



# **Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme "Sheds for Life" through the application of implementation science**

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## Table of Contents

Declaration.....	vii
Acknowledgements.....	viii
Funding.....	xi
Abstract.....	xii
List of Tables.....	xiv
List of Figures .....	xv
List of Abbreviations.....	xvi
List of Appendices.....	xviii
Outline of thesis chapters .....	xix
Chapter 1: Introduction .....	1
1.1 Introduction .....	1
1.1.1 A note about this PhD .....	2
1.1.2 Outline of chapters .....	2
1.2 Men's Health outcomes .....	3
1.3 Determinants of men's health .....	7
1.3.1 Biological determinants of men's health.....	7
1.3.2 Lifestyle and men's health .....	8
1.3.3 Social determinants of men's health .....	13
1.3.4 Masculinity and men's health .....	14
1.3.5 The paradox of 'hard-to-reach' men.....	16
1.4 Moving beyond a deficit model of masculinity.....	17
1.4.1 Recognising men's health in policy and programme design.....	17
1.5 Gendered approaches to men's health.....	20
1.6 Men's Sheds as a setting for health promotion.....	20
1.7 Evaluating community-based programmes in partnership.....	22
1.7.1 The role of community-based participatory research in programme design .....	23
1.7.2 The application of implementation science .....	24
1.7.3 Effectiveness-implementation designs.....	25
1.8 Summary and rationale .....	27

Chapter 2: Methodology.....	31
2.1.1 Men’s health – the need for gender specific approaches.....	33
2.1.2 Community-Based Men’s Health Promotion in Men’s Sheds.....	34
2.2 Methods.....	38
2.2.1 Development of the “Sheds for Life” Intervention in Men’s Sheds	38
2.2.2 SFL Programme Design .....	39
2.2.3 Engagement of HTR men using gender-specific implementation strategies .....	42
2.2.4 Ethics, Consent and Data Management .....	44
2.2.5 Effectiveness-Implementation evaluation design .....	45
2.3 Part 1: Evaluating the effectiveness of SFL – Research Design .....	46
2.3.1 Overview.....	46
2.3.2 Participants and sampling.....	46
2.3.3 Evaluating the effectiveness of SFL- Data collection .....	47
2.3.4 Evaluating the effectiveness of SFL- Data analysis .....	49
2.4 Part 2: Evaluating the implementation of SFL- Research Design.....	50
2.4.1 Overview.....	50
2.4.2 Evaluating the implementation of SFL -Data collection.....	52
2.4.3 Evaluating the Implementation of SFL -Data analysis.....	60
2.5 Limitations .....	60
2.6 Discussion .....	61
2.7 Dissemination.....	63
2.8 Declarations .....	64
Chapter 3: Baseline characteristics of Sheds for Life participants .....	66
3.1 Introduction.....	68
3.1.1 Why Men’s Sheds? .....	68
3.1.2 What might health promotion in Sheds look like? – A case for ‘Sheds for Life’ .....	69
3.1.3 Men’s Shed members – Who are they?.....	70
3.2 Methods.....	71
3.2.1 Recruitment process and participants.....	72
3.2.2 Data collection and analysis .....	74

3.3 Results .....	76
3.3.1 Risk Profile of Participants .....	80
3.3.2 Health Status .....	80
3.3.3 Lifestyle Behaviours .....	82
3.3.4 Subjective Wellbeing .....	82
3.3.4 Education and Marital Status .....	85
3.4 Discussion .....	86
3.5 Conclusion .....	90
Chapter 4: The impact of COVID-19 on the health and wellbeing of Sheds for Life participants .....	93
4.1 Introduction .....	96
4.1.1 Men and COVID-19 .....	96
4.1.2 Turning the spotlight on the wider ramifications of COVID-19 .....	96
4.1.3 Tracking the impact of COVID-19 on 'hard to reach' groups: a case study from Ireland .....	98
4.2 Methodology .....	100
4.2.1 Participants .....	100
4.2.2 Study Design and Data Collection .....	101
4.2.3 Data Analysis .....	102
4.3 Results .....	103
4.3.1 Impact of COVID-19 on Shedders: .....	106
4.4 Discussion .....	113
4.4.1 Loneliness and wellbeing .....	114
4.4.2 Physical Activity .....	116
4.4.3 Alcohol .....	117
4.5 Limitations .....	118
4.6 Conclusions .....	118
Chapter 5: The impact of Sheds for Life on the health and wellbeing outcomes of participants (quantitative) .....	120
Abstract .....	121
5.1 Background .....	123
5.1.1 Tailoring health promotion to men .....	123

5.1.2 The Men's Sheds as a setting for Health Promotion .....	124
5.1.3 Sheds for Life – Health Promotion 'for Shedders by Shedders' .	126
5.2 Methods.....	128
5.2.1 Participants and Sampling.....	128
5.2.2 Data Collection .....	129
5.2.3 Data Analysis .....	131
5.3 Results .....	133
5.3.1 Reach and follow-up rates .....	133
5.3.2 Profile of Shedders .....	133
5.3.3 Initial Impact of SFL (Baseline to 3 months) .....	134
5.3.4 Medium-term impact of SFL (Baseline through to 12m).....	139
5.3.5 Binary Logistic Regression .....	146
5.4 Discussion .....	147
5.5 Conclusions.....	153
5.6 Limitations .....	154
Chapter 6: Shedders experiences of the impact of Sheds for Life .....	158
6.1 Introduction.....	160
6.1.1 Masculinity and men's health .....	160
6.1.2 Reframing masculinities within a gender transformative approach to health .....	161
6.1.3 Sheds for Life – meeting men where they are at .....	163
6.2 Methods.....	165
6.2.1 Participants .....	166
6.2.2 Procedures .....	167
6.2.4 Data analysis .....	168
6.3 Findings.....	168
6.4 Discussion .....	180
6.5 Conclusion.....	184
Chapter 7: Economic Evaluation of Sheds for Life.....	185
7.1 Introduction.....	187
7.1.1 Nature of Sheds for Life .....	189

7.1.2 Assessing costs of health programmes .....	190
7.2 Materials and methods .....	192
7.2.1 Study participants .....	192
7.2.2 Data collection .....	193
7.2.3 Methodological approach.....	194
7.3 Results .....	195
7.3.1 Sensitivity analysis.....	201
7.4 Discussion .....	202
7.5 Conclusions.....	206
Chapter 8: The Implementation of Sheds for Life.....	209
1 Introduction.....	211
2 Methods.....	216
2.1 Research Design .....	216
2.2 Selection of implementation frameworks .....	217
2.3 Implementation testing of Sheds for Life.....	219
2.4 Scalability assessment of Sheds for Life.....	220
3 Results .....	221
3.1: Step 1: Characterisation of the Sheds for Life implementation setting .....	221
3.2 Step 2: Identification and engagement of Sheds for Life key Stakeholders.....	227
3.3: Step 3: Identification of implementation determinants (barriers and facilitators) .....	232
3.4 Scale up of Sheds for Life.....	255
4 Discussion .....	256
5 Conclusion.....	260
6 Addendum to Chapter 8 .....	263
Chapter 9: Discussion.....	264
9.1 Introduction to the chapter.....	264
9.2 Summary of findings and their application to scalability assessment.....	264
9.2.1 Introduction and Literature Review .....	264

9.2.2 Chapter 2: Sheds for Life protocol .....	266
9.2.3 Chapter 3: Baseline characteristics of SFL participants.....	267
9.2.4 Chapter 4: The impact of COVID-19 on Sheds for Life participants .....	268
9.2.5 Chapter 5: The impact of Sheds for Life on the health and wellbeing outcomes of participants .....	269
9.2.6 Chapter 6: Shedd's experiences of the impact of Sheds for Life .....	270
9.2.7 Economic Evaluation of Sheds for Life .....	271
9.2.8 The implementation of Sheds for Life .....	272
9.3 Considerations for scale-up of Sheds for Life.....	275
9.3.1 What does scale-up look like? .....	275
9.3.1 Where is Sheds for Life now? .....	277
9.5 Strengths and limitations of the research .....	280
9.5.1 Limitations.....	280
9.5.2 Strengths .....	282
9.6 Implications for research, policy and practice .....	283
9.7 Conclusions.....	285
Bibliography .....	287
Appendices .....	314

## Declaration

I declare that the work in this thesis is my own work, completed under the supervision of Prof Niamh Murphy (Department of Sport and Exercise Science, South East Technological University, Waterford) and Dr Noel Richardson (National Centre for Men's Health, South East Technological University, Carlow). The article-based chapters meet the requirements to be included in this thesis where I was responsible primarily for the planning, execution and preparation of the work for publication. This work has not been submitted for any academic award at this, or any other, third level institution.

Signed: 

Date: June 2022



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Finally, I would like to end my acknowledgements with a poem for all the men who shared their experiences with me throughout this journey.

## ***Boys in Neverland***

*When he was lost he watched 'Hook'  
And dreamed of a boy who would never grow up,  
Where the noose had not yet taken us from our happy place,  
And where by Hook or by Crook it's a pirate's life.  
I wondered why I could not find him,  
Not even in the place between sleep and awake;  
But girls can't fall out of prams and become lost boys.*

*Perhaps there's a place beyond Pan and the Captain,  
Where boys love hard but aren't hardened,  
Draw swords when they must,  
But do not leave daggers bearing notes,  
And know it's okay to turn back and gaze at the stars,  
And tell us all about losing their marbles,  
Thinking themselves rather brave for that,  
While we laugh and shriek "We want to speak to a grown up!",  
Crying tears for every happy thought.*

*A place where boys can call out for their mothers,  
Proclaim their belief in fairies,  
And if a pirate's life is not for them,  
Wear tights, and still have adventures with Indians.  
Where they can tell their Dads that they want to go home  
And remember;  
that while the clock ticks in the belly of the crocodile,  
They do not have to be there to meet it.*

*A place, where to live would be a rather grand adventure.*

*Aisling Mc Grath*

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## Abstract

**Title:** Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme "Sheds for Life" through the application of implementation science

**Author:** Aisling McGrath

**Background:** Men's Sheds (Sheds) are community-based settings that offer a unique opportunity to apply gender-specific approaches to engage 'hard-to-reach' (HTR) men with health promotion. Despite this, there has been no formal evaluation of structured health promotion in Sheds to date. Sheds for Life (SFL) is a 10-week initiative co-designed with Shed Members (Shedders) and delivered directly in the Shed setting in Ireland with core components comprising of a health check, physical activity, mental wellbeing and healthy diet. It is implemented by multiple stakeholders at individual, provider, organisation and systems level and thus multiple contextual factors influence its scalability. In addition, research has called for careful consideration of what health promotion in Sheds should look like, particularly with regard to respecting the ethos of Sheds as highly variable, autonomous, non-structured spaces, as part of any attempts to engage Sheds in structured health promotion programmes. This thesis evaluates the scalability of SFL through the application of implementation science.

**Methods:** A mixed methods, hybrid effectiveness-implementation study design was used to test intervention effect and implementation outcomes across multiple levels (participant, provider, organisational and systems levels), guided by community-based participatory research and established implementation frameworks. *Chapter 2* captures protocols pertaining to the development, design and implementation of SFL and the evaluation of the impact on participants' health and wellbeing outcomes up to 12 months. *Chapter 3* assesses reach of SFL through analysis of objective health measures, (body composition, blood pressure, blood lipids) captured via health screening as well as sociodemographic and health and wellbeing measures (physical activity, subjective wellbeing, mental health, social capital, cooking and diet) via questionnaires. *Chapter 4* assesses the impact of COVID-19 on wellbeing (life satisfaction, mental health, loneliness, physical activity (PA), self-rated health and other lifestyle measures) among SFL participants through a comparison of two cohorts pre and post COVID-19 up to 6 months. *Chapter 5* evaluates the impact of SFL on health and wellbeing outcomes through an analysis of Shedders (n=421) participating in SFL alongside a wait list control (n=86) up to 12 months. *Chapter 6* applies a qualitative reflexive thematic analysis incorporating ethnographical observations, focus groups (n=8) and short semi-structured interviews (n=16) conducted with SFL participants to capture Shedders' experiences of SFL in practice. *Chapter 7* assesses costs of SFL alongside questionnaires incorporating the SF-6D administered to participants up to 12 months, generating utility scores to determine quality adjusted life years (QALYS). *Chapter 8* uses implementation frameworks to capture the process of implementation, identify implementation determinants and strategies to address barriers to inform implementation outcomes and assess scalability.

**Results:** Results from *chapter 3* determine that SFL was effective in engaging HTR men (mostly older, retired with the majority in 'at-risk' categories for objective health measures). *Chapter 4* highlights that Shedders experiencing COVID-19 at 6 months had decreased self-rated health and life satisfaction ( $p<0.001$ ), with increased loneliness scores ( $p<0.0005$ ). Higher loneliness scores were also correlated with

lower health ratings, life satisfaction and PA during COVID-19 ( $p < 0.001$ ). *Chapter 5* determines that outcomes related to subjective wellbeing, mental wellbeing, physical activity, social capital and healthy eating significantly increased post SFL ( $p < 0.05$ ). Mental wellbeing scores (SWEMWBS) post SFL remained significantly higher than baseline despite COVID-19 impact ( $p < 0.05$ ). Binary logistic regression indicates that the odds of a meaningful SWEMWBS change was significantly higher for Shedders that had lower SWEMWBS (OR 0.804), less loneliness (OR 0.638) and lived alone (OR 0.456) at baseline. Shedders with lower SWEMWBS had higher odds of experiencing positive changes in life satisfaction (OR 0.911) and trust (OR 0.928), while Shedders who lived alone had also higher odds of experiencing positive changes in healthy eating (OR 0.481). Moreover, inactive Shedders at baseline had higher odds of experiencing increased levels of physical activity (OR 0.582). *Chapter 6* describes three key themes; Creating the 'right environment'; Normalising meaningful conversations; a legacy for 'talking health'; and; Transforming perceptions of how men 'do health'. Findings demonstrate the utility of SFL to be gender transformative. *Chapter 7* demonstrates that the SFL intervention group experienced an average 3.3% gain in QALYS from baseline to 3 months and a further 2% gain from 3 months to 6 months at an estimated cost per QALY of €15,724. This highlights the utility of SFL as a cost-effective initiative. *Chapter 8* determines that active recruitment, co-design processes, leadership and stakeholder engagement emerged as key facilitators of SFL implementation. Prominent barriers were institutional capacity and funding. Acceptability, adoption and appropriateness of the initiative were high among stakeholders with sustainability largely contingent on funding and staff resources.

**Conclusion:** Findings highlight that the gendered and co-design approach of SFL was effective in engaging HTR men in Sheds and that this approach offers much potential to encourage sustained changes in health and wellbeing outcomes. Findings also demonstrate the utility of SFL to be gender transformative by normalising meaningful conversations about health in Sheds, facilitated by an invested process of engagement. The programme was also found to be cost-effective where it's community-based, partnership approach was key to its sustainability. The application of implementation science captures the process of implementation and the development of a methodology for implementation of health promotion in Sheds that can be replicated elsewhere. It identifies that SFL is a transferable, scalable model, where leadership and fidelity to the process of implementation are key to its successful scalability. This work makes a valuable contribution to knowledge by being the first study to evaluate a structured health promotion initiative in Sheds. It adds to the evidence-base for men's health promotion and public health more broadly, particularly in the areas of economic evaluation and identification of implementation strategies where a dearth of research exists. It demonstrates the operationalisation of implementation frameworks in practice and identifies the key implementation and evaluation strategies that can act as a blueprint for health promotion in Sheds, men's health work and health promotion more broadly.

## List of Tables

Table 1: 2.1 Structure of SFL phase 1 including workshops in development for phase 2 delivery .....	40
Table 2: 2.2 SFL Effectiveness-Implementation Hybrid Design .....	55
Table 3: 3.1 Shedder demographics and health and wellbeing measures ...	77
Table 4: 3.2 Comparison of subjective and objective health measures by age .....	84
Table 5: 3.3 Regression Analysis on subjective variables .....	85
Table 6: 4.1: Participant and Shed characteristics .....	104
Table 7: 4.2: Wellbeing measures in Pre COVID and COVID cohorts at T1, T2 and T3.....	107
Table 8: 5.1: Wellbeing and lifestyle outcomes up to T2 with control comparison .....	137
Table 9: 5.2: Wellbeing and lifestyle outcomes at T3 and T4 for the IG by Cohort .....	144
Table 10: 5.3: Binary logistic regression analysis for changes in dependent variables (baseline to 3months) .....	146
Table 11: 7.1: Costs of the Sheds for Life programme.....	196
Table 12: 7.2 Average Value for Components of SF-6D over Time Period by Group.....	198
Table 13: 7.3: Utility Analysis of the Sheds for Life Programme .....	200
Table 14: 8.1: The five P's for effective implementation of SFL (Koorts et al., 2018).....	224
Table 15: 8.2: Determinants of SFL implementation across individual provider, organisational and systems level as per CFIR (Damschroder et al., 2009)	234
Table 16: 8.3: What strategies enhance implementation in SFL? Outcomes of SFL, influencing determinants and strategies to address implementation barriers.....	248
Table 17: Represensentation of how thesis chapters addressed scalability assessment (Milat et al., 2016) .....	274

## List of Figures

Figure 1: 3.1 Representation of risk profile of Shedders based on sociodemographic and health and wellbeing characteristics .....	81
Figure 2: 5.1: Life satisfaction across time period by cohort .....	140
Figure 3: 5.2: SWEMWBS across time period by cohort.....	141
Figure 4: 7.1: Cost Acceptability Curve for Thresholds up to €30,000. ....	202
Figure 5: 2.1 Sheds for Life implementation flowchart .....	226
Figure 6: 2.2 Sheds for Life stakeholder map at systems, organisation, provider and Shed level .....	232
Figure 7: 8.3: An adapted ecological model of SFL implementation (Koorts et al., 2018).....	233
Figure 8: 8.4: Sheds for Life scalability assessment using ISAT (Milat et al., 2020).....	255



## List of Abbreviations

12 months	T4
12 months	12m
3 months	T2
3 months	3m
6 months	T3
6 months	6m
Baseline	T1
Body Mass Index	BMI
C1	Cohort 1
C2	Cohort 2
Cardiovascular disease	CVD
Central Statistics Office	CSO
Community-based participatory research	CBPR
Consolidated Framework for Implementation Research	CFIR
Control Group	CG
Cost-effectiveness acceptability curve	CEAC
Dental Health Foundation	DHF
Football Fans in Training	FFIT
General Practitioner	GP
Guidance for Effective Engagement with Men's Sheds	GEEMS
Hard-to-reach	HTR
Health and Wellbeing Manager	HWM
Health Information Quality Authority	HIQA
Health Service Executive	HSE
Incremental Cost Effectiveness Ratio	ICER
International Standard Randomised Controlled Trial	ISCRTN
Number Registry	
Intervention Group	IG
Intervention Scalability Assessment Tool	ISAT
Irish Cancer Society	ICS

Irish Heart Foundation	IHF
Irish Research Council	IRC
Marie Keating Foundation	MKF
Men on the Move	MOM
Men's Shed Members	Shedders
Men's Sheds	Sheds
National Office of Suicide Prevention	NOSP
Office of National Statistics	ONS
Participatory Action Research	PAR
Physical activity	PA
Practical Planning for Implementation and Scale up Guide	PRACTIS
Practical, Robust Implementation Sustainability Model	PRISM
Provider Organisations	POs
Quality Adjusted Life Years	QALYS
Self-efficacy for Exercise Scale	SEE
Self-rated health	SRH
Service Provider	SP
Sheds for Life	SFL
Short Form 6 D	SF-6D
Short Warwick Edinburgh Mental Wellbeing Scale	SWEBMWS
South East Technological University	SETU
Statistical Packages for the Social Sciences	SPSS
Sustainable Development Goals	SDGS
The Exploration, Preparation, Implementation, Sustainment Framework	EPIS
The Irish Longitudinal Study on Ageing	TILDA
The Irish Men's Sheds Association	IMSA
The Reach, Effectiveness, Adoption, Implementation, Maintenance Framework	RE-AIM
The Self-Efficacy for Exercise Scale	SEE
Waterford Institute of Technology	WIT
World Health Organisation	WHO

## **List of Appendices**

Appendix A	Research Dissemination
Appendix B	Protocol Paper Additional File 1 (Chapter 2): SFL operationalisation of the PRACTIS guide
Appendix C	Protocol Paper Additional File 2 (Chapter 2): All items from the World Health Organisation Trial Registration Data Set
Appendix D	Protocol Paper Additional File 3 (Chapter 2): SPIRIT checklist – Standard Protocol Items for interventional trials
Appendix E	Baseline Characteristics paper additional file 1 (Chapter 3): Descriptives for individual cooking and food preparation confidence constructs correlated with education levels
Appendix F	Economic Evaluation - Supplementary File 1 (Chapter 7): Histograms of Six dimensions of the SF-6D at baseline
Appendix G	Supplementary File 1: Scoring of the Intervention Scalability Assessment tool (Chapter 8)
Appendix H	Ethical Approval Confirmation
Appendix I	Baseline participant questionnaire
Appendix J	Follow-up participant questionnaire with COVID-19 measures
Appendix K	Participant information sheet
Appendix L	Participant consent form
Appendix M	Provider information sheet and letter for aligning data collection
Appendix N	Provider consent form
Appendix O	Participant topic guides
Appendix P	Short interview schedule (participants)
Appendix Q	Provider Interview Schedule
Appendix R	Coordinator Interview schedule
Appendix S	Data collection tools and procedures
Appendix T	Memorandum of understanding template between IMSA and programme partners
Appendix U	Expression of interest form for SFL participants
Appendix V	Sheds for Life Co-design workshop guide
Appendix W	Online Files: Sheds for Life Handbook, Guidance for Effective Engagement with Men's Sheds manual and Sheds for Life impact report

## Outline of thesis chapters

This PhD has been prepared as an article-based PhD based on a collection of papers. The requirements for this approach have been met where a minimum of three peer-reviewed articles should be included with the PhD. The following is an outline of the thesis chapters including published works and works currently under review. As per university guidelines, disclosure will be set out in an authorship and contribution for each prepared publication utilising the descriptors available under the CRediT system.

Author contributions abbreviations are as follows:

A.M. = Aisling McGrath (PhD Candidate); N.M. = Niamh Murphy; N.R. = Noel Richardson; T.E. = Tom Egan; G.O. = Gillian Ormond

### Chapter 1: Introduction

An introduction to the work and review of the literature which aims to set the papers in the context of existing literature, provide an explanation of the scope and objectives of the work and chosen methodology and includes an overview of themes common to all papers included in the thesis.

### Chapter 2: Methodology

Chapter 2 provides a detailed description of the Sheds for Life evaluation protocol and has been published as:

McGrath, A., Murphy, N. & Richardson, N (2021). Study protocol: Evaluation of Sheds for Life (SFL): A community-based men's health initiative designed "for Sheddors by Sheddors" in Irish Men's Sheds using a hybrid effectiveness-implementation design. *BMC Public Health*: <https://doi.org/10.1186/s12889-021-10823-8>

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review and editing, A.M., N.M. and N.R. All authors have read and agreed to the published version of the manuscript.

**Chapter 3:** Chapter 3 captures the baseline characteristics of Sheds for Life participants with a view to informing the needs of participants and understanding the reach of the Sheds for life initiative in engaging hard-to-reach cohorts of men. This work has been published as:

McGrath, A., Murphy, N., Egan, T., Ormond, G. & Richardson, N. (2022). 'Understanding Sheddars: which sociodemographic, health and wellbeing characteristics best inform appropriate health promotion action and a 'Shed for Life'? *Health Promotion Journal of Australia*. doi: <https://doi.org/10.1002/hpja.649>

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**Chapter 4:** Chapter 4 assesses the impact COVID-19 had on the health and wellbeing outcomes of Sheds for Life participants from baseline to 6 months with a view to providing valuable longitudinal data of the impact of the pandemic on older, more vulnerable men within Men's Sheds. It also provides insights on how the pandemic may have impacted the outcomes of Sheds for Life more broadly. This chapter has been published as:

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**Chapter 7:** Chapter 7 presents the findings from an economic evaluation of Sheds for Life in an assessment of cost effectiveness to inform wider implementation effectiveness and scalability of the initiative in Men's Sheds. This chapter has been published as:

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**Chapter 8:** Chapter 8 discusses the implementation process of Sheds for Life guided by established implementation science frameworks. It identifies barriers and facilitators to implementation to inform implementation outcomes and scalability. This chapter has been prepared for publication and is under review as:

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**Chapter 9:** Chapter 9 provides an overall discussion of the work and research objectives as well as implications and recommendations for further practice.



# **Chapter 1: Introduction**

## **1.1 Introduction**

This thesis aims to build upon the evidence base for gender-specific men's health promotion while also highlighting the importance of evaluating implementation efforts in order to promote the systematic uptake of research into practice. It applies an implementation science design to the evaluation of 'Sheds for Life' (SFL) a community-based men's health promotion programme delivered in the Men's Sheds (Sheds) setting in Ireland. Through the application of implementation science, it utilises community-based participatory research (CBPR), and mixed methods to evaluate the scalability of SFL while identifying a suitable delivery strategy for health promotion in Sheds that applies a gendered lens to engagement of 'hard-to-reach' (HTR) men (e.g. those who are unemployed, socially disadvantaged, isolated, with limited education).

### **Aim:**

To investigate the effectiveness of the SFL intervention in terms of; i) health impact ii) economic costs and iii) implementation strategies for implementation and scale-up , while identifying a suitable delivery model for health promotion in Sheds that engages HTR men.

### **Research Questions**

1. What are the facilitators and barriers that impact implementation and sustainability of SFL across the individual, provider, organisation and wider systems level?
2. Does participation in Sheds for Life improve health knowledge, attitudes, outcomes and behaviours among participants?
3. Is the SFL implementation approach cost-effective?
4. What is the process by which the SFL model is developed and implemented in order to effect maximum penetration, adoption and acceptability in the target population group (key stakeholders)?
5. How does the partnership and capacity building focus of SFL contribute to the implementation and scale-up of the programme?

### 1.1.1 A note about this PhD

The research for the SFL evaluation commenced in October 2018 on receipt of a four year employment-based scholarship from the Irish Research Council. The scholarship was awarded based on the research proposal prepared by the candidate, guided by supervisors. The nature of this PhD approach is important for the context of this work as it involved an embedded research approach where the candidate was placed directly into the implementation environment. This facilitated a close working relationship with the overseeing body of SFL, the Irish Men's Sheds Association (IMSA), as well as helping to build important partnerships with provider organisation of SFL and men within Sheds (Shedders). It also allowed monitoring of variables across multiple levels of the implementation context as they evolved (Shed, Shedder, provider, organisational and systems level). The embedded research approach facilitated co-production of SFL with key stakeholders, ongoing knowledge exchange and translation of research findings into practice as SFL developed, guided by implementation frameworks outlined in detail in chapter 2. The nature of this PhD complemented the implementation science approach which encouraged adoption of SFL among key stakeholders and where the evaluation of SFL was therefore an ongoing and iterative process of implementation.

### 1.1.2 Outline of chapters

The literature reviewed throughout this thesis sets the scene and provides a rationale for the research approach. By virtue of its article-based format, each chapter has a distinct introduction reviewing a relevant section of the literature. This introductory chapter aims to briefly set the scene for the research by providing an overview, while the reader will be signposted to subsequent sections in the chapters that follow. The introduction section will predominantly focus on providing a justification for focusing on men's health promotion; specifically, gendered approaches that can effectively contribute to gender equality in health. While each publication (proceeding chapters) covers a distinct section of the literature, the introduction to chapter 2 discusses the

importance of gender-specific approaches to men's health and the efficacy of community-based men's health promotion to engage men, with particular reference to Men's Sheds. This chapter also highlights the need for pragmatic evaluation in community-based work and outlines a case for the application of implementation science with description of the evaluation design. The introduction to chapter 3 also provides a detailed description on the potential of Men's Sheds to engage men with health promotion, particularly those who are HTR, as well as a review of the literature which outlines the need to understand the demographics and health and wellbeing characteristics of Shedders. The introduction to chapter 4 describes the disproportionate impact of COVID-19 on men and discusses the risk of loneliness and social isolation for older and more HTR men. The introduction to chapter 5 discusses the importance of tailoring health promotion to respond to the needs of men. It highlights the potential of Sheds as a setting for health promotion as well as the utility of SFL to enhance the health and wellbeing of Shedders. The literature in chapter 6 discusses the influence of masculinity on men's health and help-seeking and the importance of reframing masculinities within a gender transformative context. Chapter 7 discusses the nature of SFL and the importance of evaluating men's health initiatives for cost-effectiveness in making the case for men's health promotion to key decision makers. The introduction to chapter 8 discusses the application of implementation science to SFL and the selection of implementation frameworks with a view to assessing scalability. Finally, chapter 9 presents an integrated discussion that summarises and synthesises key findings within the context of the wider literature.

## **1.2 Men's Health outcomes**

Robust evidence has demonstrated persistent trends that health outcomes among males are generally worse than females globally (Baker, White, & Morgan, 2020). While there have been improvements in survival across the age spectrum over recent decades, males continue to have a lower life expectancy compared to females (Wang et al., 2020). The most recent Global Burden of Disease study in 2019 highlights that; globally female life

expectancy remains higher at 76.1 years compared to males at 71.0 years, a difference of almost five years. Males also have an increased probability of death from the age of 16 to 60 years (0.16) compared to females (0.10; Wang et al., 2020). Moreover, throughout the period from 1950 to 2019 males had a lower life expectancy than females across all regions, demonstrating that men and women do not benefit from life expectancy increases equally. In Ireland, data suggests the average male life expectancy is 3.6 years below their female counterparts at 80.4 years and 84.3 years respectively (Department of Health, 2019; Wang et al., 2020). While the life expectancy gap between males and females is narrowing, men in Ireland continue to have a higher mortality rate from almost all leading causes of death with women typically still experiencing a higher number of healthy life years than men (Department of Health, 2019; Health Service Executive, 2017).

Premature deaths from non-communicable diseases such as cancers, chronic respiratory disease and diabetes mellitus have, as international figures suggest, been in decline since the mid-2000s (WHO, 2017a). Yet, male mortality rates remain consistently higher than female mortality, with non-communicable diseases accounting for over four million male deaths in the European Region between 2000 and 2015 (WHO, 2018b). In Ireland, most recent data outlines the four main causes of male mortality to be invasive cancers, circulatory system disease, respiratory system diseases and external causes of injury and poisoning (Devine & Early, 2020). Indeed men are more likely to die prematurely from cardiovascular disease than women (White et al., 2011; WHO, 2018b), where trends highlight an excess burden of ill-health in men but also demonstrate that the aetiology of disease progression varies between sexes and therefore treatment and prevention strategies should recognise the need to tailor these accordingly (Walli-Attaei et al., 2020). Men are also more susceptible to overweight and obesity which puts them at an increased risk of non-communicable disease such as ischemic heart disease, stroke, chronic kidney disease, hypertensive heart disease and diabetes mellitus (Dai et al., 2020; Tharakan et al., 2022; White et al., 2011). This is of particular concern when considering a recent analysis which demonstrates that, from 1990 to 2017, the age-standardised rate of high-BMI-related deaths

remained stable for females but increased by 14.5% for males, and the age-standardised rate of high-BMI-related disability adjusted life years increased by 12.7% for females but over double that for males at 26.8% (Dai et al., 2020). The increased risk of overweight and obesity for men has been highlighted as a priority issue in men's health advocacy both nationally (Health Service Executive, 2017) and internationally (Australian Government Department of Health, 2019; White et al., 2011; WHO, 2018b). Furthermore, the rising prevalence of diabetes is linked to the almost ubiquitous increase in body-mass index globally (Murray et al., 2020), with men twice as likely to develop Type II diabetes (White et al., 2011; WHO, 2018b). Men also develop diabetes at a lower BMI than women across the same age range, a factor correlated to adiposity distribution, testosterone deficiency and increased insulin resistance (Logue et al., 2011; Yao et al., 2018). Moreover, men's health disorders commonly associated with diabetes, include erectile and sexual dysfunction and hypogonadism which can significantly impair aspects of biopsychosocial wellbeing, and diabetes risk should therefore remain a priority area for men's health (Salter & Mulhall, 2019). In addition, the incidence rate for all cancers combined is 19% higher in men (222.0 per 100,000) than in women (186 per 100,000). Death rates are also 43% higher in men than in women (120.8 and 84.2 per 100,000) highlighting a significant gender gap in cancer prevalence and mortality (Sung et al., 2021). The most common cause of cancer deaths and disability for men are tracheal, bronchus, lung, liver cancer and stomach cancer (Fitzmaurice et al., 2019). These cancers are non-gender specific and therefore highlight the excess burden of ill-health relating to cancer for men.

While women are twice as likely to report depressive symptoms, men have higher rates of suicide and addictive behaviours which is suggestive of a higher prevalence of depressive symptoms that may in fact be underreported (Shi et al., 2021). Research has highlighted both sex and gender differences as important determinants in the presentation of anxiety and depression (Bangasser & Cuarenta, 2021; Shi et al., 2021). For instance, mild-moderate depression tends to be reported more often by females, and severe depression and suicidal ideation reported more often by males (Shi et al., 2021). Potential mechanisms include gender differences in coping style (e.g.

barriers to emotional expression and help-seeking in males) and neurobiological processes such as social avoidance, learned helplessness and anhedonia (Bangasser & Cuarenta, 2021; Shi et al., 2021). Indeed, one of the largest disparities between sexes in relation to premature mortality are deaths by suicide (White et al., 2011; WHO, 2018b). The global age-standardised suicide rate is significantly higher in males (13.7 per 100,000) than in females (7.5 per 100,000). In countries with the highest rates of suicide, female rates were 30 per 100,000 compared to 45 per 100,000 in males, with age-standardised suicide rates in Ireland at 4.2 per 100,000 in females and 17.6 per 100,000 in males (Devine & Early, 2020). Globally this translates as suicide rates being 1.8 times higher in males than in females, and close to 3 times higher in high-income countries (WHO, 2019a). Moreover, national suicide rates are not always designed to monitor shifts in suicidal behaviour in particular subgroups (e.g. disadvantaged men) or account for information on non-fatal suicidal behaviour (Claassen et al., 2010). For instance, when considering suicide trends in the UK and Ireland, men who are “less well off” and living in more deprived areas are ten times more likely to die by suicide than men in more affluent areas, suggesting that social inequality within high-income countries exacerbates male suicide rates (Layte & Banks, 2016; Samaritans, 2020). Middle aged men in Ireland are a particularly high risk group, with suicidal behaviour being more prevalent in specific at-risk subgroups (O'Donnell & Richardson, 2018). Other research from Australia and New Zealand suggests that vulnerable older men have the highest rate of suicide in any age or gender group which, it has been argued, is largely influenced by gender roles and masculinity norms, highlighting the need for a gendered approach in suicide prevention (Barak et al., 2020; King et al., 2020). Ireland's national strategy to reduce suicide 'Connecting for Life 2015 to 2024' prioritises the need to improve the availability of robust data with a focus on groups most vulnerable to suicidal behaviour (Health Service Executive, 2015). This requires a gendered focus on men alongside key risks and protective factors so that interventions and services can be tailored to meet the needs of particularly vulnerable male populations and respond to trends as a matter of priority (Health Service Executive, 2015)

### **1.3 Determinants of men's health**

While women too experience disparities in health, men, for a host of complex factors experience poorer health outcomes (WHO, 2018b). The higher risk for premature mortality and large differences between subpopulations of men has long been documented across countries and, at times, regarded as a natural phenomenon (WHO, 2018c). This elementary view further exacerbates gender inequalities in health and it is important to investigate the causes that lead to differences in health outcomes between genders with a view to advancing population health of both men and women by incorporating evidence into action (Baker, 2020).

#### **1.3.1 Biological determinants of men's health**

Biology has a role to play in influencing the aetiology of disease in men and women which impacts prevalence, manifestation and response to treatment, rooted in genetic differences between sexes (Mauvais-Jarvis et al., 2020; Regitz-Zagrosek, 2012). For instance, infant mortality is higher in boys than girls in most parts of the world. This has been explained by sex differences in genetic and biological makeup, with boys being biologically weaker and more susceptible to diseases and premature death (Pongou, 2012). Recent research also highlights that male chromosomal composition (XY) results in weaker cancer defence responses compared to females (Haupt et al., 2019). Testicular testosterone permanently masculinises the reproductive tract and the organisation of brain circuits affecting male behaviour at puberty into adulthood (McCarthy et al., 2009). The influence of testosterone has a primitively established role in promoting successful reproduction through demonstrating aggression, competitiveness and risk-taking, all factors that ultimately influence the health of men (Casto et al. 2020; Herbert, 2018). In the case of COVID-19, both biological and genetic mechanisms are correlated with contributing to higher mortality rates in men, despite similar case numbers (Gottert et al., 2022). For instance women have higher production of interferon  $\alpha$ , required for immunological defence against viral infections and data suggest that females produce a greater humoral response than males (Tharakan et al.,

2022). Sex differences in fat distribution and central obesity correlate with sex differences in the risk of cardiovascular diseases with central fat distribution more common in men and associated with a higher risk of disease (Lumish, O'Reilly, & Reilly, 2020). Oestrogens produce anti-inflammatory actions which protect against cardiac damage in premenopausal women, by contrast testosterone induces adverse cardiac remodelling (Mauvais-Jarvis et al., 2020). Oestrogen also plays a possible neuroprotective role in schizophrenia pathology a hypothesis supported by the later onset, age and severity of symptoms during menopause and low bouts of oestrogen during the menstrual cycle (Li et al., 2016). The above examples highlight that sex is an important modifier of physiology and disease via genetic, epigenetic, and hormonal regulations that can contribute to the burden of ill-health in men, and yet it is difficult to separate the influence of gender and sex on health outcomes (Mauvais-Jarvis et al., 2020; Regitz-Zagrosek, 2012).

### 1.3.2 Lifestyle and men's health

Many of the disparities in the health gap between genders is equated to preventable lifestyle and risk factors such as; alcohol and drug use, physical activity, diet, exposure to risk and risk taking behaviour, with evidence suggesting that up to 50% of premature male mortality is preventable (White, et al., 2011; WHO, 2018b). These modifiable lifestyle and preventable risk factors are closely linked to chronic health issues such as obesity, diabetes, hypertension and high cholesterol and are the principle causes of mortality including respiratory diseases, cardiovascular diseases and some cancers (Ng et al., 2020).

#### *Substance misuse*

The global population who are current users of tobacco has been in decline, yet male consumption of tobacco has been significantly higher over time (WHO, 2019b). In 2015 the male rate of tobacco consumption globally was 40.3% whilst it had declined to 9.5% in females. By 2025 the rate is projected to decline to 35.1% in males and 6.7% in females (WHO, 2019b). These trends suggest that men will remain disproportionately impacted by tobacco related



morbidity and mortality, with the gap between genders widening. In fact, among males, a 30% relative reduction in prevalence between 2010 and 2025, in line with Sustainable Development Goals (SDGs) targets, is not likely to be achieved in any country income group. In the case of alcohol, the most recent data suggests alcohol consumption in Ireland is increasing with estimates of total per capita alcohol consumption in litres of pure alcohol at 13 litres and is predicted to reach 13.9 litres by 2025, with males more likely to be current drinkers and consume more alcohol than females (WHO, 2018a). Male consumption was 20.4 litres compared to 5.8 litres in females, with average level of consumption in Europe almost 4 times higher in males (WHO, 2018a). Overall alcohol consumption and frequency of binge drinking is higher in men than in women with up to 54% of Irish men classified as heavy episodic drinkers (Health Service Executive, 2017; Manthey et al., 2019). Furthermore, men are more likely to engage in harmful alcohol use which is one of the leading risk factors for population health and directly impacts many targets of the SDGs including those for maternal health, infectious disease, non-communicable disease (cancers, CVDs, cognitive disorders), mental health (including suicide) and it is also linked to homicides, traffic accidents, violence and aggression, sexual assault, injuries and poisoning (WHO, 2017a, 2018a, 2018b; Wilsnack et al., 2018). Heavy episodic drinking largely impacts gender equality in terms of the health impact it has on men but also female partners and children who are likely to be adversely affected in terms of adverse drinking behaviour and depletion of family resources due to alcohol abuse (Laslett et al., 2017; WHO, 2018a). Alcohol is often consumed before, along with or after psychoactive substance use and men are more likely to engage in illicit drug use, a behaviour related to interactions among biological, environmental, sociocultural and developmental influences (Becker, McClellan, & Reed, 2017; WHO, 2018a). In the Republic of Ireland, the number of males being treated for problem drug use increased from 5,826 to 7,626 between 2012 and 2018 (Devine & Early, 2020). Potential long-term effects in men include psychiatric morbidity, suicidal ideation and risk, social effects related to relationship breakdown and employment as well as risk of infection in the case of drug injection. Short-term effects can also be adverse leading to accidental overdose or injury (White et al., 2011)

### *Risk-taking behaviour*

Men are also more likely to engage in other risk-taking behaviour and be subject to risk exposure beyond that of alcohol, tobacco and drug misuse, behaviours that are also well documented (WHO, 2018c). In a comparative risk assessment of burden of disease and injury attributable to 67 risk factors, 60 of the risk factors had significantly higher male mortality rates than female (Lim et al., 2012). Men are over-represented in most fatal and non-fatal accidents and injuries as well as violence-related injuries compared to women (White et al., 2011). In Ireland, road injuries and suicide are the principal causes of accidental death among all male groups with four out of five road fatalities being men (Department of Health, 2019). Evidence suggests that men are also more likely to engage in risky financial behaviour such as precarious investments and gambling (Charness & Gneezy, 2012; Howat-Rodrigues, Tokumaru, & Izar, 2018). Occupation also has a significant role to play in male risk exposure with men more likely to be employed in roles where occupational hazards that lead to physical injury and exertion are present (Berecki-Gisolf et al., 2015). Layte et al. (2015) conducted a longitudinal comparison using data from the Irish Central Statistics Office to calculate crude and standardised mortality rates for men and women in different socio-economic groups. The findings highlighted that men have steeper mortality gradients in comparison to women with the mortality of male manual workers being 140% higher during the 2000s compared to professional males. In relation to COVID-19, gendered practices and behaviour such as lack of adherence to social restrictions, and reduced propensity towards mask wearing and hand washing are also potential causes of the disproportionate mortality rates from COVID-19 in men (Baker et al., 2020; Smith et al., 2020). Gender differences in both the weighing of the potential consequences of behaviour or subsequent risk-taking reflects a process of emotional responses to environmental stimuli which can be fuelled by complex biopsychosocial factors (Azanova et al., 2021), meaning that gender-specific prevention strategies are critical to mitigate against harmful risk taking.

### *Diet and physical activity*

Males who have a poor diet and are physically inactive are at significant increased risk of developing disease such as; cardiovascular and circulatory disease, diabetes, mental illness, arthritis, cancers and respiratory diseases (Devine & Early, 2020). A systematic assessment by Imamura et al. (2015) of global consumption of key dietary items across 187 countries saw better diets in women compared with men ( $p < 0.0001$ ). While studies have shown women to consume more fruit and vegetables and whole foods, men habitually have lower intakes of fruit and vegetables as well as a higher consumption of fatty meats and sweet carbonated drinks than their female counterparts (Carroll, Capel, & Gallegos, 2019; Masella & Malorni, 2017). A cross-sectional study by Lombardo et al. (2020) assessing eating behaviours found statistically significant gender differences where men had a lower intake of whole grain food, cereals and vegetables with a higher intake of meat, eggs and processed meat. The men in the study also ate faster, ate more during the night and ate less home cooked meals compared to women. Moreover, women are more likely to have higher levels of nutritional awareness (Yahia et al., 2016) and higher levels of cooking skills compared to men due to social determinants, with low levels of cooking skills associated with unhealthy dietary behaviours (Tani, Fujiwara, & Kondo, 2020).

Physical activity has long been associated with benefits in improving muscular and cardiorespiratory fitness, as well as bone and functional health and reducing risks of; overweight and obesity, hypertension, coronary heart disease, stroke, type-2 diabetes, cancers, depression and anxiety and fall risks and fractures (Bull et al., 2020). Men in particular have highlighted the positive benefits of physical activity for their mental wellbeing (O'Donnell & Richardson, 2018), where those with low levels of physical activity are twice as likely to have clinically relevant depressive symptoms compared to those with high levels of physical activity (Donoghue, O'Connell, & Kenny, 2016). Indeed, a recent study by Currier et al. (2020) using baseline data from 13,884 participants in the Australian Longitudinal Study on Male Health found that men who completed the physical activity guidelines (150 min/week) had lower odds of moderate to severe depression symptoms.

Despite an abundance of evidence surrounding the health benefits associated with physical activity, an alarming proportion of the adult population continue to lead sedentary or low-active lifestyles. In fact, more than a quarter of the world's adult population (1.4 billion adults) and 1 in 4 men are not sufficiently active (Bull et al., 2020). Moreover, males who are insufficiently active have a 20-30% increased risk of death (WHO, 2018c). This mortality gradient also becomes steeper where multiple modifiable lifestyle risk factors such as poor diet, smoking, drug use and alcohol are present (WHO, 2018b). In Ireland, 54% of males achieve the physical activity guidelines compared with 38% of women (Devine & Early, 2020). While a larger percentage of males are more physically active, a significant percentage (46%) remain insufficiently active. Moreover, physical activity levels in males significantly decline in older age (Donoghue et al., 2016). Self-efficacy to sustain physical activity compounded by lack of social support may be important predictors for this decline (McAuley et al., 2011). Research by Bergström, Börjesson, and Schmidt (2015) found that self-efficacy to perform physical activity among middle-aged men was a stronger predictor of sustained engagement with physical activity compared to self-rated physical activity. Physical activity self-efficacy was also strongly and independently associated with cardiovascular events during 13-years of follow-up among this cohort who had no known cardiovascular disease at baseline. In Ireland, the Irish Longitudinal Study on Ageing (TILDA) found that 42% of men over 50 years reach the recommended physical activity guidelines (Donoghue et al., 2016) while the "Men's Health in Numbers" report found that 20% of males ages 75 years or older reach the recommended level of physical activity (Devine & Early, 2020). Beyond the risk of non-communicable disease, these are stark statistics for men's wellbeing considering that those that report lower levels of physical activity also report lower social participation, self-rated health, quality of life and higher loneliness scores. While individual lifestyle and behaviours such as smoking, alcohol use, diet and physical activity are important considerations in men's health, it is also important to acknowledge the interconnectedness of risk factors and not view these individual behaviours in isolation but rather to understand the underlying factors that are the driving force behind them in order to identify suitable

strategies and interventions that work to promote and enhance the wellbeing of men and society as a whole (White et al., 2011).

### 1.3.3 Social determinants of men's health

Individual behaviours contribute to an excess burden of ill-health in men. However, it is crucially important to understand that lifestyles are not simply the product of individual choice. Health studies in the last number of years have moved away from explaining differences in men's health based on these behaviours (White et al., 2011). Rather, studies have investigated the underlying causes framed within the social determinants of health and how gender relates to equity, exploring masculinity and how it impacts men's health, particularly in the case of more marginalised male subpopulations (Griffith, Bruce, & Thorpe, 2019; WHO, 2018b). Manifestations of gender are largely influenced by learning and adopting different behaviours (Martin & Ruble, 2010). Men and women are strongly influenced by their social context which, in turn, influences gender identity and subsequent gender roles, with early gender-normative influences of parents and peers having multiple and differing health consequences for girls and boys (Weber et al., 2019). Gender, unlike sex, is defined by sociocultural norms and what may be considered masculine or feminine behaviour may vary depending on cultural context (Keizer, Helmerhorst, & van Rijn-van Gelderen, 2019). Gender is therefore socially determined by a complexity of sociocultural factors (Vlassoff, 2007). This also underscores a crucial factor for consideration in health promotion and gender equity in health; that men are not a homogenous group and there are significant differences in the circumstances of males' lives, their health behaviours and their health outcomes impacted by behavioural, social and structural factors such as; age, ethnicity, culture, sexual orientation, socio-economic status and access to employment, education and policies to support male wellbeing (Weber et al., 2019; WHO, 2018c). It is the intersection of gender within these other socio-demographic variables that contributes to the wide-ranging health outcomes experienced by men. This strongly influences the gender gap in health in terms of morbidity and mortality and also the gap within and between genders in the same country (WHO, 2018b).

#### 1.3.4 Masculinity and men's health

Constructions of masculinity can exert significant influence on the wellbeing of men (Fleming, Lee, & Dworkin, 2014). These present as a set of attributes, values, functions and behaviours that are assumed to be essential to men in a specific culture (Kachel, Steffens, & Niedlich, 2016). Men who are socialised in traditional beliefs about manhood or align with dominant norms of masculinity can engage in poorer health behaviours and experience greater health risks (Fleming et al., 2014). Men who associate with the traditional social norm of the male breadwinner can experience more significant job strain and partake in potentially life-threatening work (Verdonk, Seesing, & de Rijk, 2010). Moreover, the positioning of the male as the breadwinner is often so deeply associated with masculinity that, despite the stress and responsibility that comes with it, men feel compelled to maintain this role independent of household need (Syrda, 2019). For instance, a U.S. study which used data from a longitudinal household survey of n=6,035 households, found that when controlling for total household income, predicted male psychological distress reached a minimum at a point where wives made 40% of total household income and reached highest level when men were entirely financially dependent on their partner (Syrda, 2019). This highlights both the stress men face when tasked with being the sole breadwinner and paradoxically the distress when being out earned by their wives.

The term 'hegemonic masculinity' defines ideal masculine attributes, as well as broader aspects of patriarchal societies (Connell & Messerschmidt, 2005). This system provides clear privileges for men and yet within these can fester vulnerabilities for men's own health and also risk for women and other more marginalised male populations of men (Pan American Health Organisation, 2019). Features of dominant masculinity such as self-sufficiency, rigid gender roles, heterosexuality, strength and stoicism, competitiveness and risk taking can determine how males engage with health and some characteristics such as aggressiveness and competitiveness contribute to dysfunctional relationships, violent and reckless behaviour, as well as addictions which can

significantly impact the wellbeing of men and their families (Fish et al., 2015; Pan American Health Organisation, 2019). Recent research also posits that men who exhibited higher overall traditional masculine ideology and gender role conflict were at an increased risk of contracting COVID-19 (Walther et al., 2022).

### *Masculinity, mental health and help-seeking*

Men who are socialised within dominant traits of masculinity are less likely than women to: perceive themselves at risk for illness; believe they have internal control over their health; contemplate changing unhealthy habits; and utilise health care (WHO, 2018b). Indeed, men access primary services far less than women and take far longer to receive or present with a diagnosis (Höhn et al., 2020). Men who adhere to traditional masculine norms are socialised in ways that reinforce rigid ideals of stoicism, independence, invulnerability, and avoidance of negative emotions (Yousaf, Grunfeld, & Hunter, 2015). Moreover, conformity to traditional masculine norms has been associated with suicidality and suicide attempts, depression in middle-aged and older males, alcohol and substance use, and negative attitudes towards help-seeking (Nicholas et al., 2022; Wong et al., 2017). Reasons why men access healthcare less frequently than women may be both cultural and biological as men are less likely to maintain continuity of healthcare compared to women who stay in the system more consistently due to contraception and childbearing (Carson, 2020). However men's general help-seeking patterns for physical, social or emotional issues that impact their wellbeing is largely influenced by masculinity and its intersection with other identities such as age, race, ethnicity and sexual orientation (Vogel & Heath, 2016).

Societal factors that exert influence on men's help seeking can manifest behaviours that are not conducive to seeking help such as; restrictive emotional expression, the perception that help-seeking is weak and embarrassing, the need for independence and control, gender role conflict, anxiety, fear and distress about using formal health services, poor communication and the perceived cost (time and monetary) in engaging with

health services (Yousaf et al., 2015). These barriers towards men's help seeking are indeed largely equated to deep-rooted social constructs of masculinity where gendered practices and behaviours conflict with reasons to seek help (O'Brien, Hunt, & Hart, 2005). Masculinity has a significant role to play particularly in relation to mental-health where men are more reluctant to seek help, often only doing so when at crisis-point, which may be one of the precipitating factors as to why men are more likely to die by suicide (Best et al., 2016; O'Donnell & Richardson, 2018). Indeed men are less likely to avail of therapy compared to women and research has identified elevated masculine role identity and male-typical externalising depression symptomatology as direct factors associated with reduced psychotherapy use in psychologically distressed men (Eggenberger et al., 2021). Stigmas related to mental illness are intensified for men as these, and the nature of help-seeking itself, represent to them a failure to uphold their perception of masculine traits, perceiving these emotions as 'feminine', further compounding their shame in their perceived lack of emotional strength and resilience (Cleary, 2012; Keohane & Richardson, 2017). The literature in the introduction to chapter 6 further discusses the influence of masculinity on men's health and help-seeking.

#### 1.3.5 The paradox of 'hard-to-reach' men

The literature highlights that responses to tackling men's health require recognition that the burden of ill health in men is caused by multiple complex factors. Moreover these are exacerbated for socially disadvantaged and hard-to-reach (HTR) cohorts (Health Service Executive, 2017). Introductory sections to chapter 3, 5 and 6 discusses in greater detail a particular need for men's health promotion to focus on men who tend to be more isolated from, or reticent about, accessing formal health services or social support networks due to geography, experiences of mental health issues, social disadvantage, unemployment, low educational attainment or changes in life course. These men are considered HTR in health endeavours and are at an increased risk of poorer health outcomes (Lefkowich, Richardson, & Robertson, 2015; WHO,



2018b). The evidence suggests that further efforts are required in men's health strategies to address the most vulnerable and HTR groups of men (WHO, 2018<sup>b</sup>). In particular, there is an urgent need to address a key paradox in men's health, whereby men who are most in need of intervention are least likely to engage with health services. The task for men's health promotion is to reach beyond the 'worried well' by designing innovative and tailored programmes targeted to specific subpopulation groups of HTR men.

#### **1.4 Moving beyond a deficit model of masculinity**

Resigning masculinity as the cause of the problems with men's health behaviour can reinforce negative stereotypes and further exclude men from health engagement by leading to practitioner biases (Mahalik et al., 2012). In fact, more recently there has been greater acknowledgement of the potential to align health promotion goals and behaviours with more traditional aspects of masculinity (Gerdes & Levant, 2017; Waling, 2018). The concept of masculinity should be considered within a more complex model of gender, recognising men and the variations in masculine identities as not hermetically sealed while also emphasising the interplay of geography of masculinities as well as the agency of women (Connell, 2012). A social constructionist understanding of masculinity posits that conforming to certain masculine norms can be beneficial, if not protective for health behaviours (Levant & Wimer, 2014). Currently health services are not adequately versed in gendered health services, nor do their resources reflect consideration of gender influences on health (Morgan et al., 2018). For instance, despite the known outcomes of higher burden of disease, male specific literature is significantly under-represented in health care facilities – a missed opportunity to provide targeted male health education and improve male health literacy (Whitehead et al., 2020). In the case of older men, aversion to health care may be compounded by its digitisation which can increase inequality between generations and among older men while increasing inequality in access to public services (Pirhonen et al., 2020).

##### **1.4.1 Recognising men's health in policy and programme design**

At a policy level, issues surrounding men's health often fail to receive adequate attention with issues of gender equality largely focusing on women (Baker, 2020; Smith, Watkins, & Griffith, 2020). Efforts to address gender issues at a health policy level have more typically fallen short in accounting for a true understanding of gender within policy design (Connell, 2012; Smith, Adams, & Bonson, 2018). These systemic issues as well as the failure to account for men across structural and social environments significantly impact men's ability to engage with health services. The COVID-19 pandemic, in particular, has drawn attention to longstanding neglect of men's health at policy level, globally, nationally, and locally. The disproportionate impact of the virus on men has been linked to men's lower immune responses and higher rates or pre-existing co-morbidities combined with gendered practices and behaviours related to masculinity (Baker et al., 2020; Gottert et al., 2022; Tharakan et al., 2022). On a more positive note, increasing focus has been mounting in the area of men's health in recent years at national and global level, both in policy and research into correlates and determinants that influence men's health and the need to address the burden of ill health in men (Health Service Executive, 2017; WHO, 2018c). Particular progress has been made in Ireland, Australia, Brazil and Iran, four countries which have developed national men's health policies that aim to enhance the wellbeing of men through a gendered approach (Department of Health and Ageing, 2008; Department of Health and Children, 2008; Esmailzade et al., 2016; Ministério da Saúde Brasil, 2008). These policies highlight significant progress in attempts to tackle inequalities in men's health and their refinement and attempts at integration into practice highlights the commitment to continue to improve the health and wellbeing of men, with a particular focus on health equity between different population groups of men (Australian Government Department of Health, 2019; Health Service Executive, 2017).

Internationally, the work of Global Action on Men's Health, awareness raising campaigns such as International Men's Day as well as the WHO European Region's men's health strategy for 53 member states highlights significant progress in establishing men's health as a priority area (Baker, 2020; WHO, 2018b). While there has undoubtedly been progress over the past twenty

years recent reports highlight that men's health still remains generally absent from policies and programmes at all levels while global gender equity policy often fails to acknowledge men or else position men and masculinities in a negative way (Baker, 2020; Smith et al., 2018; Smith et al., 2020). Prioritisation of men's health can be hampered by views that men experience privilege in terms of opportunities and access to resources and that focusing on men's health may further compromise health care for women and children (Carson, 2020). Notwithstanding the 'patriarchal dividend' (Connell, 2012) enjoyed by men, it is important to highlight that the process of improving men's health contributes towards greater gender equality in health as it not only benefits men but also has a profound impact on women, children and society (Carson, 2020; Pan American Health Organisation, 2019). Indeed, an equal focus on men, women and children's health could result in a reduction in healthcare costs by preventing chronic and advanced disease while reducing time lost from work, disability, and financial stresses on the family (WHO, 2018b). Recognising that improved men's health can benefit all of society also means leadership at policy level, capacity building at practitioner level and the identification of suitable strategies to engage men as well as more robust efforts to capture and evaluate their implementation (Smith et al., 2018; WHO, 2018b). It is imperative from a men's health equity standpoint that effective strategies are well documented and evaluated to promote systematic knowledge translation for practitioners and policy makers (Baker et al., 2020). The gender and health literature highlights the importance of recognising gender in the context of the design, development and implementation of gender-specific programmes targeting men, with particular attention to understanding male attitudes towards health behaviours (Ríos-González et al., 2021). A "one size fits all approach" towards health planning is not effective and there is an increasing need for gender-specific health promotion strategies that target lifestyle and health behaviour change in men (Robertson & Baker, 2016; White, 2020). The WHO (2018b) highlight the importance of 'gender responsive' approaches to effectively respond to men's (and women's) health needs. The responses exist within a hierarchy ranging from gender-unequal to gender transformative.

## **1.5 Gendered approaches to men's health**

Understanding the complexities of masculinities within the health systems and how men engage with and are impacted by them has determined a need for gender-specific approaches towards engaging men with health at policy and programme level, with a particular focus required on tailored and targeted interventions that encourage engagement of men (Baker, 2020; Lefkowich et al., 2015). Robertson and Baker (2016) suggest that when gender-specific strategies are embedded as part of the process, men can and will engage with health services. The focus on addressing gender inequality in health programming has become more clearly conceptualised as a gender-transformative approach (Ruane-McAteer et al., 2019). Gender-transformative approaches benefit men in broadening the interpretation of masculinity and the socially acceptable ways in which masculinity can be expressed. The WHO (2018b) recognise gender-transformative health promotion as a means to improve health outcomes by redefining harmful gender norms, challenging gender stereotypes and developing more equitable gender roles and relationships. Gender transformative interventions engage men to be reflexive and critical about their masculinity and to challenge and change gender-inequitable attitudes and behaviours (Casey et al., 2016; Fleming et al., 2014). Effective interventions that utilise gender transformative approaches, challenge unhelpful norms to make health engagement and help seeking among men more normalised within masculinities (Casey et al., 2016). On the other hand, health promotion initiatives that fail to take gender perspectives into account are usually less effective and may sometimes perpetuate gender stereotypes in a way that is counterproductive to achieving sustainable health outcomes and gender equality (Fleming et al., 2014; WHO, 2018b). The introduction to chapter 2 discusses the need for gender-specific approaches in more detail while the introduction to chapter 6 highlights the benefits of incorporating gender transformative approaches into programme design.

## **1.6 Men's Sheds as a setting for health promotion**

The use of community-based settings for health promotion have much potential to implement preventative health strategies and interventions that can ease the burden on health systems while employing gender-specific strategies that effectively engage vulnerable male populations with health (Olliffe et al., 2020). This setting allows a bottom-up, strengths-based, multi-sectoral approach that can effectively counteract the influence of more restrictive aspects of male-gendering on men's health behaviours in what men typically consider a safe and familiar environment (Milligan et al., 2015). The introduction to chapter 2 discusses the potential of the community setting to engage men, with reference to other successful men's health initiatives. Within the community, the positive function of men-only groups have been cited as a key determinant to the success of men's health initiatives (Staiger et al., 2020). Indeed, the Men's Sheds have long been recognised as a suitable setting in which to actively promote and engage men with health- building on their organic and inherent health promoting qualities (Wilson & Cordier, 2013). The introduction to each subsequent chapter (2-8) includes a discussion on the origins of Sheds and their utility as spaces for health promotion. In brief, Sheds originated in Australia and have since grown exponentially in Ireland. Sheds are autonomous grass roots spaces which offer Sheddors a safe and familiar environment. They foster a sense of social support, belonging, and camaraderie, while facilitating the development of new skills, shared projects, activities, goals and decision making (Golding, 2021; Lefkowich et al., 2015). All of these factors are conducive towards enhancing the health and wellbeing of the men who attend (Nurmi et al., 2018).

Research on Irish Men's Sheds has mirrored many of the findings internationally in that Sheds enrich the lives of their members through meaningful participation and continued learning, with an important role in supporting older men through difficult life transitions such as retirement and loss of a loved one (Carragher & Golding, 2015). Moreover, their informal nature makes them an attractive setting to typically HTR men. The inherent health promotion qualities of Sheds therefore present a strong foundation upon which to build structured health promotion programmes that engage HTR men in an accessible setting. However recent research has highlighted the

potential tension that may arise from imposing formal healthcare upon the informal setting of the Sheds, where its informality is an integral element to its inherent health promotion (Bergin & Richardson, 2020; Kelly et al., 2021a). Chapter 2 discusses this in further detail whilst exploring suitable pathways for health promotion in Sheds that do not compromise their integrity. While Sheddors have demonstrated an appetite for health promotion in Sheds and research suggests that the time is ripe to capitalise on this opportunity, it is critical that these endeavours do not erode the ethos of the Shed environment but rather enrich it. For this to happen programmes need to be pragmatically evaluated with Shed members at the centre of decision making (Bergin & Richardson, 2020; Kelly et al., 2021b).

### **1.7 Evaluating community-based programmes in partnership**

Beyond the need to strategically evaluate health promotion programmes in the Sheds whilst maintaining the integrity of the Shed environment and upholding the autonomy and respect of its members, there is a knowledge gap in the documentation and dissemination of effective gendered interventions that promote men's health (Bergin & Richardson, 2020; Foettinger et al., 2022; Sharp et al., 2022). In light of the limited availability of formally evaluated "men friendly" settings based health promotion programmes, there is also a need to address the underrepresentation of men in health promotion programmes and to increase the availability of research that can act as a blueprint for practitioners and policy makers (Olliffe et al., 2020; Robertson et al., 2016). Moreover, the National Men's Health Policy in Ireland has called for greater application of evaluation methods to provide a blueprint for future development of programmes which may support increased uptake and engagement from men in such programmes (Department of Health and Children, 2008). Baker (2015) also discusses how evaluation reports are an important contribution to the growing evidence-base needed in advancing men's health on policy agendas. Sharp et al. (2022) argue that there is a clear demand for community-based men's programmes but gendered approaches and evaluations are key to promoting their sustainability and scale-up.

In relation to Men's Sheds specifically, researchers have called for more strategic and longitudinal evaluation to understand what health promotion in Sheds might look like as well as to assess the Shed-health link (Bergin & Richardson, 2020; Foettinger et al., 2022; Kelly et al., 2021a). Nevertheless, it is also critically important that these strategies involve Shed members as central decision makers in the design and delivery of health promotion initiatives (Bergin & Richardson, 2020). Moreover, Sheds are highly variable, autonomous, non-structured spaces - the very characteristics that form the essence of Sheds and which need to be respected in order to uphold the integrity and ethos of the Sheds (Bergin & Richardson, 2020). The challenge therefore is to develop a pragmatic delivery design that can operate within an organic, non-structured space, where contextual factors vary, where attendance can be sporadic, and where there is no compulsion to undertake any activity. The methodology for this approach has been outlined in chapter 2.

#### 1.7.1 The role of community-based participatory research in programme design

Community-based participatory research (CBPR) has been described as a collaborative approach to research that offers opportunities to address and understand complex health and social problems (Minkler & Wallerstein, 2011). This approach is particularly attractive for academics and public health professionals struggling to address the persistent problems of health care disparities in a variety of populations (Viswanathan et al., 2004). Developed in equitable partnership with community members, organisational representatives, researchers and other stakeholders, CBPR seeks to include all those involved in the process through contributing expertise and sharing in decision making and ownership (Wallerstein & Duran, 2006). Minkler and Wallerstein (2011) argue that CBPR is not a method but rather an orientation to research that emphasises mutual respect which can be progressive in reducing disparities, building systems change and balancing research and action. The historical roots of CBPR are linked to the development of participatory action research (PAR) described as a paradigm of participatory

research raising challenges to the positivist view of science, the construction and use of knowledge, the role of the researcher in engaging society, the role of agency and participation of the community, and the importance of power relations that permeate the research process, and the capacity to become a more just and more equitable society (Israel et al., 2005; Wallerstein & Duran, 2006).

Previous research on Sheds has highlighted that there are implications for how working with an array of masculinities within the Men's Shed movement will be helpful to their future growth and engagement (Mackenzie et al., 2017). Similarly, research identified a need to integrate perspectives of the individuals, community and organisations with a gendered focus when developing strategies for capacity building aimed at creating and delivering programmes for men (Lefkowich et al., 2015). Those who employ CBPR have emphasised the importance of creating partnerships with the people for whom the research is ultimately meant to benefit (Jull, Giles, & Graham, 2017). Effective men's health programmes to date have also highlighted that, in order to engage men, and particularly those who are HTR, health promotion endeavours must include men in their decision making and encourage a collaborative process involving all key stakeholders; researchers, practitioners, participants and policy makers (Thorpe & Halkitis, 2016). Chapters 2 and 8 discuss the application of CBPR to the SFL evaluation in more detail as well the complementary role of embedded research.

#### 1.7.2 The application of implementation science

The CBPR approach employed by SFL is underpinned by implementation science. Implementation science encompasses many of the principles of CBPR such as; the engagement of key stakeholders to understand the contextual factors; capacity building within the inner setting; partnership in the research process; systems development through a cyclical and iterative process with a view to long-term sustainability, with both processes linked to improved knowledge translation (Israel et al., 2005; Jull et al., 2017; Koorts et al., 2018). Implementation science can be defined as:



“the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services. It includes the study of influences on healthcare professionals and organisational behaviour” (Eccles & Mittman, 2006, p.1),

Implementation science requires trans-disciplinary research teams that include members who are not routinely part of most clinical trials and therefore is complemented by participatory research approaches (Bauer et al., 2015). In order to promote the systematic uptake and sustainability of SFL across Sheds it is important to consider facilitators and barriers at all levels of implementation. The field of implementation science has developed in response to a gap in research and a lack of practical guidance on how to translate sound evidence-based interventions into practice (Eccles & Mittman, 2006; Powell et al., 2015). The challenges of implementing and sustaining these complex health interventions often emerge after tightly controlled efficacy trials are complete and conditions to disseminate and scale-up the interventions become much more variable (Koorts et al., 2018). This is particularly pertinent to consider in the context of Sheds where, before beginning to account for external determinants on health endeavours, no two Sheds share the same social or physical environment (Kelly et al., 2021a). Moreover, in public health and health promotion research to date, barriers and facilitators to implementation in practice, such as the delivery capacity of partners and organisations, are often only addressed once the intervention is ready for wider implementation (Peters et al., 2014; Proctor, Powell, & McMillen, 2013). This can often result in efficacious interventions failing to be adopted when applied to real-world settings (Rapport et al., 2018). There have been calls for research to begin to address this failure of translating evidence to practice by shifting the focus from tightly controlled interventions to evaluating those capable of implementation and scale-up from the outset (Koorts et al., 2018). Chapters 2 and 8 outline the application of implementation science to the SFL evaluation in detail.

### 1.7.3 Effectiveness-implementation designs

Landes, McBain, and Curran (2019) discuss how the traditional research pipeline has encouraged a staged approach to evidence-based intervention development that historically has focused on ensuring an intervention works under ideal conditions before considering translation into the real world. This leads to a time lag between development of an evidence-based intervention and translation into the real-world setting. While implementation science emerged to address this issue, there is still a delay when following the traditional route of efficacy-effectiveness-implementation. The speed of moving research findings into routine adoption can be improved by considering hybrid designs that combine elements of effectiveness and implementation research (Curran et al., 2012; Landes et al., 2019). Hybrid designs focus on the dual testing of both effectiveness of the clinical intervention and its implementation. The type of trial design is not dictated by the type of hybrid; meaning that many types of randomised and non-randomised studies can utilise this approach (Landes et al., 2019). Hybrid type 2 designs are ideal when there is momentum for implementation in terms of system or policy demands (Landes et al., 2019). A hybrid type 2 design allows for continued evaluation of the effectiveness of the intervention which could capitalise on the implementation occurring to evaluate the impact of implementation strategies. This is particularly relevant in the case of SFL where there have been calls to implement targeted health promotion in the Sheds supported by a rich landscape of men's health research and policy in Ireland (Baker, 2015; Bergin & Richardson, 2020; Department of Health and Children, 2008; Health Service Executive, 2017). Moreover, the potential effectiveness of health interventions is often reduced or poorly adopted because of multiple contextual factors that can act against its implementation in real-life settings (Koorts et al., 2018). Therefore, it should not be enough to know if a health intervention is effective, but rather the focus should also be on understanding why and how it is effective to ensure that the model can be translated across implementation settings (Proctor et al., 2011). Chapter 2 provides further detail on the literature in relation to this approach as well as the methods employed within this work and the combination of implementation frameworks used.

#### *1.7.3.1 Evaluating cost in implementation science*

Adjacent to assessment of clinical effectiveness is the assessment of cost effectiveness which is also a key outcome of implementation and determining suitability for scale-up (Milat et al., 2016). Cost in implementation science is understood as the cost impact of an implementation, the true cost of which depends upon the particular intervention, the implementation strategy used and the location of delivery (Proctor et al., 2011). Proctor et al. (2011) outline that measurement of implementation costs is essential for studies in real-world settings that can benefit from appealing to policy makers and funders by demonstrating cost-effectiveness. This is particularly relevant in the case where costs of the intervention may be compared with other alternative treatments or implementation strategies. Implementation costs associated with an intervention are also likely to impact the rating of acceptability of the intervention and costs are therefore important to measure in the remit of an implementation study where acceptability is a key priority (Lewis et al., 2015; Proctor et al., 2011). For policy makers and funders, it will be important to demonstrate the cost-effectiveness of SFL in the context of prioritising finite public funds. This is particularly pressing as there is a lack of evidence on the impact of men's health promotion in community settings, including in Men's Sheds, and with no available research to date on the economic evaluation of health promotion in Sheds (Bergin & Richardson, 2020; Kelly et al., 2021b; Vaughan et al., 2015). Chapter 7 further explores the benefits of evaluating cost in implementation science as well as the importance of demonstrating cost-effectiveness for men's health initiatives.

### **1.8 Summary and rationale**

The literature demonstrates a clear burden of ill health in men caused by a multitude of complex biopsychosocial factors, which yields wider ramifications beyond the health of men. In order to address gender inequality in health, positive movements towards the development of health promoting policies and strategies that account for the diversity within and between genders are critical to advancing population health. Evidence suggests that significant

improvements can be achieved if there is a focus on priority areas such as diet, physical activity, mental health and wellbeing, where multiple outcome measures are factored into the intervention design (Health Service Executive, 2017; WHO, 2018c; Wyke et al., 2015). Underpinning these priority areas is an impetus to understand the complex ways in which gender influences men's health behaviours and gendered approaches to engage men with health are therefore a vital foundational layer that must form the basis for men's health promotion. Interventions that assimilate gender transformative approaches and that normalise help seeking within the context of diverse masculinities are particularly progressive in advancing gender equality in health for both men and women (WHO, 2018b). Moreover in implementation science, research has called for the inclusion of theories such as postcoloniality and reflexivity that foreground attention to the role of power in knowledge production and to the ways that researchers and interventionists may perpetuate inequalities in health outcomes (Snell-Rood et al., 2021). This highlights the need for a CBPR approach and effective men's health programmes to date have also highlighted that, in order to engage men, and particularly those who are HTR, health promotion endeavours must include men in their decision making and encourage a collaborative process involving all key stakeholders; researchers, practitioners, participants and policy makers (Thorpe & Halkitis, 2016). Community-based men's health promotion approaches have demonstrated promise in engaging men within a non-clinical and familiar space (Carroll et al., 2018; Lefkowich et al., 2015; Patrick & Robertson, 2016; Robertson et al., 2013). This can be further enhanced by embedding researchers into the implementation setting which can encourage research co-production through knowledge exchange and alignment of findings with policy and practice needs (Wolfenden et al., 2017).

When drawing from what works in other effective men's health programmes that inform strengths-based and gendered approaches, the Men's Sheds setting is well-positioned to deliver targeted and tailored health promotion to a potentially HTR group of men that otherwise may not engage with health services (Bergin & Richardson, 2020). While, the Sheds have long been earmarked as spaces where structured health promotion can be delivered to

a HTR group of men, care must be taken when synchronising formal healthcare with the informal environment and ethos of the Shed- the very essence that makes them effective spaces for men (Bergin & Richardson, 2020). To date, there has also been limited evaluation on formal healthcare strategies within Sheds and there is also a need to determine effective implementation strategies that are appropriate to the Sheds setting, that are acceptable to Sheddors, and that can engage HTR men with health. Alongside the variable environment of the Shed, there is also a need to understand the complex intervening variables that act as back drop to implementation of SFL (Nilsen, 2015). Moreover, complexity is not just a property of the intervention but of the context or system into which it is placed, which includes multiple and dynamic interacting parts that generate nonlinear relationships (Hawe, 2015). Variables at the individual, provider, organisational and wider systems level need to be understood in order to identify a suitable delivery model for SFL that is translatable across delivery settings, is widely adopted across key stakeholder groups and is sustainable within the wider system. Alongside the need to identify a suitable initiative to engage men with health there is a lack of practical guidance on how to effectively implement and scale-up health interventions (Koorts et al., 2018). In the context of SFL scale-up is the deliberate effort to increase impact of SFL so as to benefit more Sheddors while fostering programme development on a lasting basis that may influence policy (Milat et al., 2016). This will involve assessing scalability requiring an evaluation of a range of considerations, including feasibility, acceptability, costs, sustainability and adaptability (Milat et al., 2020). As far as this literature has determined (see chapter 7), there has also been no economic evaluation of health promotion in Sheds and this will be a critical factor in justifying resources for SFL to policy makers and funders. The effectiveness-implementation design of this research (see chapter 2) aims to engage all key stakeholders in the development, testing and implementation and scale-up of SFL. It aims to investigate both the process and effectiveness of the SFL intervention with a focus on the key strategies involved in implementation and future scale-up to maximise reach to HTR men within the non-conventional settings of the Sheds and wider implementation environment. The evaluation focuses on early prioritisation of intervention planning and implementation

outcomes while including continuous active engagement from key stakeholders and assessing the intervention effects of SFL. This aims to encourage intervention development and adaptation of SFL that ensures broad and sustained implementation.

It is pertinent to note that the timeline of this research coincided with the COVID-19 pandemic. This pandemic further emphasised the need for men's health promotion programmes through evidence demonstrating that COVID-19 disproportionately affected males, particularly those from more vulnerable cohorts (Smith et al., 2020). An important goal of this research will be to identify the impact COVID-19 has had on the health and wellbeing outcomes of SFL participants in order to provide insights into key priority areas for Sheds and to also understand the impact of COVID-19 on the programme outcomes (see chapter 4). Findings from the SFL research generally, will have a significant role in determining the effectiveness, sustainability, and potential scale-up of the SFL initiative and, more broadly, in terms of the wider rollout of community-based programmes targeted at men.

The findings will make a significant contribution to knowledge by; identifying a suitable delivery model to engage men with health in Men's Sheds; demonstrating the impact of health interventions on health and wellbeing outcomes of Sheddors; determining cost-effectiveness of health promotion in Sheds; informing strategies that engage HTR men with health and wellbeing; highlighting how partnership and capacity building contributes to implementation and scale-up of health interventions, and identifying facilitators and barriers to implementation of community-based men's health promotion.

## **Chapter 2: Methodology**

This chapter outlines the protocol for the Sheds for Life evaluation and has been published as: McGrath, A., Murphy, N., & Richardson, N. (2021). Study protocol: evaluation of sheds for life (SFL): a community-based men's health initiative designed "for Shedders by Shedders" in Irish Men's sheds using a hybrid effectiveness-implementation design. BMC Public Health, 21(1). <https://doi.org/10.1186/s12889-021-10823-8>

Note: Supplementary material for this chapter as per publication can be found in the appendices: Appendix B, C & D.

## **Abstract**

**Background:** Men's Sheds ("Sheds") offer a unique opportunity to reach a captive audience of "hard-to-reach" men. However, attempts to engage Sheds in structured health promotion programmes must respect the ethos of Sheds as highly variable, autonomous, non-structured spaces. This paper captures the key methodologies used in "Sheds for Life" (SFL), a men's health initiative tailored to the Shed setting.

**Methods:** A hybrid effectiveness-implementation study design is used to test effectiveness and implementation outcomes across multiple levels (participant, provider, organisational and systems levels). A dynamic, iterative and collaborative process seeks to address barriers and translation into the real world context. Using a community-based participatory research approach and guided by established implementation frameworks, Shed members ('Shedders') assume the role of key decision makers throughout the evaluation process to promote the systematic uptake of SFL across Shed settings. The protocols pertaining to the development, design and implementation of SFL and the evaluation of impact on participants' health and wellbeing outcomes up to 12 months are outlined.

**Conclusions:** There is a dynamic interplay between the intervention characteristics of SFL and the need to assess and understand the diverse contexts of Sheds and the wider implementation environment. A pragmatic and context-specific design is therefore favoured over a tightly controlled efficacy trial. Documenting the protocols used to evaluate and implement a complex multi-level co-developed intervention such as SFL helps to inform gender-specific, community-based men's health promotion and translational research more broadly.

**Trial registration:** This study has been retrospectively registered with the 'International Standard Randomised Controlled Trial Number' registry (ISRCTN79921361) as of the 5th of March 2021.

**Keywords:** men's health, gender-specific, community, implementation, evaluation, health promotion, physical activity, Men's Sheds



## 2.1 Background

### 2.1.1 Men's health – the need for gender specific approaches

Despite an increased emphasis on 'the problem' of men's health in recent years, men remain disproportionately impacted by ill-health and premature mortality (WHO, 2018b). There have been calls for more gender-specific health promotion strategies that target lifestyle and health behaviour change, particularly to so called 'hard-to-reach' (HTR) groups of men (i.e. those who are unemployed, socially disadvantaged, isolated and have low educational attainment; Griffith et al., 2019). Paradoxically, these same groups are frequently the least likely to engage with health promoting initiatives (Carroll, Kirwan, & Lambe, 2014; Curran et al., 2016). Early research into men's health highlighted men's avoidance of health promotion and health services as a consequence of aligning to more traditional traits of masculinity such as stoicism, self-reliance and competitiveness (Oliffe et al., 2019). More recently, the focus has shifted to positioning gender within a wider social determinants of health or intersectional context to better understand how gendered patterns of health behaviours are shaped by particular environmental, economic and socio-cultural contexts (Robertson & Baker, 2016). Such an approach acknowledges that men's poor health outcomes reflect a multiplicity of factors that cut across all rungs of the social ladder and are exacerbated for vulnerable groups of socially disadvantaged or HTR men (Baker, Francis, Soares, Weightman, & Foster, 2015). In fact, the biggest challenge for men's health promotion is to better understand the complex biopsychosocial factors that influence men's health in order to more effectively engage the most vulnerable men with health and well-being initiatives (Salgado, Knowlton, & Johnson, 2019; Thorpe & Halkitis, 2016). Gender-specific approaches to health promotion need to account for the intersection between gender and other aspects of identity in designing tailored and targeted interventions that encourage men to engage (Baker, 2020; Lefkowich et al., 2015). This approach also aligns more broadly with global health policies and priorities relating, for example, to the Sustainable Development Goals and reducing the burden on health systems (WHO, 2018b, 2018c), and can also therefore be

considered a strategic way of gaining momentum and support from policy makers and funders (Baker, 2020). However, global gender equity policy still often fails to acknowledge men or else to position men and masculinities in a negative way, thereby creating challenges in translating knowledge into practice (Smith et al., 2020). Within the Irish context there have been progressive movements to advancing men's health equality. This is evident in a rich landscape of men's health research and practice work that has emerged within Ireland in recent years (Baker, 2015), underpinned by a national men's health policy (Department of Health and Children, 2008; Health Service Executive, 2017) and the roll-out of a national men's health training programme (Lefkowich et al., 2018; Osborne et al., 2016). These serve as an important back- drop for men's health promotion.

#### 2.1.2 Community-Based Men's Health Promotion in Men's Sheds

The non-clinical nature of the community setting is recognised as a key enabler of men's engagement in health promotion programmes (Carroll et al., 2014). This setting allows a bottom-up, strengths-based, multi-sectoral approach that can effectively tackle the influence of more restrictive gender norms on men's health behaviours, as well as providing men with a safe and familiar environment (Milligan et al., 2015). A range of additional gender-specific strategies have shown significant promise in engaging men, including; seeing men as partners, delivering key messages through informal approaches, identifying and utilising a 'hook' to engage men at buy-in stage, promoting positive social interaction and support, connecting more traditional masculine ideals (autonomy, control, resilience) with being healthy, using testimonials and peer support to encourage other men to take ownership of their health, actively seeking to promote camaraderie and team spirit, and drawing on language and styles that are relatable, (Lefkowich et al., 2015; Patrick & Robertson, 2016; Robertson & Baker, 2016). These strategies are reflected in recent community based men's health programmes such as; Men on the Move (Kelly et al., 2019a), the HATRICK programme (Caperchione et al., 2017), Famers have Hearts (van Doorn et al., 2020) and Football Fans in Training (Wyke et al., 2015). Utilising community settings for health promotion

interventions while applying gender-specific strategies to engage more vulnerable male population groups, offer much potential in terms of easing the current burden on health systems (Olliffe et al., 2019). These programmes provide a useful roadmap in designing and implementing health promotion in the Men's Shed setting. Sheds are a community-based, grassroots movement which originated in Australia and have since grown exponentially in Ireland. Sheds have long been recognised not just as a suitable setting in which to actively promote and engage men in health but also as being imbued with inherent and organic health promoting qualities (Wilson & Cordier, 2013). Sheds are autonomous grass roots spaces which are non-structured and informal, varying in size and resources. Sheds offer a safe and familiar environment for Shed members ('Shedders') and foster a sense of social support, belonging and camaraderie, through developing new skills, shared projects, activities, goals and decision making (Lefkowich & Richardson, 2016). All of these factors have been linked with enhancing the health and wellbeing of the men who attend with social support, in particular, being frequently reported as a key enabler of men's help-seeking (Fish et al., 2015). The enhanced sense of belongingness that is attributed to the non-conventional setting of Sheds increases their appeal to typically HTR men (Bergin & Richardson, 2020; Golding, 2015). This is also the case in more recent research which suggests that the Sheds have a protective effect against loneliness (McGrath, Murphy, & Richardson, 2020). The inherent health promoting qualities of Sheds therefore present a strong foundation upon which to build structured health promotion programmes. Moreover, drawing from a rich source of past interventions that utilised strengths-based and gender-specific approaches, the Men's Sheds setting is well-positioned to deliver tailored, targeted health promotion initiatives to what has been traditionally regarded as an inaccessible cohort of HTR men (Bergin & Richardson, 2020). Nevertheless, it is also critically important that such endeavours enrich rather than erode the ethos of the Shed environment, which means that programmes need to be pragmatically evaluated with Shedders at the centre of decision making (Bergin & Richardson, 2020; Kelly et al., 2021b). Conventional wisdom dictates that health interventions need to be delivered systematically, to be context free, with strict inclusion criteria. However, Sheds are not just highly

variable, autonomous, non-structured spaces; these are the very characteristics that define the essence of Sheds and which need to be respected in order to uphold the integrity and ethos of the Sheds. The challenge therefore is to develop a pragmatic delivery design that can operate within an organic, non-structured space, where contextual factors vary, where attendance can be sporadic, and where there is no compulsion on members to undertake any activity.

### 2.1.3 Implementation Science and the need for Pragmatic Evaluation

Preserving the integrity of the Shed environment and upholding the autonomy and respect of its members are key priorities that underpin any attempts to strategically evaluate health promotion programmes in Sheds. Findings from such evaluations are important in order to address the underrepresentation of men in health promotion programmes and to increase the availability of research that can act as a blueprint for practitioners and policy makers. It is important to capitalise on strengths-based and gender specific approaches by carrying out robust formal evaluations of these programmes (Olliffe et al., 2019; Wilson & Cordier, 2013). Furthermore, there is a lack of practical guidance on how to effectively plan, implement and scale up health interventions more broadly. Strategic and pragmatic evaluation endeavours encourage systematic uptake of effective interventions in real world settings, such as the Sheds, through limiting translation issues that can typically occur and prevent wider implementation of efficacious trials (Peters et al., 2014). The challenges of implementing and sustaining health interventions in real world settings often emerge after tightly controlled efficacy trials are complete and conditions to disseminate and scale-up the interventions become much more variable (Bauer et al., 2015). A criticism of public health and health promotion research to date, is that barriers and facilitators to implementation in practice, such as the delivery capacity of partners and organisations, are often only addressed once the intervention is ready for wider implementation (Rapport et al., 2018). The result, often, is a failure to adopt and apply efficacious interventions to real-world settings. There have been calls for research to overcome this failure

to translate evidence to practice by shifting the focus from tightly controlled interventions to evaluating those capable of implementation and scale-up from the outset (Koorts et al., 2018). The use of implementation science in the evaluation of health programmes can be valuable in identifying barriers to, and facilitators of effective implementation. By employing an iterative and collaborative process that engages with all key stakeholders across the implementation environment, it is more feasible to transcend barriers and translation issues in a pragmatic and dynamic way (Koorts et al., 2018).

Whilst it is imperative to capture the ‘active ingredients’ of implementation and how they relate to each other, this can be challenging with more complex interventions (Medical Research Council, 2000). It is important to remember that complexity is not just a property of the intervention but of the context or system into which it is placed, which includes multiple and dynamic interacting parts that generate nonlinear relationships (Hawe, 2015). Therefore, the potential effectiveness of health interventions is often reduced or poorly adopted because of multiple contextual factors that impact upon their implementation in real-life settings, such as the Sheds. In other words, knowing a health intervention is effective is not enough; there also needs to be a focus on understanding why and how it is effective to ensure that the model can be translated across implementation settings (Proctor et al., 2011). Hybrid-typology evaluation designs can therefore be a useful guide towards the dual testing of both clinical and implementation effectiveness particularly for community-based and real-world projects that can benefit from more rapid translational gains, more effective implementation strategies, and more useful information for decision makers (Curran et al., 2012). This is particularly true of the Sheds setting where there exists a unique, naturally occurring opportunity to access a cohort of HTR men but where effective implementation strategies are critical within the variable, capricious, unstructured Shed environment. This paper addresses an important gap in the literature by applying an implementation lens to the evaluation of a community-based men’s health promotion programme using gender-specific approaches. The paper details the methodology used in the design, implementation and evaluation of the SFL programme. Specifically, it tracks the process of

engaging men and delivery partners in SFL and sustaining their engagement over time, and it details the methods used to evaluate the impact of participation in SFL on various aspects of health up to 12 months.

## **2.2 Methods**

### **2.2.1 Development of the “Sheds for Life” Intervention in Men’s Sheds**

The concept of SFL was first developed in 2016 in response to a commitment from the representative body for Sheds (Irish Men’s Sheds Association; IMSA) to prioritise health initiatives for its membership. Prior to the implementation of a structured SFL programme, the IMSA embarked on scoping work at various Shed ‘Cluster meetings’ (regional information-sharing meetings with multiple Shed representatives). The purpose of this was to engage with Sheddors on their health needs and their preferences for types of health promotion interventions in Sheds. This process confirmed that there was an appetite from Sheddors for more structured health promotion that built on the inherent health promoting qualities of the Shed. The IMSA developed partnerships over time through on-going collaboration with various service provider organisations who were actively seeking to reach HTR groups of men in their health promoting endeavours and who had the capacity to deliver health and wellbeing components in the Sheds setting. This resulted in the piloting of a range of discrete health promotion initiatives in Sheds and to the emergence of SFL as a potential future health promotion programme for Sheddors. In order to ensure that the goals of the IMSA and partner organisations aligned with Sheddors’ needs, a research study was conducted at this time with key stakeholders (Sheddors, IMSA, partner organisations) to explore their experiences of the SFL pilot programmes, and to reach consensus on an acceptable and respectful approach to deliver SFL in the Sheds (Bergin & Richardson, 2020). The research found that respecting the Shed environment and its inherent health promoting values was critical to the acceptability of SFL. Involving Sheddors in the decision making process of SFL, respecting the autonomy of the Sheds and tailoring SFL to the variable and individual settings of the Sheds were also highlighted as key priorities for Sheddors. A fundamental requirement was to define a clear strategy and “rules of

engagement” for implementing SFL and that those delivering elements of SFL understood and valued the ethos of the Sheds and its members (Bergin & Richardson, 2020). Informed by this research, the IMSA developed a strategy document (“Guidance for Effective Engagement with Men’s Sheds”) to support health promoting organisations and professionals to respond and engage effectively with Shedders through SFL (IMSA, 2018a). The document included a training workshop to support implementation of the guidelines during SFL delivery. In June 2018 the Irish Research Council awarded an Employment-Based postgraduate scholarship to support the formal evaluation of SFL. Over time, SFL evolved into a partnership network comprising the IMSA, academics, an advisory group (consisting of men’s health promotion specialists and twelve allied service provider partner organisations), along with representation from Shedders.

#### 2.2.2 SFL Programme Design

The findings of the SFL scoping study (Bergin & Richardson, 2020) guided the decision to structure SFL into a ten-week programme, which sought to deliver targeted and tailored wellbeing and life skill components to the Sheds. Four core components were identified aligning with the key pillars of the Healthy Ireland Framework and Healthy Ireland Men, including healthy eating, physical activity and mental health (Department of Health, 2013; Health Service Executive, 2017). Several optional components to accompany the core components were also developed to which Sheds could self-select, aligning with the needs of Shedders and the skillset of provider organisations (See Table 1 for an outline of SFL structure). This format was viewed by programme providers as being long enough in duration to encourage positive and sustained behaviour change, whilst from Shedders’ perspective, it also respected the fluid nature of Sheds in which a longer programme might conflict with Shed routine. Moreover this structure was pragmatic enough to consider whether SFL was feasible in the real-world, capricious Shed environment while prioritising future sustainability within existing funding structures (QualRIS, 2019). This structure and format were also informed by what worked in other programmes in Ireland with similar cohorts of men within community settings

(Kelly et al., 2019a; Richardson, Dunne, & Clarke, 2010). Notwithstanding an agreed overall programme structure, careful attention was paid to how this worked in practice through a process of engagement with key stakeholders via formal and informal meetings, phone calls and emails which were ongoing through the pre-implementation and implementation phases of SFL. From January 2018 to January 2021, formal quarterly review meetings occurred with key stakeholders, at least twice weekly meetings took place between the health and wellbeing team responsible for co-ordinating SFL and the principal researcher, approximately 40 meetings occurred with individual provider organisations, and monthly report meetings took place with funding bodies, alongside quarterly financial reports.

**Table 1: 2.1 Structure of SFL phase 1 including workshops in development for phase 2 delivery**

<b>Core Components of SFL</b>			
<b>Programme Component</b>	<b>Description</b>	<b>Duration</b>	<b>Lead Provider</b>
<b>Health check</b>	Health check by a registered nurse in a mobile health unit at the Shed measuring; Blood pressure, HR, cholesterol, carbon monoxide, weight, waist and body mass index	30 minutes at baseline	The Irish Heart Foundation
<b>Healthy Food Made Easy</b>	Basic nutrition & cookery course led by a trained facilitator	2.5 hour workshops for 6 weeks	The Health Service Executive (HSE)
<b>Mental Health &amp; Wellbeing in the Community</b>	Mental health and promoting positive wellbeing led by community development officer	4 hour workshop (Available in 2 x 2 hour session format)	Mental Health Ireland
<b>Sheds choose one of the two following physical activity programmes:</b>			
<b>Exercise for Shedders</b>	Exercise class to maintain posture, strength, flexibility, balance & general physical capabilities led by qualified physical trainer	1 hour exercise class for 10 weeks	Siel Bleu Ireland
<b>OR</b>			
<b>Sheds ag Siúl*</b>	Guided walking programme led by local sports partnership officer	1.5 hours every second week across the 10 week programme	Get Ireland Walking
<b>Optional components of SFL**</b>			
<b>Diabetes: Living Well,</b>	Workshop on diabetes awareness and management led by qualified diabetes specialist	1.5 hours single workshop	Diabetes Ireland



<b>Being Well Workshop</b>			
<b>'Hands for Life' CPR Training</b>	Workshop on performing CPR in the community led by CPR trainer	1 hour single workshop	Irish Heart Foundation
<b>Oral Health</b>	Workshop on oral health awareness and maintenance led by dental nurse	1 hour single workshop	Dental Health Foundation Ireland
<b>Cancer Awareness</b>	Workshop on cancer awareness & reducing the risk of male-related cancer led by cancer prevention officer	1 hour single workshop	Marie Keating Foundation and Irish Cancer Society
<b>safeTALK</b>	Workshop on how to help prevent suicide by recognising signs, engaging someone and connecting them to an intervention resource for further support led by suicide prevention trainer	4 hours single workshop	National Office for Suicide prevention Ireland
<b>Getting online computer training</b>	Beginners course on getting online & using devices led by trained community mentor	5 x 2 hour sessions	Age Action Ireland
<b>Optional workshops in development for phase two delivery***</b>			
<b>Dementia Awareness</b>	Workshop to promote awareness of dementia signs, symptoms & risk factors & communication tips to support Sheddars with early stage dementia in the Shed led by dementia advisor	1 hour single workshop	Dementia Understand Together & The Alzheimer society of Ireland
<b>Bereavement and Loss</b>	Workshop to explore different forms of bereavement and loss as well as coping strategies for men led by bereavement specialist	TBC	TBC
<b>Sexual Health</b>	Workshop to explore male sexual health and relationships led by sexual health promoter	TBC	TBC
<p><b>* Sheds ag Siúl : Walking component ('ag Siúl' Gaelic term for 'walking')</b></p> <p><b>**Sheds select 2-3 optional components tailored to their Shed preference in addition to core components</b></p> <p><b>*** Sheddars expressed a need during phase one implementation for new topics to be added to SFL &amp; workshops that encompass these are currently in development for phase two</b></p>			

Although currently structured as a ten-week intervention with both core and optional components, SFL was designed as a flexible, dynamic programme, subject to ongoing adaptation to meet evolving needs. This meant that the SFL implementation strategy also needed to be flexible to accommodate new provider organisations over time in response to new or evolving requirements and preferences from Sheddors. Thus, the structure and partnership network of SFL inevitably evolves and grows over time. Whilst this presents certain challenges, it can also be seen as a strength of the programme, not least in terms of its potential to remain fresh and contemporary. It is heavily invested in a partnership network that recognises the value of SFL and respects the ethos of Sheds. Also, SFL adopts a sustainable delivery model in that it is delivered under real-world conditions, where service provider organisations undertake SFL delivery as part of their routine work plans - as opposed to short-term (and often unsustainable) grant funding. That said, finite resources both in terms of a limited implementation workforce and competing priorities among provider organisations, demand that a prudent approach is taken to matching Sheds' needs with programme offerings. The collaborative foundation of SFL where all key stakeholders are involved in decision-making is therefore an important consideration which can inform implementation outcomes and identify evolving implementation barriers and facilitators for early prioritisation.

### 2.2.3 Engagement of HTR men using gender-specific implementation strategies

Health promotion initiatives that fail to incorporate gender perspectives into their implementation plans are usually less effective and, at worst, can perpetuate gender stereotypes that are not conducive to positive wellbeing (WHO, 2018b). The underpinning vision of SFL is to normalise conversations about health and wellbeing in Sheds and encourage help seeking, a vision that potentially conflicts with traditional norms of masculinity that are often regarded as being characteristic of more HTR groups (WHO, 2018b). Central to this approach is the positioning of Sheddors as key stakeholders alongside provider organisations, researchers and the IMSA. This acknowledges

Shedders as active participants in the overall process - from programme design to implementation to evaluation and indeed to informing strategies more broadly to engage HTR men in health. This also means investing in relationships, establishing credibility and tailoring new programmes around the needs of individual Sheds (Bergin & Richardson, 2020). The implementation of the ten-week SFL format and application of implementation frameworks (see implementation research design) to guide the engagement process, also facilitates acceptability and optimises recruitment, participation and engagement in SFL.

The design and delivery of SFL draws heavily on established gender-specific approaches as outlined in section one of the introduction. These strategies are layered upon the male-specific, safe, familiar environment and sense of social support that is organic to Sheds. Among the key gender-specific strategies that are adopted for SFL are to (i) offer the programme free of charge, thereby removing cost barriers; (ii) provide a comprehensive health check as a “hook” to engage men; (iii) use non-typical health related components such as digital literacy and CPR as additional hooks to engage those less reluctant to sign up to a more conventional health programme; (iv) offer each Shed the choice (via an expression of interest form) to self-select into the programme based on Shed consensus, facilitating a sense of ownership, autonomy and control; (v) offer each Shed a selection of choice-based components, facilitating individual Shed preferences and further enhancing a sense of control and autonomy; (vi) use an informal and interactive delivery style to maximise engagement and enjoyment of the programme; (vii) foster an environment of openness and peer-support between participants; (viii) create a non-competitive and relaxed environment where participants engage at their own pace; and (ix) visit each individual Shed in advance of the programme commencing, to brief Shedders on the programme, to build a sense of rapport and trust, and to assess the Shed environment’s suitability to participate in the programme (including adaptations needed to facilitate this). Sheds for Life is described to prospective participants as a programme “for Shedders by Shedders”. Prospective participants are encouraged to see themselves as pioneers, actively shaping the programme through their participation and paving the way for future

delivery and scale-up of the programme. Reinforcing Sheddors' sense of ownership of the programme is designed to build safety and trust, and to reassure participants that SFL is not being implemented to undermine the routine environment and ethos of the Sheds, a critical factor in gaining acceptability at Shed level.

#### 2.2.4 Ethics, Consent and Data Management

The study received ethical approval from Waterford Institute of Technology Research Ethics Committee (REF: WIT2018REC0010). This study has also been registered with the 'International Standard Randomised Controlled Trial Number' registry (ISRCTN79921361). During Shed visits, all participants have the details of the research clearly explained to them through verbal and written instruction and informed written consent is obtained by a member of the research team prior to participation in the research. Confidentiality of participants is ensured through the study's compliance with Waterford Institute of Technology's protection policy. Namely, all personally identifiable materials, such as consent forms, will be stored securely within the Institute. These will be stored separately from the transcribed research data and questionnaires, and only accessible by named researchers. All data sets will be kept on a password protected computer. Personal identifiable data will be retained for five years and then appropriately destroyed. Research data will be fully transcribed and anonymised, all details on identity, will be removed and replaced with de-identified information or pseudonyms. All enrolled participants will be allocated a unique study ID and the information linking their ID to their personal information will be held securely at Waterford Institute of Technology. All intervention content will be run under the guidance and training of IMSA by qualified external partners. Therefore, the risk to persons is not directly linked to this research. However, all SFL partners are adequately insured and qualified to run elements of SFL and engage in a screening process with participants to assess their ability to partake in the intervention for safety purposes. Screening elements of SFL will be run by registered nurses from the Irish Heart Foundation. Other practitioners working directly with participants are trained in first aid and also will complete Guidance training

for working effectively within the environment of the Sheds. Topics covered in discussions or during questionnaire administration leave a small but important risk of participants becoming distressed. In case of such an event the distress of the participant will be ascertained, and the participant offered a break from the interview or to suspend the interview as appropriate. If a participant becomes distressed the researcher will stay with them until their distress reduces, or if their distress persists, the researcher will signpost them to an appropriate community support service. The researcher will report any issues of concern to the project supervisors and the IMSA.

#### 2.2.5 Effectiveness-Implementation evaluation design

The SFL study adopts an implementation science focus. This approach strives to incorporate a broader scope than traditional clinical effectiveness alone; to focus not only on individual or participant level but also on how service provider, organisation, and wider systems impact implementation (Bauer et al., 2015). Successful implementation should be considered in light of a variety of factors including the effectiveness of the intervention to be implemented alongside implementation outcomes (Proctor et al., 2011). For these reasons, a hybrid type-two effectiveness-implementation study design was chosen. This means dual testing of effect and implementation outcomes of SFL in order to pragmatically promote translation into the real world context from the outset while also providing more valid estimates of potential effectiveness in the implementation setting of the Sheds (Curran et al., 2012). In order to assess implementation outcomes and address barriers and facilitators to effective implementation, a community-based participatory research approach was adopted to involve key stakeholders across implementation levels (Koorts et al., 2018). Mixed methods are used to assess both implementation and effectiveness outcomes, which are described in detail in the following sections (See Table 2). The following sections outline the research design. Part 1 details how effectiveness of SFL is evaluated and Part 2 describes how the SFL implementation is evaluated.

## **2.3 Part 1: Evaluating the effectiveness of SFL – Research Design**

### **2.3.1 Overview**

Phase one of SFL encompassed the first delivery of the programme in Sheds. Following assessment of the implementation environment, namely the capacity and resource constraints of provider organisations to deliver SFL along with the nuances, ethos and autonomy of the inner (Sheds) setting, the SFL ten-week intervention was implemented on a phased basis across two cohorts comprising two counties in each cohort with a view to delivering Phase 2 as a single cohort across a further four new counties (i.e. Phase 1 (4 counties, two cohorts); Phase 2 (4 counties, one cohort); see participants and sampling). A mixed methods approach was applied to assess the impact of SFL Phase 1 testing on the biopsychosocial health of participants up to 12 months. This consisted of focus groups, interviews and questionnaires assessing health outcomes.

### **2.3.2 Participants and sampling**

Respecting the autonomous and informal environment of the Sheds is an important factor in delivering health promotion through Sheds (Bergin & Richardson, 2020; Lefkowich & Richardson, 2016). Therefore, Sheds are recruited to participate in the SFL programme and evaluation via purposive sampling using an expression of interest process with the objective to deliver SFL in a diverse range of Shed settings (small/large, urban/rural). All adult males in the Sheds setting were eligible to participate in the study providing they had good proficiency of the English language and could give informed consent. A sample size estimation was undertaken using G\*Power 3.1.9.2 software using physical activity (PA) as the key outcome measure, whereby it was calculated that 106 participants would be required for a trial in which participants were individually randomised (the decision to use PA as the primary outcome measure was determined through consultation with Sheddors who requested that PA be a key focus of SFL during the initial pilot phase). However a clustered design in which SFL was delivered to small clusters of men within Sheds was more preferable to honour the Shed ethos

whilst also ensuring a wide geographical spread. For this reason a design with circa 20 men in each cluster was estimated. A previous study with middle-aged men suggested that this design effect is  $\sim 2.4$ , thus increasing the sample size required to 255 (Carroll et al., 2018). Allowing for a 20% dropout based on a sample size estimation, the final total required was 306 or 15 clusters. In the event of low participation within clusters, it was decided that SFL would be targeted at clusters with similar representation. In Phase 1, 421 Sheddars participated across 22 clusters and these were divided into two cohorts. Whilst delivery occurred in the first cohort (n=12 clusters; n=212 Sheddars) a wait list control cohort served as a comparator (n=3 clusters; n=86 Sheddars) and these were a subset of the second cohort (n=9 clusters, n=209 Sheddars). Fourteen clusters were in urban areas and 8 were in rural areas across counties; Kildare (in Ireland's mid-east region with a population of ca. 222,504), Waterford (in Ireland's south-east region with a population of ca. 116,176), Limerick (in Ireland's south-east region with a population of ca. 194,899) and Louth (in Ireland's mid-east region with a population of 128,884) (Central Statistics Office, 2017). Participants were recruited for Phase 1 across Waterford and Kildare in March to May 2019 and Limerick and Louth in September to December 2019. Participants for Phase 2 will be recruited from September to December 2021 (recruitment was postponed until this date due to COVID-19 restrictions).

Purposive sampling was also used to conduct formal focus groups (n=8) with participating Sheds in Phase 1. This qualitative study seeks to gather a diverse representation of Sheddars' experiences of SFL to complement quantitative findings including changes in knowledge, attitudes and behaviours. Informal short interviews (n=16) were also conducted ad-hoc during Shed visits in Phase 1 to further inform Sheddars' experiences of SFL.

### 2.3.3 Evaluating the effectiveness of SFL- Data collection

Questionnaires are administered to participants by a research team member trained in data collection procedures to ensure standardised measurement and questionnaire administration. Questionnaires are administered one-to-one in the Sheds setting to account for potential literacy issues, prevent

respondent burn-out, limit missing data and build rapport and trust between the researchers and Sheddors. To also minimise missing data, participants will be contacted by the IMSA in the days before the research team visit the Sheds to perform data collection. Due to the informal nature of the Sheds, absence of data for a participant does not necessarily indicate dropout from SFL. During 6 and 12 month follow-up in Phase 1, Cohort 2 were experiencing COVID-19 restrictions and therefore questionnaires were administered via phone in order to promote participant retention and complete follow-up. The questionnaire was designed via a consultation process with stakeholders involved in the design and delivery of SFL with a view to optimising acceptability for SFL participants and also SFL providers who were interested in evaluating their individual components of SFL. Participant demographics are recorded at baseline and include date of birth, living arrangements, educational attainment, employment status relationship and ethnicity. Participants are also asked how long they had been a Shed member and how often they attend the Shed. Core health and wellbeing outcomes measured at all-time points up to 12 months consist of; subjective wellbeing, help-seeking, physical activity, mental wellbeing, diet and cooking skills, social capital and self-efficacy. Participants are also asked how often they seek information about their health.

Self-rated health is measured using a single question Likert scale with high reliability among older men (Lundberg & Manderbacka, 1996). The single-item PA measure is used to record PA levels (Milton, Bull, & Bauman, 2011). The Self-Efficacy for Exercise Scale (SEE) is used to measure physical activity self-efficacy (Resnick & Jenkins, 2000). Life worth and satisfaction are recorded using the Office of National Statistics subjective wellbeing 11-point scales (Office for National Statistics, 2015). Mental wellbeing is measured using the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS) with raw to metric score conversion where a change of 2+ is considered relevant (Stewart-Brown et al., 2009). Loneliness is measured at all-time points using the UCLA 3-item scale measuring three dimensions of loneliness; relational connectedness, social connectedness and self-perceived isolation, with participants also asked at baseline to retrospectively rate their loneliness prior to joining the shed (Russell, 1996). Social Capital is measured based on



relevant recommendations from WhatWorksWellbeing (Whatworkswellbeing, 2018), capturing trust, belonging and close support. Interpersonal trust is measured using the Office of National Statistics 11-point scale (Office for National Statistics, 2015). Lifestyle behaviours are also recorded - smoking (number smoked per day) and alcohol consumption (days drinking and units consumed per drinking session). Assessments of cooking and healthy eating behaviours are developed in conjunction with the partner organisation delivering the Healthy Food Made Easy component of SFL. Participants are asked about their levels of daily fruit and vegetable consumption, cooking style, cooking frequency and willingness to cook. Confidence constructs around cooking and healthy eating are measured via a 12 item Likert scale ranging from “not at all confident” to “very confident”. The questions were adapted from a protocol for community-based cooking interventions which were developed at a lower literacy level with varying levels of literacy among participants in mind (Garcia et al., 2017). The constructs used to assess cooking and healthy eating were previously validated (Barton, Wrieden, & Anderson, 2011). See Table 2 for effectiveness outcome measures including optional components.

Semi-structured topic guides were developed for focus groups and short interviews. These were designed using a hybrid deductive-inductive approach applying implementation frameworks to assess implementation outcomes but also to allow room for exploring attitudes towards SFL, changes in knowledge and behaviours. A constant comparison process is being used to refine and adapt topic-guides to reflect new themes to be explored as SFL evolves across implementation settings.

#### 2.3.4 Evaluating the effectiveness of SFL- Data analysis

Questionnaire data is analysed using Statistical Packages for the Social Sciences (SPSS V 25). Descriptive statistics for each variable are calculated to inform participant characteristics. Intervention effect on health and wellbeing outcomes are determined by comparing the change scores from baseline to 3, 6 and 12 months, comparing data using inferential tests to identify significant differences set at  $p=0.05$ . Analysis of subgroups based on criteria such as;

Shed size location and timing of the intervention, will also be performed to identify significant differences in intervention effect between groups. Outcome data obtained from all participants are included in the data analysis, regardless of adherence to SFL. The intervention effects will be assessed at 3, 6 and 12 months based on those who completed follow-up at these time points. Assuming a worst case scenario for absentees i.e. that absentees failed to achieve a significant improvement in core health outcomes (physical activity, diet, mental wellbeing, subjective wellbeing, social capital and help-seeking), these worst- case scenario analyses will reflect the intention to treat principle. The numbers who achieved significant improvement at 3, 6 and 12 months will be presented as a percentage of those who were tested at these follow-up points. For the initial intervention effect worst-case scenario, the numbers who achieved significant improvements at 3 months will be presented as a percentage of those who were tested at baseline. The worst-case scenario for maintenance of this initial intervention effect will present the numbers who achieved significant improvements at 6 and 12 months as a percentage of those who were tested at the 3 month follow-up. Observed success rates will be compared between the intervention and comparison group in waiting using Chi-Square analysis.

A hybrid analytic approach of inductive and deductive analysis is applied to the participant transcripts. This means that whilst implementation frameworks are applied to inform implementation outcomes, the analysis process will remain open to findings that may emerge outside of those pre-set domains to allow assessment of intervention effect. In these circumstances, inter-rater reliability is used to cross-check coding strategies and interpretations are negotiated to agree on a 'master' code list.

## **2.4 Part 2: Evaluating the implementation of SFL- Research Design**

### **2.4.1 Overview**

The implementation and sustainment of an effective, evidence-based programme in the real-world setting is complex and therefore multiple frameworks are increasingly being used in studies to address multiple facets

of implementation (Damschroder, 2020; Nilsen, 2015). Sheds for Life operates within a complex system of shifting elements such as the diverse and variable contexts of the Sheds and the wider implementation environment, including the competing priorities of provider organisations and systems level funding and policies. As a result, there is a need to continually engage current and emerging stakeholders as well as inform key adaptations and processes that are necessary to implement SFL in multiple locations while executing appropriate implementation strategies to embed SFL in the routine environment of the Shed. Recognising the context in which SFL is implemented as a constellation of active intervening variables rather than simply a backdrop for implementation is therefore important to better identify and address implementation challenges (Damschroder et al., 2009; Nilsen & Bernhardsson, 2019). Indeed, these dimensions continually evolve over time and require on-going monitoring. For this reason, a combination of implementation and evaluation frameworks are used to guide the implementation testing and evaluation of SFL. These frameworks consist of a determinant framework to specify constructs that may influence the SFL process and predict implementation outcomes, a process framework to specify steps to execute for implementation phases and an evaluation framework to specify multiple levels of outcomes to assess (Nilsen, 2015).

The determinant framework used is The Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009). This framework is used to characterise and understand constructs across five domains which interact in complex ways to influence implementation outcomes. These include; i) the characteristics of the SFL intervention (e.g. how complex the intervention is), ii) the outer setting (e.g. external policies that influence the SFL intervention), iii) the inner setting (e.g. the readiness for SFL implementation), iv) the characteristics of individuals (e.g. individual self-efficacy), and v) the intervention process (e.g. engaging individuals to champion SFL). The CFIR was used as a practical guide to systematically assess potential barriers and facilitators in preparation for implementing SFL. It was also used to develop topic guides for stakeholders at each level to

characterise the implementation setting during SFL implementation as well as to guide the observation of SFL.

The process framework applied to SFL implementation is the (PRACTIS) - PRACTical planning for Implementation and Scale-up guide (Koorts et al., 2018). The PRACTIS is used in an iterative process to practically guide the implementation process and evaluation in collaboration with key stakeholders. In this study, it is used to promote successful implementation and scale-up of SFL. Sheds for Life implementation is guided by four key steps, namely; characterising the parameters of the implementation setting, identifying and engaging key stakeholders, identifying implementation barriers and facilitators, and addressing potential barriers to implementation across individual, provider, organisational and systems levels. The implementation setting is characterised by following a checklist criteria of five P's i.e. i) People; the individuals involved for effective implementation of SFL, ii) Place; what settings and organisations will be involved in SFL iii), Process; how the implementation process of SFL will occur iv), Provisions; what resources may be necessary to achieve this process, and v) Principles; what are the underlying principles of SFL and the implementation process that will be scaled-up. These were explored in collaboration with key stakeholders as per PRACTIS (Koorts et al., 2018). Additional File 1 demonstrates SFL operationalisation of the PRACIS guide (See Additional File 1; Appendix B).

Finally, the evaluation framework applied to SFL is the taxonomy for implementation outcomes (Proctor et al., 2011). This framework measures outcomes pertaining to implementation i.e. acceptability, adoption, appropriateness, feasibility, fidelity, implementations costs, penetration and sustainability. These are assessed in the SFL evaluation using mixed methods to measure implementation effect. Implementation testing consists of ongoing engagement with service provider organisations through quarterly stakeholder meetings, observation and field notes, interviews and focus groups as well quantitative measures to assess cost outcomes (See Table 2).

#### 2.4.2 Evaluating the implementation of SFL -Data collection

In order to explain or understand implementation outcomes, the perspectives and experiences of a broad representation of stakeholders at the participant, provider, organisation and wider systems level are sought. Purposive sampling is used to identify key informants for interview to inform implementation outcomes across the multi-level implementation environment. Mixed methods are used to inform implementation outcomes. The PRACTIS guide is used as part of an iterative process to characterise parameters of the implementation setting, engage key stakeholders, identify implementation barriers and facilitators and address potential barriers to implementation within the evolving implementation climate (Koorts et al., 2018). Ongoing consultation with stakeholders is deemed appropriate to the implementation approach as contextual shifts can be unpredictable and assessment of the broader implementation environment requires flexibility and iteration (Hamilton & Finley, 2020). Alongside this, interviews (n=19) at provider, organisational and systems level are also conducted using semi-structured interview schedules which are designed based on CFIR constructs and used to inform a taxonomy of implementation outcomes, with room for other themes to emerge (Damschroder, 2020; Proctor et al., 2011). Focus groups and interviews previously outlined at participant level are also used to inform implementation outcomes. As a considerable amount of time is spent in the variable environments of different Sheds during data collection, observation and field notes are also used to discover and document the context in which implementation occurs. This process is guided by CFIR constructs with a view to also informing the effectiveness of implementation strategies.

The questionnaires administered to Sheddors at baseline, 3, 6 and 12 months are also used to inform implementation outcomes; cost and penetration of SFL. Self-reported attendance records are collected at follow-up points via the questionnaire to capture attendance. Providers of the SFL components also capture attendance records at delivery and records of the numbers of Sheddors who are eligible versus those who participate in SFL are gathered to further inform penetration. The short form 6-D (SF-6D) is assessed via the questionnaire, alongside the gathering of cost data for assessing cost effectiveness of SFL. It is a preference-based measure of health with a six-

dimensional health status classification: physical functioning, role functioning, social functioning, pain and discomfort, mental health and vitality. It was derived from the SF-36. Participants select one of the levels (up to level 4 or level 6) in each dimension which best describes their current health status (Brazier, Roberts, & Deverill, 2002).

**Table 2: 2.2 SFL Effectiveness-Implementation Hybrid Design**

<b>Evaluation</b>	<b>Research Question</b>	<b>Research Methods &amp; Data collection approaches</b>	<b>Tools &amp; Frameworks</b>	<b>Targeted Outcome</b>
<b>Implementation</b>	What are the facilitators and barriers that impact implementation and sustainability of SFL across the individual, provider, organisation and wider systems level?	Qualitative	PRACTIS guide (PRACTical planning for Implementation and Scale-up)	Acceptability
		Participatory Research		Adoption
		Focus groups, Interviews (Hybrid approach of thematic deductive and inductive analysis)		Appropriateness
		Ethnography	CFIR (Consolidated Framework for implementation research)	Feasibility
			Semi-structured topic guides	Fidelity
		Stakeholder meetings		Implementation Cost
				Penetration
				Sustainability

What is the process by which the SFL model is developed and implemented in order to effect maximum penetration, adoption and acceptability among key stakeholders?	Qualitative	PRACTIS guide (PRACTical planning for Implementation and Scale-up)	Penetration
	Participatory Research		Adoption
	Focus groups, Interviews	CFIR (Consolidated Framework for implementation research)	Acceptability
	Ethnography		
	Stakeholder meetings	Attendance and membership records	
How does the Partnership and Capacity building focus of SFL contribute to the implementation and scale-up of the programme?	Quantitative	Semi-structured topic guides	
	Recording attendance (providers) & Self-reported attendance at follow-up (participants)		
	Qualitative	PRACTIS guide (PRACTical planning for Implementation and Scale-up)	Acceptability
	Participatory Research		Adoption
	Interviews	CFIR (Consolidated Framework for implementation research)	Appropriateness
	Stakeholder meetings		Feasibility
	Capacity Building Workshops	Semi-structured topic guides	Sustainability



	Is the SFL implementation approach cost-effective?	Quantitative  Cost Gathering  Assessment of cost using Quality Adjusted Life Years	The SF6D	Implementation Cost  Feasibility  Sustainability
<b>Effectiveness-Implementation</b>	Does participation in Sheds for Life improve health knowledge attitudes, outcomes and behaviours among participants?	Pragmatic controlled Trial  Quantitative  Questionnaires administered at baseline, 3, 6 & 12 months  Qualitative  Focus groups, ethnography, key informant interviews	Core outcome tools  Self-reported Health Rating  Seeking health information rating  7-item Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS)  5- point Likert Scales assessing; comfort having a conversation about mental health, understanding mental health and identifying practical supports  3-Item UCLA Loneliness Scale. Rated on a 3-point scale. Higher scores equal increased loneliness	Quantitative Core outcomes  Subjective Wellbeing  Help-seeking  Physical Activity  Mental Wellbeing  Diet & Cooking skills  Social Capital  Self-efficacy  Quantitative Supplementary outcomes  Diabetes Awareness, SafeTALK suicide prevention,

ONS 11-point Scales 0-10 Life satisfaction and life worth	Digital Literacy, Oral Health, Cancer awareness, CPR
8 point scales 0-7 physical activity and walking measure	Qualitative outcomes
The 9-item self-efficacy for exercise scale (SEE)	Changes in attitudes and behaviours
Close support, belonging, trust	Acceptability
Alcohol, smoking & fruit & vegetable consumption	Adoption
	Appropriateness
Cooking frequency, cooking style and 12 measure scale measuring confidence constructs in relation to cooking	
Supplementary outcomes:	
Questions measuring changes in confidence and knowledge in relation to supplementary components developed in collaboration with provider organisations	

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Qualitative tools

Semi-structured topic  
guides

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### 2.4.3 Evaluating the Implementation of SFL -Data analysis

Data pertaining to SFL participation (attendance records, self-reported attendance, numbers who participated versus numbers eligible) are triangulated to assess penetration. Cost-effectiveness is being determined by comparing the costs (direct and indirect) of SFL to its benefits which will be captured as the impact on quality-adjusted life-years (QALYs) derived from the short form-6D algorithm. Qualitative data are analysed using a framework-driven approach, applying the CFIR to inform implementation outcomes. Focus groups and interviews will be transcribed and, as per recommendations by the National Cancer Institute's White Paper on qualitative research in implementation science, a hybrid approach of thematic deductive and inductive analysis will be used to inform implementation outcomes (QualRIS, 2019). This means that whilst the CFIR domains will be applied to inform implementation outcomes, the analysis process will remain open to findings that may emerge outside of those pre-set domains. A constant comparison process previously outlined will again be applied.

## 2.5 Limitations

While the non-randomised design of SFL may be seen as a limitation, the SFL research exists within a complex real-world environment with many evolving variables. For this reason, a pragmatic evaluation approach is necessary in which upholding Shed ethos means that participants cannot be randomised for assessment of intervention effect. However a strength of this approach is also in the process of identifying an appropriate implementation model that can effectively engage HTR men with targeted health promotion in the capricious Sheds environment. The very nature of this environment is what attracts HTR men and for this reason it is critically important that this informal and autonomous atmosphere is maintained when synchronising with more structured health promotion. There is also a subjective nature to the data that allows inherent bias through the self-report format. Yet, constructs of wellbeing and perceived health status are subjective in their own right and the evaluation

captures insights from Shedders in the real-world context of a typically close-knit setting.

## **2.6 Discussion**

An important backdrop to SFL is the rich landscape within its outer setting of men's health research and practice work that has emerged within Ireland in recent years (Baker, 2015; Richardson & Carroll, 2018). While SFL evolved mostly as a bottom-up initiative to address a particular need, it was also mandated by a top-down men's health policy directive (Health Service Executive, 2017). This wider context of men's health work within Ireland was highly conducive to and compatible with the key principles and objectives of SFL. Crucially however, SFL was not foisted on Shedders! On the contrary, SFL emerged from an invested process of engagement, consultation, relationship building and pilot testing. These efforts seeded partnership networks that understood the processes and recognised the value in engaging men with health. This is an important consideration at a time when Sheds have been earmarked as settings that facilitate access to HTR men and where expectations placed on Sheds to expand into formal healthcare delivery may cause tensions within Sheds (Kelly et al., 2021b). While the content and structure of SFL may evolve over time, this process of delivery and partnership are the crux of its sustainability. Sheds for Life operates within a systems level that does not yet offer any significant funding support but the partnership and capacity building processes of SFL remain the crucial elements in terms of its sustainability.

Sheds for Life challenges traditional gender norms about health by reframing men's active engagement in their own health and encouraging male peer support in dealing with health issues as a socially acceptable and 'manly' choice (WHO, 2018c). Through this process of engagement, SFL reflects a gender-transformative approach, normalising health conversations within the culture and environment of Sheds— settings that have not traditionally prioritised health and wellbeing. This also challenges gender stereotypes of women as care-givers and custodians of men's health, thereby contributing to gender equality. The efforts to shift health programmes with men from being

gender-neutral to more gender-specific and gender-transformative, can improve population health for both women and men by enhancing equitable gender relations (Dworkin, Fleming, & Colvin, 2015). It is evident that the burden of ill health in men is caused by a multitude of complex biopsychosocial factors. In order to address gender inequality in health, movements towards the development of health promoting strategies and interventions that account for the diversity within and between genders are critical to advancing population health (Baker, 2020). In this respect, reaching beyond the 'worried well' and engaging HTR groups of men remains a key priority. Effective men's health programmes to date have highlighted that, in order to engage men, and particularly those who are considered HTR, health promotion endeavours must include men in their decision making and encourage a collaborative process involving all key stakeholders; researchers, practitioners, participants and policy makers (Dworkin et al., 2015; Kelly et al., 2021b; Thorpe & Halkitis, 2016).

The SFL evaluation investigates both the implementation and effectiveness of the intervention and identifies the key strategies to engage HTR men in health within the non-conventional settings of the Sheds. Research findings from complex interventions to promote health suggests that traditional research and practice methods fall short in meeting many of the challenges inherent in complex interventions. This means that science needs to reassess some essential beliefs and prejudices about research methods and conventional terminology which is overly focused on knowledge generation and can blind researchers to the very mechanisms they seek to understand within the practice context (Hawe, 2015). The SFL evaluation embeds implementation processes and outcomes from the start with active engagement from all key stakeholders – including Sheddors. The move from tightly controlled trials towards pragmatic delivery in the real-world Sheds setting using a bottom-up, multi-sectoral approach is key to identifying implementation strategies within the continually shifting context that can promote systematic uptake of SFL. Scale-up within a complex environment can mean that programmes may rarely be translated to variable settings completely intact or standardised (Hawe, 2015). Rather it is the “core principles” that are essentially transferred and

knowing this in advance can encourage the essence of an intervention to be distilled while applying more conscious processes to enhance its effects and embed it into the routine environment (Hawe, 2015). The flexible implementation strategy of SFL outlined in this paper highlights how the structure and partnership network of SFL will evolve over time. The sustainability of SFL in the variable Sheds settings will mean adaptations to suit the local contexts in which it operates. In its scale-up, the evaluation will aim to protect the essence of SFL by translating the core principles of the programme, viewing its fidelity as residing in the theory of the change process (i.e. the changes in the Sheds context which bring about, aid or sustain individual change) rather than in any particular component (Hawe, 2015). The SFL approach aims to effectively promote positive men's health behaviours in what men consider a safe and familiar environment. It also aims to encourage intervention development and adaptation of SFL that ensures broad and sustained implementation. This approach is explicitly orientated towards delivering impact-focused research activity that forges strong links between research and practice. Findings will have a significant role to play in determining the effectiveness, sustainability, and potential scale-up of the SFL initiative and, more broadly, in terms of the wider translation of community-based programmes targeted, in particular, at HTR groups of men. This study provides many excellent opportunities for knowledge translation that can have a tangible impact on practice in the fields of health promotion, public health and men's health.

## **2.7 Dissemination**

SFL is grounded in implementation science and therefore results of the study will be disseminated to key stakeholders on an ongoing basis in order to inform necessary adaptations. An interim analysis will be performed following Phase 1 implementation to assess the impact of SFL on the health and wellbeing outcomes of participants. These findings will be made available in an impact report document that will be accessible to participants, provider organisations, the IMSA and any other relevant groups. Some interim findings have also been reported in published work relating to the impact of COVID-19 on Sheddors (McGrath et al., 2020). Funders will play no role in the study conduct, analyses

or data interpretation. There are no publication restrictions and findings of the research will be widely disseminated. Key outputs from SFL implementation will contribute to the dissemination plan. Data from Phase 1 testing will inform Phase 2 implementation. It is envisaged there will be numerous publications arising from this research study along with presentations at national and international conferences. The findings from SFL will be used to produce a final report for the IMSA targeted principally at policy makers and service providers. An accessible version of the report will be produced for Sheddors and the general public to ensure knowledge exchange at all levels.

## **2.8 Declarations**

**Ethics and Consent:** The study received ethical approval from Waterford Institute of Technology Research Ethics Committee (REF: WIT2018REC0010). This study has also been registered with the 'International Standard Randomised Controlled Trial Number' registry (ISRCTN79921361). All participants had the details of the research clearly explained to them through verbal and written instruction and informed written consent was obtained prior to participation in the research.

## **Competing Interests**

The authors declare that they have no competing interests

## **Authors' contributions**

AM was responsible for the design and implementation of the research, writing the original draft and substantive review and editing. NM contributed to the design and implementation of the research and substantive review and editing. NR contributed to the design and implementation of the research and substantive review and editing. All authors read and improved the final manuscript.

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### **Chapter 3: Baseline characteristics of Sheds for Life participants**

This chapter describes the baseline characteristics of Sheds for Life participants in order to determine penetration/reach. Specifically it investigates if SFL was reaching men who are considered HTR. This chapter is published as: McGrath, A., Murphy, N., Egan, T., Ormond, G. & Richardson, N. (2022). Understanding shedders: Which socio-demographic, health and wellbeing characteristics best inform appropriate health promotion action in men's sheds and a 'Shed for Life'? *Health Promotion Journal of Australia*. doi: <https://doi.org/10.1002/hpja.649>

Note: Supplementary material for this chapter as per publication can be found in the appendices: Appendix E

## **Abstract**

**Issue Addressed:** Men's Sheds ('Sheds') have been identified as inherently health promoting and as potential settings to engage 'hard-to-reach' men in more structured health promotion initiatives. However, little is known about the sociodemographic or health and wellbeing characteristics of Shed members ('Shedders') on which such initiatives might be based. This study captures a baseline cross sectional analysis of Shedders (n=384) who participated in 'Sheds for Life', a health promotion initiative tailored to Sheds.

**Methods:** Objective health measure, (body composition, blood pressure, blood lipids) captured via health screening as well as sociodemographic and health and wellbeing measures (physical activity, subjective wellbeing, mental health, social capital, cooking and diet) via questionnaires were assessed. Descriptive statistics were generated and differences between groups were determined via parametric and non-parametric testing. Bivariate analysis was used to determine associations and regression analysis then estimated various predictors on mental wellbeing, life satisfaction and loneliness.

**Results:** Participants were mostly over 65 years (77.3%), retired (88.6%) with limited educational attainment (77%). The majority were in the 'at-risk' categories for objective health measures, with most being referred to their GP following health screening (79.6%). Older Shedders were also more likely to meet physical activity guidelines. Mental wellbeing was positively correlated with life satisfaction and increased social capital and these were also positively correlated with physical activity ( $p<0.05$ ).

**Conclusions:** Findings highlight the potential of Sheds in reaching a 'hard-to-reach' and 'at-risk' cohort of men. Despite a high prevalence of 'at-risk' objective health measures, participants report their health in positive terms. Future health promotion initiatives should capitalise on the inherent health promoting properties of Sheds.

**So what?** Findings raise important implications for prioritising and designing health promotion initiatives in Shed settings.

### **3.1 Introduction**

#### **3.1.1 Why Men's Sheds?**

Our increased understanding of the complexities of men's health practices and masculinities has focused attention on the need for gender-specific approaches that inform more tailored and targeted interventions towards engaging men in their health (Baker et al., 2020; Lefkowich et al., 2015). Community-based and gender-specific men's health and wellbeing programmes have shown promise in engaging men by delivering targeted health promotion programmes within safe and familiar environments (Milligan et al., 2016). Men's Sheds ('Sheds'), in particular, have been identified as settings that are well positioned to deliver tailored health promotion initiatives to a cohort of men who otherwise might not engage with health services (Bergin & Richardson, 2020; Kelly et al., 2021a). Sheds are autonomous grassroots spaces that offer men a safe and familiar environment, that foster a sense of social support, belonging and camaraderie, and that give a sense of purpose through developing new skills, shared projects, activities, goals and decision making (Lefkowich et al., 2015). Indeed, recent studies suggest a multitude of potential benefits and health enhancing outcomes from Shed membership such as; problem sharing, empowerment, sense of belonging, improvement in health and help seeking behaviours, reduced loneliness and depressive symptoms, sense of equality and inclusivity along with active retirement opportunities (Fish et al., 2015; Golding, 2015; Mackenzie et al., 2017; McGrath et al., 2020; Nurmi et al., 2018; Richardson et al., 2017; Wilson, Stancliffe, et al., 2015). It is the inherent and organic inclusivity of Sheds that positions them as a suitable setting in which to actively promote and engage men with health (Wilson & Cordier, 2013). Originating in Australia in the 1980s (Golding, 2015), Sheds have since proliferated across Ireland with up to 450 Sheds currently operational. This equates to more Sheds per head of capita than any country in the world (IMSA, 2018b). A noteworthy feature in the phenomenal growth of Sheds has been their emergence and organic development from grassroots, without any meaningful supports in terms of any policy framework or funding at State or Federal level (Misan, Haren, &

Ledo, 2008). Indeed, the informal and non-clinical environment within Sheds attracts a cohort of men that have more traditionally been considered both 'hard-to-reach' ('HTR') and 'at risk' (in terms of health status); i.e. those who are older, retired or not in current employment, from lower socioeconomic backgrounds, lower educational attainment, and lower levels of health literacy (Bergin & Richardson, 2020; Misan et al., 2017). Moreover, while men have traditionally been regarded as HTR, currently health services aren't adequately versed in gendered approaches that effectively engage men, and rather, it is a combination of complex biopsychosocial factors that impact men's health engagement (Baker, 2020). Indeed, research suggests that when gender-specific strategies are embedded as part of the process men will engage with health services (Robertson & Baker, 2016). With the emergence of Sheds, it also became apparent that there was a level of agency and appetite for health promotion in the Sheds (Wilson, Cordier, Doma, Misan, & Vaz, 2015). As a result, Sheds quickly emerged in Western countries as an exemplar for the promotion of men's health and well-being at a health and social policy level, as well as a potential space for delivering structured health promotion to men in an accessible way (Kelly et al., 2021b; Wilson & Cordier, 2013).

### 3.1.2 What might health promotion in Sheds look like? – A case for 'Sheds for Life'

Notwithstanding the appeal and potential advantages of delivering more structured health promotion in Sheds, there is a need to proceed with caution. Findings from two scoping studies highlight the potential tensions that may emerge in instances where health practitioners fail to recognise or respect the nuances that exist within Sheds. In particular, Shed members ('Shedders') regard retention of the informal and flexible environment and ethos of their Sheds, as well as involving Shedders in the decision-making process, as fundamental requirements to any health promotion endeavours in Sheds (Bergin & Richardson, 2020). Beyond the design and structure of health promotion in Sheds, is the need to identify suitable implementation strategies that do not over-burden Shedders or detract from primary Shed aims (Kelly et

al., 2021b). Furthermore, while the informality of Sheds is their inherent strength, it can also pose significant barriers in terms of delivering structured health promotion in Sheds (McGrath, Murphy, & Richardson, 2021).

Sheds for Life (SFL) is a health and wellbeing initiative offered to Sheds in Ireland delivered via a partnership network of organisations who recognise the value of working with Sheds and can respond to specific health and wellbeing priorities (e.g. physical activity (PA), mental health, healthy eating). The initiative was conceived by the overseeing body of Sheds in Ireland (The Irish Men's Sheds Association; IMSA), who engaged in a process of consultation and relationship building with partner organisations, academics and Sheddors in developing the programme. Crucially, SFL utilises strengths-based and gender specific approaches in the safe and familiar environment of Sheds to deliver tailored and targeted health promotion directly in the Shed setting (McGrath et al., 2021). Guided by a participatory research and implementation science approach, Sheddors are key decision makers in the design and delivery of SFL, which has enabled its systematic uptake across the network of Sheds in Ireland. A full protocol paper detailing the design of both the SFL initiative and evaluation process is available (McGrath et al., 2021).

Critical to the success of SFL is a pragmatic and flexible delivery approach that can overcome barriers within the capricious Shed environment and that can account for continually shifting contextual variables across the wider system (McGrath et al., 2021). The SFL initiative is the first structured health promotion programme delivered in Sheds settings and therefore addresses a significant gap in the literature on Men's Sheds and serves as an important guide for the implementation of health promotion in Sheds.

### 3.1.3 Men's Shed members – Who are they?

Alongside the utility of SFL in providing a template for structured health promotion in Sheds, there is also a need to address a deficit in the men's health literature in terms of the demographic of men who participate in health promotion in Sheds. Indeed, findings on Shed outcomes generally highlighted in previous scoping and narrative reviews, are predominantly based on small

scale qualitative studies, with a distinct lack of information on the demographics of Shed participants, typically limited to age and gender (Albrecht, Foettinger, & Bammann, 2021; Kelly et al., 2019b; Milligan et al., 2016; Wilson & Cordier, 2013). Moreover, researchers have identified a lack of quantitative and mixed methods approaches, as well as limited use of validated measures to measure health outcomes, which is a noted limitation in assessing the Shed-health link (Kelly et al., 2019b). Understanding the characteristics of Sheddors is important to tailor health promotion endeavours accordingly and to respond effectively to the needs of the target group. Small scale studies have highlighted the potential of Sheds to engage HTR men who may be reticent about accessing traditional health services. However, recent research highlights the need for further insights into the demographics of Sheddors (Kelly et al., 2019b; Misan et al., 2017). This paper fills this gap by presenting a cross-sectional analysis of the baseline sociodemographic and health and wellbeing characteristics of Sheddors who participated in a structured health promotion programme (SFL). There will be a particular focus on establishing whether the programme is effective in reaching beyond 'the worried well' - on the basis of Sheddors meeting 'HTR' (sociodemographic variables) and/or 'at risk' (health and wellbeing variables) criteria - and ultimately whether there is merit in prioritising Sheds as a setting for targeted health promotion interventions.

### **3.2 Methods**

This research emanated from the wider study evaluating the SFL initiative. The implementation and evaluation of SFL is guided by a community-based participatory research approach, which involves engagement from all key stakeholders across the individual, provider, organisation and wider systems level. A multi-disciplinary team of Sheddors, academics, and allied provider organisations deliver and support elements of SFL, with the IMSA overseeing its delivery. This process is guided by established implementation frameworks (Damschroder et al., 2009; Koorts et al., 2018; Proctor et al., 2011). In short, the evaluation of SFL consists of a hybrid effectiveness-implementation type 2 design with a dual focus on assessing effectiveness at both participant level and in terms of implementation, with a view to informing its scalability as per

Curran et al. (Curran et al., 2012). The full protocol for the SFL evaluation signposted above, outlines the design of SFL as well as the methods involved in assessing intervention and implementation effect (McGrath et al., 2021). This paper will detail the baseline data gathered via questionnaires prior to the commencement of SFL in Sheds.

### 3.2.1 Recruitment process and participants

Programmes that incorporate a gendered approach in their design and delivery can maximise reach and recruitment of ‘at risk’ cohorts of men (Kelly & Steiner, 2021). Moreover, in implementation science, reach or penetration of an intervention is also an important determinant of implementation effectiveness and justification for scale up (Proctor et al., 2011). For these reasons, the recruitment phase of SFL was designed to purposively reach men in the Shed setting using a variety of gender-specific strategies which are detailed elsewhere (McGrath et al., 2021) but, which most notably, included trust building and an active recruitment phase. This recruitment strategy involved sending all Sheds in targeted counties in Ireland a promotional package and inviting them to register an ‘expression of interest’ in participating in SFL. This gave Sheddors a sense of control, autonomy and agency over the process. Those Sheds that expressed an interest in participating were then visited by the first researcher and members of the IMSA in person to discuss the SFL process and to recruit individual Sheddors to both the programme and the evaluation. This purposive sampling approach was effective in reaching men in the familiar setting of the Shed, ensuring that all Sheddors were appropriately briefed about SFL, creating a sense of acceptability about SFL, and building trust and rapport between Sheddors and the SFL team. During these visits SFL was described to prospective participants as a programme “for Sheddors by Sheddors”. Prospective participants were encouraged to see themselves as pioneers, actively shaping the programme through their participation and paving the way for future delivery and scale-up of the programme. Reinforcing Sheddors’ sense of ownership of the programme was designed to build safety and trust, and to reassure participants that SFL could



co-exist with, and was not a threat to the routine activities and ethos of the Sheds, a critical factor in gaining acceptability at Shed level.

In total, n=31 Sheds out of a potential n=44 (70%) across the selected counties opted into SFL. Participants were recruited across Counties Waterford and Kildare from March to May 2019 and Limerick and Louth from September to December 2019. These counties were chosen to encourage a diverse representation of Sheds and Shedders while accounting for programme delivery capacity constraints. Key considerations included the capacity and resource constraints of provider organisations to deliver SFL; the variability and nuances within different Sheds that shaped Shedders' readiness to receive SFL; along with the capacity constraints of a small SFL co-ordinating team, which limited geographical spread of the programme for pragmatic reason (McGrath et al., 2021). Sheds were given the option to partner with neighbouring Sheds if they lacked facilities or had lower numbers. As a result, SFL was delivered in n=22 Shed settings. Fourteen Shed settings were in urban areas and 8 were in rural areas across counties; Kildare (in Ireland's mid-east region with a population of ca. 222, 504), Waterford (in Ireland's south-east region with a population of ca. 116,176), Limerick (in Ireland's mid-west region with a population of ca. 194,899) and Louth (in Ireland's mid-east region with a population of 128, 884; Central Statistics Office, 2017, 2019)<sup>1</sup>. Data were collected at recruitment phase to identify the number of Shedders who regularly attended the participating Sheds to establish the reach of SFL. It was estimated that n=565 were active members of the participating Sheds at the time of recruitment, with the majority (n=421; 75%) opting to participate in SFL and the supporting evaluation. All adult males in the Sheds setting were eligible to participate in the study providing they had good proficiency in the English language and could give informed consent. During recruitment phases, all participants had the details of the research clearly explained to them through verbal and written instruction and informed written consent was obtained by a member of the research team prior to participation in the

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<sup>1</sup> In Ireland, urban areas are classified as towns/settlements with populations greater than 50,000 where 20 per cent or more of the usually resident workforce population's workplace address is in 'Cities'. Rural areas are defined as having an area type with a population less than 1,500

research. The study received ethical approval from Waterford Institute of Technology Research Ethics Committee (REF: WIT2018REC010)

### 3.2.2 Data collection and analysis

All participants were offered a free comprehensive health check prior to commencement of the SFL ten-week programme. As well as being an important aspect of baseline data collection, this served as an additional engagement strategy or 'hook' to encourage uptake of the SFL initiative. The health check was delivered directly in the Shed setting during routine Shed hours by an Irish Heart Foundation nurse (a long-standing partner of the IMSA whose staff are vastly experienced in engaging populations of marginalised men). The health check encompassed a range of objective measures, including body mass index (BMI), waist circumference, lipid profiles, blood glucose and blood pressure. Results of the health check were recorded on a standardised health check card and given to the participants for their records. In keeping with GDPR requirements, the research team obtained written consent from participants after their health check to take a copy of their health check results. At this time, questionnaires that captured participants' sociodemographic and health and wellbeing characteristics were also administered by a research team member trained in data collection procedures to ensure standardised measurement and questionnaire administration. Questionnaires were administered one-to-one in the Sheds setting to account for potential literacy issues, prevent respondent burn-out, limit missing data and build rapport and trust between the researchers and Sheddors. At the time of data collection  $n=384$  out of a possible  $n=421$  were available to complete the questionnaire representing a 91.2% response rate.

The questionnaire was designed in consultation with stakeholders involved in the design and delivery of SFL with a view to optimising acceptability for SFL participants and also SFL providers who were interested in evaluating their individual components of SFL. Participant demographics were recorded at baseline and included date of birth, living arrangements, educational attainment, employment status, relationship status and ethnicity. Participants were also asked how long they had been a Shed member and how often they

attended the Shed. Core health and wellbeing outcomes included subjective wellbeing, help-seeking, PA, mental wellbeing, diet and cooking confidence constructs, social capital, self-efficacy and frequency of seeking health information (McGrath et al., 2021). Risk thresholds were identified for each variable as follows: Hypertension was defined as systolic BP level of  $\geq 140$  mmHg and/or diastolic BP level  $\geq 90$  mmHg (“pre-hypertensive” subjects i.e. 120–139 mmHg systolic BP and 80–89 mmHg diastolic BP (Unger et al., 2020) were also noted, as they are at more risk of developing CVD). Body mass index parameters were classified as;  $<18.5$  (underweight), 18.5 to 24.9 (normal weight), 25 to 29.9 (overweight) and  $>30$  (obese; WHO, 2021). With regard to abdominal obesity, a waist measurement of  $<37$  inches equated to ‘low’ morbidity, 37-40 inches was considered ‘high risk’ and  $>40$  as ‘very high’ risk (Paley & Johnson, 2018). As the majority (76.9%) of participants were not fasting at the time of the health check, non-fasting ranges (4 to 7 mmol/l) were applied for blood glucose measurements, as per the Irish Heart Foundation’s parameters. Total cholesterol levels  $\geq 5$  mmol/l and triglycerides  $\geq 1.7$  mmol/l were also applied as per the Irish Heart Foundation’s parameters. In cases where health check measures gave rise for concern, Sheddors were advised by the nurse to visit their general practitioner (GP) for follow-up, therefore numbers recommended to visit their GP are also calculated. Data on history of diabetes, stroke and heart disease were also recorded. Lifestyle risk factors included not meeting the PA guidelines, smoking, not consuming the recommended five daily portions of fruit and vegetables, and consuming more than the recommended upper threshold of 17 standard alcoholic drinks per week. Other risk indices included having a low propensity to seek health information; low self-rated health (SRH - ratings between average and poor); and low life satisfaction (life worth and trust score of  $\leq 6$  (Central Statistics Office, 2020; Department of Health, 2019); low mental wellbeing (Short-Warwick Edinburgh Mental Wellbeing scores (SWEBMWWS) indicating average mental health to probable depression) (Warwick Medical School, 2021); lower ability to talk about or manage mental health; and a categorisation of ‘lonely’ (score of  $\geq 6$ ) on the 3-item UCLA loneliness scale (Resnick & Jenkins, 2000). In terms of demographical information, there was a particular focus on ‘HTR’ (Bergin & Richardson, 2020; Misan et al., 2017) Sheddors, i.e. those who were

older, single, lived alone, and had lower education. A detailed protocol on instruments used is available (McGrath et al., 2021; see also Table 3).

Data were analysed using Statistical Packages for the Social Sciences (SPSS v24). Descriptive statistics are provided for all baseline characteristics. Independent-samples t-tests, Anova tests, Mann-Whitney U and Kruskal-Wallis H tests were also performed to determine differences between groups at baseline on continuous or ordinal dependent variables. Similarly, bivariate analysis was also performed to determine association (strength and direction) between variables where relevant. Finally, OLS regression analysis was conducted to determine whether various variables had a significant impact on three composite subjective measures – mental health, life satisfaction and loneliness. The selection of these independent variables was guided by relevant theory which considers drivers of subjective wellbeing, (Arrondo, Cárcaba, & González, 2021; König & Larsen, 2017; Robertson, 2019) and on specific patterns that emerged from the data.

### **3.3 Results**

Whilst all participants in SFL (n=421) consented to participate in the evaluation, some were not available at the point of baseline data collection, which resulted in n=384 completing the questionnaire at baseline. Table 3 highlights Shedd's sociodemographic characteristics and core health and wellbeing measures.

**Table 3: 3.1 Shedder demographics and health and wellbeing measures**

Variable (Measurement used)		N=(%)	Mean (range) ± SD
Age (Date of Birth)		382	69.1 (27 to 90) ± 9.14
Ethnicity (Multiple Choice)			
	<i>White Irish</i>	380 (99.2%)	
	<i>Other</i>	3 (0.8%)	
Education (Multiple Choice)			
	<i>Primary Only</i>	92 (24.9%)	
	<i>Some/completed secondary</i>	199(52.1%)	
	<i>Some/completed grad level</i>	78 (20.4%)	
	<i>Some/completed postgrad</i>	10 (2.6%)	
Marital Status (Multiple Choice)			
	<i>Married/cohabiting/in a relationship</i>	284 (74.2%)	
	<i>Widowed</i>	36 (9.4%)	
	<i>Separated/Divorced/Single</i>	63 (16.4%)	
Living situation (Multiple Choice)			
	<i>Lives alone</i>	68 (17.8%)	
	<i>Lives with others</i>	314 (82.2%)	
Employment (Multiple Choice)			
	<i>Currently employed</i>	44 (11.5%)	
	<i>Retired/not currently employed</i>	339(88.6%)	
Length of Shed membership (years)		379	2.75 (0 to 9) ± 2.06
Self-rated health (Single question Likert scale)		382	
	<i>Very good to Excellent</i>	138(36.1%)	
	<i>Good</i>	152(39.8%)	
	<i>Average to Poor</i>	92 (24.1%)	
Seeking health information (Likert scale – are you someone who likes to seek information about your health?)			
	<i>Often</i>	156(40.9%)	
	<i>Sometimes</i>	158(41.5%)	
	<i>Rarely to Never</i>	67(17.65%)	
Life satisfaction (Mean values on an 11-point scale)		382	7.98 (1 to 10) ± 1.71
Life worth (Mean values on an 11-point scale)		382	8.20 (2 to 10) ± 1.61
Stress (Likert scale assessed at health check)			
	<i>Not at all to only a little</i>	235(55.8%)	
	<i>To some extent</i>	74 (17.6%)	
	<i>Often to very often</i>	44 (10.5%)	
Trust rating (Mean values on an 11-point scale)		380	6.83 (0 to 10) ± 1.98
Belonging (Likert scale assessing feelings of belonging)			
	<i>Agree to Strongly Agree</i>	374(88.9%)	
	<i>Disagree to Strongly Disagree</i>	6 (11.1%)	
Close Support (Likert scale assessing feelings of close support)			
	<i>Agree to Strongly Agree</i>	374 (88.9%)	
	<i>Disagree to Strongly Disagree</i>	6 (11.1%)	
Mental Wellbeing (Short Warwick-Edinburgh Mental Wellbeing Scale; SWEMWBS)		376	26.90 (13.33 to 35.0) ± 4.77
Comfort about mental health (Likert scale assessing comfort having a conversation about mental health)			
	<i>Certain to very certain</i>	195 (72%)	
	<i>Somewhat certain to very uncertain</i>	71 (28%)	

Understanding how to manage mental health (Likert scale assessing understanding of how to manage mental health)			
	<i>Certain to very certain</i>	176(66.8%)	
	<i>Somewhat certain to very uncertain</i>	90 (33.2%)	
Loneliness Scores (UCLA 3-item scale; Resnick & Jenkins, 2000)			
	<i>**Before joining Men's Sheds</i>	382	4.77 (3 to 9) ± 2.17
	<i>At baseline</i>	381	3.31 (3 to 9) ± 0.89 *
	<i>***Those 'lonely' before joining Shed</i>	129 (33.8%)	
	<i>Those 'lonely' at baseline</i>	28 (6.7%)	
Days physically active per week (self-report single item 8-point measure; Milton et al., 2011)			
		382	3.07 ± 2.57
Meeting PA recommendations (Calculated from the 8-point single-item PA measure)			
	<i>Yes</i>	121(31.8%)	
	<i>No</i>	260(68.2%)	
Daily Fruit & Veg Consumption (Multiple choice)			
		382	3.36 (0 to 7) ± 1.76
Cooking habits			
	<i>Don't cook at all</i>	125(32.8%)	
	<i>Microwave meals/Readymade ingredients</i>	52 (13.6%)	
	<i>Prepare from scratch</i>	204(53.5%)	
Cooking Frequency			
	<i>Often</i>	162(42.4%)	
	<i>Sometimes to rarely</i>	159(41.6%)	
Cigarette Smoking (Multiple Choice)			
	<i>Never</i>	189(49.7%)	
	<i>Former</i>	159(41.8%)	
	<i>Current</i>	32 (8.4%)	
Drink Alcohol			
	<i>Yes</i>	261(68.3%)	
	<i>No</i>	121(31.7%)	
Alcoholic Drinks per Week			
			8.10 (0 to 68) ± 10.07
Blood Pressure			
		384	140/81 ±19.44/11.05
	<i>Normal BP</i>	61 (15.9%)	
	<i>Prehypertension</i>	128 (33.3%)	
	<i>Hypertension</i>	195 (50.8%)	
BMI			
		378	29.91 (18 to 53.57) ± 5.41
	<i>Underweight</i>	1(0.3%)	
	<i>Normal weight</i>	49 (13%)	
	<i>Overweight</i>	150 (39.7%)	
	<i>Obese</i>	178 (47.1%)	
Waist Circumference (inches)			
		383	41.60 (26 to 67) ± 5.42
	<i>Low waist circumference risk</i>	28 (21.3%)	
	<i>High waist circumference risk</i>	59 (15.4%)	
	<i>Very high waist circumference risk</i>	241 (62.9%)	
Total Cholesterol (mmol/l)			
		382	4.18 (2.50 to 7.55) ± 1.03
	<i>Cholesterol ≥ 5.0 mmol/l</i>	88 (22.3%)	
Triglycerides			
		382	1.67 (0.15 to 7.14) ± 1.03
	<i>Triglycerides ≥ 1.7 mmol/l</i>	142 (37.1%)	

Blood glucose (mmol/L)	380	6.15 (3.86 to 17.30) ± 1.80
	Glucose ≥ 7 mmol/l	77 (20.2%)
Referred to health services ****		223 (79.6%)

\* difference between loneliness scores before joining a Men's Shed and at baseline were statistically significant  $p < 0.001$

\*\* Sheddors were asked at baseline to retrospectively rate their loneliness prior to joining a Shed & again at baseline

\*\*\* score of ≤5 on UCLA scale = 'not lonely', score of ≥ 6 = 'lonely' (Resnick & Jenkins, 2000)

\*\*\*\* Number of Sheddors referred to their GP based on health check results

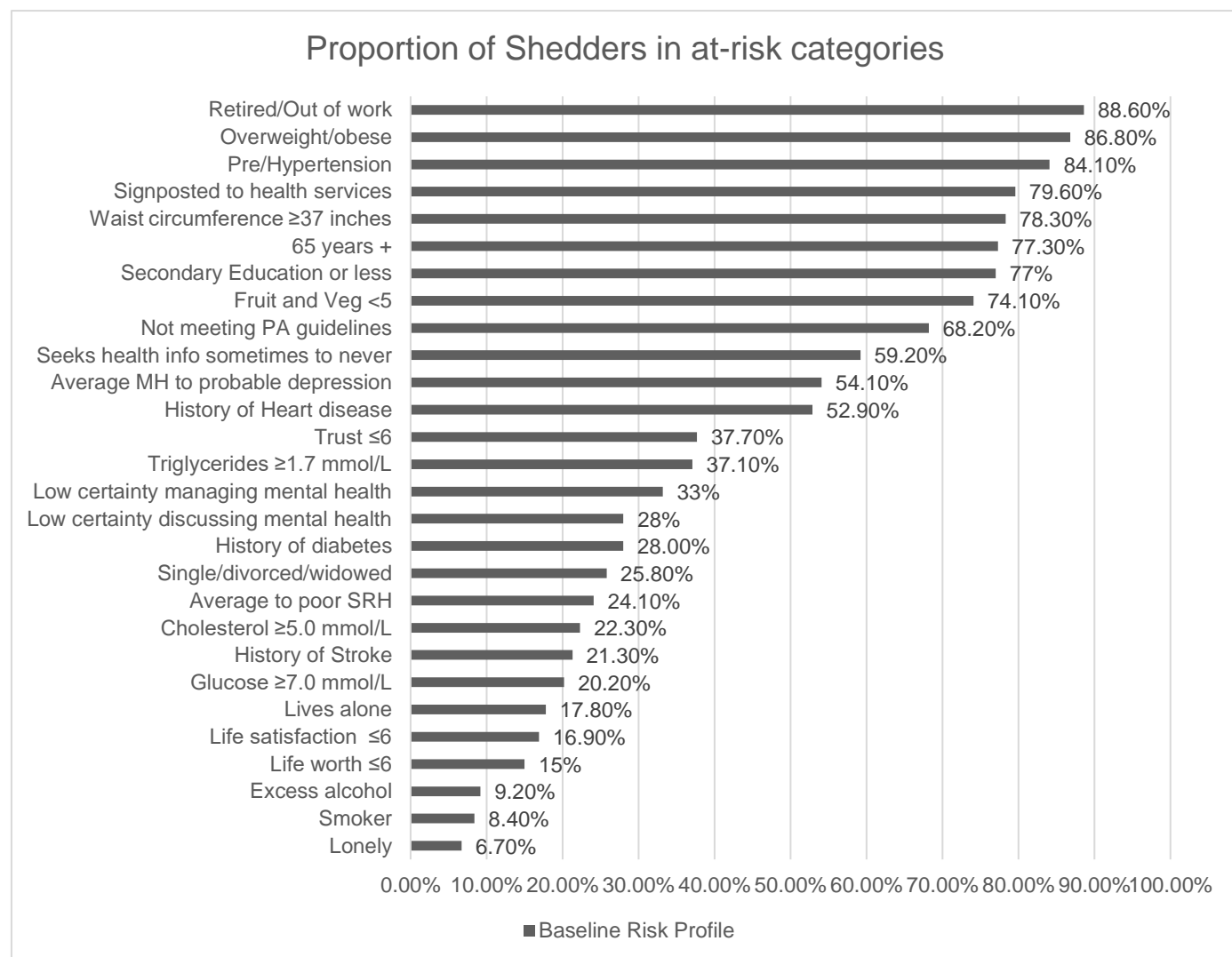
### 3.3.1 Risk Profile of Participants

A breakdown of the analysis in Table 3 revealed that a considerable proportion of the respondents can be considered HTR and at-risk (See Figure 1). The results highlight that the majority of this population of Sheddars were over 65 years (77.2%, mean 69.1 years  $\pm$  9.14, 27-90). The majority (77%) had no more than some secondary level education with almost a quarter (24.9%) of participants with no more than primary education. Most participants were not currently in employment (88.6%). While the majority of participants were mostly married (74.2%) over a quarter (25.8%) were separated, divorced or widowed with some 17.8% living alone.

### 3.3.2 Health Status

Over half of the population (52.9%) reported having a family history of heart disease, with 21.3% a history of stroke and 28% a history of diabetes. Most Sheddars (84.1%) in the study were either hypertensive (50.8%) or pre-hypertensive (33.3%). The vast majority of participants were either overweight (39.7%) or obese (47.1%). Most Sheddars were in an at-risk category for abdominal obesity with 15.4% (n=59) high risk and 62.9% (n=241) at very high risk. Just over one in five (22.3%) participants had a total cholesterol measure of  $\geq 5.0$  mmol/L, with 27.8% showing an elevated LDL-C  $\geq 3.0$  mmol/L and over half (55.1%) below the recommended level for HDL-C of  $\leq 1.0$  mmol/L. Over a third (37.1%) of Sheddars exceeded the recommended upper limit for triglycerides ( $\geq 1.7$  mmol/L). Some 20.2% had elevated blood glucose levels of  $>7$  mmol/L. The vast majority of Sheddars (79.6%) were referred to their GP based on the results of their health-check. Over half of Sheddars (59.2%) reported a limited propensity to seek information about their health (See Table 3 & Figure 1).





**Figure 1: 3.1 Representation of risk profile of Sheddars based on sociodemographic and health and wellbeing characteristics**

### 3.3.3 Lifestyle Behaviours

The mean number of days Sheddars spent physically active in moderate to vigorous activity for 30 minutes or more was 3.07 ( $n=381$ ,  $\pm 2.57$ ). More than two-thirds of participants (68.2%) did not meet the recommended PA levels of 30 minutes or more for 5 days per week (see Table 3). Mean PA self-efficacy scores were  $53.17 \pm 20.99$  out of a possible total score of 90. An independent samples t-test revealed that Sheddars who met the PA guidelines ( $n=121$ ) had significantly higher PA self-efficacy scores ( $63.45 \pm 1.51$ ) compared to those who did not ( $n=256$ ,  $48.28 \pm 1.51$ )  $t=-6.945$   $p=0.000$ . There were also statistically significant negative correlations for Sheddars between days physically active; and BMI ( $r(375) = -.207$ ,  $p=.000$ ); and waist circumference ( $r(380) = -.257$   $p=.000$ ).

Compared to the recommended minimum of 5 or more daily servings of fruit and vegetables, Sheddars consumed an average of 3.36 servings, similar to the general population of males over 54 years in Ireland with an average of 3.2 servings (O'Connor, Leahy, & McGarrigle, 2017). The majority of Sheddars ( $n=283$ , 74.1%) consumed less than the recommended 5 servings of fruit and vegetables daily. Over a third (38.8%) of Sheddars reported cooking rarely or never (see Table 3). Appendix E describes Sheddars' confidence ratings for cooking preparation and practices adapted on a 12-item scale (Garcia et al., 2017). The vast majority of Sheddars (91.5%) were not current smokers. Most Sheddars (68.3%) reported that they drink alcohol, of which 12.7% consumed more than the recommended upper limit of 17 standard drinks per week.

### 3.3.4 Subjective Wellbeing

While three-quarters of Sheddars (75.9%) self-reported their health in positive terms from excellent to good, almost a quarter (24.1%) reported their health in the range of average to poor. Some 16.9% scored their life satisfaction, and 15% scored their life worth at  $\leq 6$ , meaning the majority of Sheddars reported high life satisfaction (83.1%) and life worth (85%) ratings at baseline. The mean life satisfaction score for Sheddars (7.98) was similar to the national male average of 8.10 (OECD, 2019). A minority of Sheddars (10.5%) reported

feeling stressed 'often' (6.9%) or 'very often' (3.6%). Notably, while the majority of Sheddards fell into an at-risk category in terms of their objective health parameters, this was not reflected in their subjective state of health or SRH. Moreover, there is a positive correlation between SRH and age ( $r(382) = 0.215$ ,  $p=0.000$ ). Table 4 below considers a range of measures by age categories which further highlights that older members have higher SRH values (this scale shows higher numbers for those with lower perceived levels of health). National data (Department of Health, 2019) shows that those rating their health as 'very good' declines with age – this is contrary to the Shed cohort in this study. Table 4 also highlights that life satisfaction and mental health are also reported more positively for older Sheddards with life satisfaction being positively correlated with SRH ( $r(382) = 0.350$ ,  $p=0.000$ ). This is reinforced by trends in the objective measures, such as BMI declining with age ( $r(382)=-0.113$ ,  $p=0.03$ ) as well as an increased proportion of those meeting the PA guidelines in older age cohorts. Moreover, BMI was negatively correlated with days physically active ( $r(375) = -0.207$ ,  $p=0.000$ ) as was waist circumference ( $r(380) = 0.257$ ,  $p=0.000$ ). Similarly to SRH, national data for the percentage meeting PA guidelines shows a decline from 53% for those aged 45-54 through to 20% for those aged 75+ - while the trend is largely in the opposite direction for Sheddards (Department of Health, 2019).

**Table 4: 3.2 Comparison of subjective and objective health measures by age**

Age Category	Less than 35	35-44	45-54	55-64	65-74	75+
N	4	5	16	61	200	95
SRH [1=Excellent, 5=Poor]	3.5	3.6	3.3	3.0	2.8	2.6
% who rated health to be very good (Shed)	25%	0%	31%		38%	
% who rated health to be very good (National Average*)	56%	40%	35%		29%	
% Meeting PA guidelines (Shed)	25%	20%	44%	28%	27%	44%
% Meeting PA Guidelines (National Average **)	N/A	N/A	53%	40%	41%	20%
BMI	29.8	31.5	30.1	31.2	30.0	28.9
Life Satisfaction	7	7.6	6.8	7.5	8.2	8.0
Mental Wellbeing	26.9	23.6	24.9	25.9	27.2	27.2
Loneliness	3.8	5.0	6.2	5.2	4.5	4.8

\*Department of Health (2019) \*\* Department of Health (2019)

Mean mental wellbeing (SWEMWBS) scored at baseline was  $26.90 \pm 4.77$  out of a possible 35. The number of Sheddars in the range of average to probable depression was 54.1% (n=185) with 45.9% (n=155) in a range of high mental wellbeing<sup>2</sup>. Sheddars' mental health scores were positively correlated with an increased certainty in understanding about mental health ( $f=17.753$ ,  $p=0.000$ ) and comfort having a conversation about mental health ( $f=10.866$ ,  $p=0.000$ ). Those with higher life satisfaction also reported higher mental wellbeing scores  $r(374)=0.511$ ,  $p=0.000$ . In terms of belonging and close support, the majority of Sheddars felt they belonged to their Shed (96.9%) and that there would be someone there for them if they needed help (88.9%). Some 37.7% scored their levels of trust at  $\leq 6$ . Trust was positively correlated with SRH ( $r(382)=0.172$ ,  $p=0.000$ ), close support ( $r(382)=0.168$ ,  $p=0.000$ ) and belonging ( $r(382)=0.172$ ,  $p=0.000$ ). A paired samples t-test determined there was a significant difference in loneliness scores prior to joining a Shed (n=382,  $4.77 \pm 2.17$ ) and at baseline (n=381,  $3.31 \pm 0.890$ ,  $t=14.241$ ,  $p=0.000$ ). There was a reduction

<sup>2</sup> The cut points for SWEMWBS are 17 or less for probable depression, 18-20 for possible depression, 21-27 for average mental wellbeing and 28-35 high mental wellbeing (Warwick medical school)

of 27.1% in those who were categorised as lonely after joining a Shed which was statistically significant ( $Z=-9.764$   $p=0.000$ , see Table 3). Shedders with higher loneliness scores reported increased feelings of stress ( $r(342)=0.202$   $p=0.00$ ), with stress being negatively correlated with age ( $r(344)=-0.125$ ,  $p=0.021$ ).

To build on the earlier univariate and bivariate analysis, regression analysis was then conducted as this is a multivariate technique which does not treat the variables symmetrically and allows one to generate predictions of one variable controlling for other variables. This analysis, shown in Table 5, highlights that Shedders with higher mental wellbeing and life satisfaction have higher levels of trust when controlling for other independent variables such as age, education and marital status, while Shedders with higher mental wellbeing are also more likely to feel like they belong (see Table 5). In addition, mental wellbeing and life satisfaction were higher for Shedders meeting the PA guidelines whereas feelings of loneliness decreased.

**Table 5: 3.3 Regression Analysis on subjective variables**

	Dependent Variable		
	Mental Wellbeing	Life Satisfaction	Loneliness
Independent Variables			
Age	0.059	0.094	0.036
Education	0.042	-0.056	0.042
Marital Status	-0.127 *	-0.09	0.111 *
Urban or Rural Shed	0.055	0.092	-0.036
Trust	0.185 **	0.148 **	-0.18 **
Belonging	-0.114 *	-0.036	-0.004
Membership of Shed (years)	-0.078	0.016	-0.037
Meeting PA Guidelines	0.143 **	0.164 **	-0.113 *
N	366	372	370
R <sup>2</sup>	0.343	0.31	0.06

\* Significant at 0.05 level

\*\* Significant at 0.01 level

### 3.3.4 Education and Marital Status

While education did not have a significant impact on subjective wellbeing, Shedders with lower educational attainment were less likely to report a propensity to seek out information about their health ( $\chi^2(2) = 13.900$ ,  $p = 0.003$ ). Education levels were also positively correlated with diet and cooking

habits. Fruit and vegetable consumption increased as education levels increased ( $r(382) = 0.142, p = 0.000$ ). This is similar to the TILDA study which found that fruit and vegetable consumption increased as education increased (O'Connor et al., 2017). Education was positively correlated with confidence in cooking and food preparation ( $r(382) = 0.276, p = 0.000$ ) and Kruskal-Wallis H tests revealed that Sheddors who had higher education levels reported increased confidence in cooking and preparation practices across all twelve confidence constructs (see Appendix E).

Living situation and marital status were also correlated with wellbeing. Sheddors who lived alone or were not currently married reported lower propensity to seek out information about their health ( $n = 381, \chi^2(2) = 11.187, p = 0.025$ ). Compared to those who lived with others, Sheddors who lived alone had lower SRH ( $z = -2.477, p = 0.01$ ) and life satisfaction ( $n = 68, 7.43 \pm 1.87$  vs  $n = 311, 8.10 \pm 1.66, t = -2.975, p = 0.003$ ). Regression analysis highlighted that, when controlling for other variables, there was a significant correlation between marital status, loneliness and mental wellbeing, with Sheddors who were not currently married reporting poorer mental health and increased loneliness. Sheddors who lived with their family/partner ( $n = 311$ ) reported cooking more often compared to those who lived alone ( $n = 68, \chi^2(2) = 20.11, p = 0.00$ ).

### **3.4 Discussion**

The aim of this paper was to describe the sociodemographic and health and wellbeing characteristics of a cohort of Sheddors ( $n = 384$ ) who enrolled in a health promotion initiative (SFL) in the Shed setting. Previous studies have identified a distinct lack of such data (Albrecht et al., 2021; Kelly et al., 2019b; Milligan et al., 2016; Wilson & Cordier, 2013), making it difficult to adjudicate on the merits of the Shed as a setting for targeted health promotion interventions or on what the composition of such initiatives should be. Findings will have an important bearing on the scale-up of SFL as well as highlighting areas where diversification is needed to respond effectively to the needs of the target group. More broadly, findings raise important implications for prioritising and designing health promotion initiatives in Shed settings.

The success of the SFL recruitment strategy can be gauged by the fact that the majority of Sheddars (75%) in the target locations opted in to participate. No significant differences were found between urban and rural Sheddars in terms of demographics, health characteristics or subjective wellbeing. This suggests that Sheds attract similar groups of men across localities who stand to benefit from Shed participation equally and that effective health promotion in Sheds can be translated across geographical locations. However, as the geographical spread of this study was limited, this finding warrants further investigation. There were also no significant correlations found based on the length of time a Shedder was a member of a Shed and other variables (e.g. life satisfaction, mental wellbeing, loneliness), suggesting that any benefits that may accrue from joining a Shed are more immediate, remaining constant over time.' The demographics of this cohort of Sheddars are consistent with a previous study (Misan et al., 2017), which highlights the potential of Sheds in reaching what has traditionally been seen as a 'HTR' cohort of older, retired, lesser educated men. Sheddars' propensity to seek health information was inversely associated with education level – a notable finding in light of the strong association between tertiary education and health (42) and given that the majority of Sheddars (77%) had no more than secondary education. This suggests that health promotion strategies in Sheds should seek to normalise engagement with health through gender-specific approaches that consider health literacy and are age appropriate. Marital status and living situation also emerged as protective factors for Sheddars in terms of their health engagement and wellbeing. Sheddars who were not in a relationship and/or living alone were less likely to seek information about their health, less likely to cook, more likely to be lonely and have poorer subjective wellbeing and mental health. These findings highlight the importance of engaging more isolated men with health promotion in Sheds where social support may foster improvements in subjective wellbeing (Fish et al., 2015; Golding, 2015; Kelly et al., 2021a; Mackenzie et al., 2017; McGrath et al., 2020; Nurmi et al., 2018; Wilson et al., 2015; Wilson et al, 2016). The overwhelming majority of participants identified as white and Irish. This is at least partly reflective of the older demographic population in Ireland which does not yet have a large representation of diverse ethnicities (Central Statistics Office, 2016).

Nevertheless, greater diversity in terms of Shed membership should be encouraged to foster richer learning experiences and to prevent Sheddors from older age cohorts or from culturally diverse backgrounds feeling stigmatised or labelled (Nurmi et al., 2018).

Results from objective health and lifestyles measures suggest that the majority of Sheddors fall into at-risk categories for chronic disease, including hypertension, high risk BMI and waist circumference, family history of heart disease, diabetes and stroke, inactivity, and inadequate intake of fruit and vegetables. Moreover, an overwhelming majority of Sheddors were referred to their GP based on concern(s) raised from the health check results. Similar at-risk health characteristics were reported from a community-based physical activity programme in Ireland that also adopted a gender sensitive approach to engage a HTR cohort of men (Kelly et al., 2019a). These findings suggest that community settings, including Sheds offer much potential to reach beyond the 'worried well', by using targeted approaches to engage those most at-risk in health promotion. A minority of Sheddors (8.7%) identified themselves as current smokers which is a positive finding and noteworthy in the context of designing health initiatives in Sheds where significant investment in smoking cessation may not be warranted. Results suggest that 68.3% of Sheddors consumed alcohol which is less than the national figures for adult males of 79% (Department of Health, 2019). While overall alcohol consumption and frequency of binge drinking is higher in men than in women (Manthey et al., 2019), less than 10% of Sheddors reported drinking more than the recommended 17 standard drinks per week. Self-report bias may need to be considered here where Sheddors may have opted for a more favourable response to provide a good impression, a finding consistent with other studies that seek to engage at-risk men (van Doorn et al., 2020). Thus, the value of alcohol behaviour change initiatives in Sheds should not be discounted. However, as is the case with alcohol, men are more likely to consume tobacco and indeed by 2025 the rate of tobacco consumption is predicted to decline to 6.7% in females and only 35.1% in males (WHO, 2019). Therefore this finding may also be indicative of social desirability bias.



Despite the high prevalence of at-risk objective health measures, the majority of Shedders reported their health in positive terms. Moreover, subjective wellbeing was in fact positively correlated with age. Previous studies, involving participants both from Sheds and the general population, have posited that older people re-calibrate their self-rating of health relative to what they think is reasonable for their age (Henchoz, Cavalli, & Girardin, 2008; Misan et al., 2017). Curiously, findings from this study highlighted that the majority of health metrics (objective and subjective) were better in older than in younger Shedders. Older Shedders were also more likely to have higher SRH and over twice as likely to meet the PA guidelines in comparison to the general population of males the same age (Department of Health, 2019). Conversely, younger Shedders had poorer SRH compared to age-matched general population data, indicating that younger Shedders may choose to attend Sheds because of underlying physical or mental health issues. Findings also raise the possibility that Sheds may be a facilitating factor in encouraging older men to be more active. More active Shedders enjoyed greater mental wellbeing, life satisfaction and self-efficacy, and experienced less loneliness. Physical activity interventions that utilise the social support within Sheds may be effective not only in building PA self-efficacy, but also in enhancing Shedders' subjective wellbeing. Healthy eating initiatives may also find value in utilising the social support in Sheds and should focus on knowledge and confidence building in terms of healthy eating and cooking skills.

It is worth considering what makes a Shedder consider himself 'subjectively' healthy and this consideration may have important implications for tailoring health promotion in Sheds. For instance, findings highlight a number of correlations between sense of connection (loneliness, belonging, trust) and Shedders' self-reported wellbeing and lifestyle measures (physical activity, diet). This suggests that Shedders may place more emphasis on subjective measures such as satisfaction with life, purpose and belonging when evaluating their health, with life satisfaction positively correlated with mental health and SRH. Indeed, other research has found that older adults place twice as much emphasis on aspects of social life compared to physical health when evaluating their wellbeing (Douma et al., 2015) and there exists a wider pattern

of discrepant subjective wellbeing versus objective health in older age (Lukaschek et al., 2017). 'Happier' and 'healthier' Sheddars also scored higher on measures of trust and social capital. Thus, behaviour change techniques that revolve around building self-efficacy and social support may act as an important catalyst in encouraging positive behaviour changes in areas such as physical activity, mental health, help seeking and diet, particularly for younger Sheddars. Findings also highlight the utility of Sheds in combatting loneliness and this may also account for the high baseline of SRH. Similarly with regards to mental wellbeing, results suggest that there is an association between; men who have a good understanding of mental health and; are comfortable discussing mental health, and increased mental wellbeing. Therefore, mental wellbeing initiatives that focus on normalising conversations about mental wellbeing and enhancing understanding could have a valuable role in protecting the mental health of Sheddars, a finding consistent with previous work which evaluated the determinants of subjective wellbeing in older men and women (Lukaschek et al., 2017).

In terms of limitations to this study, it is important to acknowledge the self-report data which is subjective in nature and may be open to reporting bias. This may also be an indicator as to why older men perceive themselves as healthier, yet constructs of wellbeing and perceived health status are subjective in their own right and arguably one's perceptions and attitudes to wellbeing are predicative of good health. Recall bias may also need to be considered, particularly where Sheddars were asked to retrospectively rate their loneliness before having joined a Shed. For pragmatic reasons, the sample was drawn from selected counties in Ireland therefore findings cannot purport to be representative of all Irish Sheddars. The relationships observed are also derived from cross sectional analysis and longitudinal analysis from the SFL initiative which has recently concluded may provide more insight into the nature of these relationships.

### **3.5 Conclusion**

While Sheds have been previously identified as suitable settings to engage HTR men with health promotion, this is the first study which captures the

sociodemographic and health and wellbeing characteristics of a significant cohort of Shedders and which highlights a range of correlations that can assist in the design of tailored health promotion in Sheds. Moreover, it is important to identify whether health promotion initiatives such as SFL are successful in reaching beyond the 'worried well' as this has important indications for the effectiveness of the implementation of such initiatives as well as their suitability for scale-up. The results highlight that Sheds are effective in attracting men that are indeed 'HTR' in terms of their sociodemographic characteristics and 'at risk' in terms of their objective health measures and referrals to their GP. Findings provide a resounding endorsement of the effectiveness of the SFL recruitment strategies in terms of reach and engagement of this cohort. While Sheds are effective in reaching a cohort of HTR men, there are opportunities for Sheds to expand their reach in attracting more marginalised subpopulations of men (in terms of ethnicity, disability and those at risk of isolation) who may stand to gain from the health enhancing benefits of Sheds, including health promotion initiatives in Sheds. The fact that older cohorts of Shedders rate their health more positively and appear to be objectively healthier is a noteworthy finding. While this may be partly explained by a positive Shed effect, further research to explore the underlying factors to this anomaly is required. In particular it would be worth exploring whether the factors that prompt men to attend Sheds differs according to age and whether Sheds facilitate older Shedders to be more active.

The weight that participants in this study placed on belonging and purpose as contributing factors to their overall wellbeing, has important implications for the design and methodological approach of health promotion in Sheds. The findings make it clear that health promotion in Sheds should seek to normalise engagement with health through gender-specific approaches that consider health literacy and are age appropriate, particularly focusing on men with lower education, not married and/or living alone. Overall this study provides important insights into the health and wellbeing of Shedders and also what motivates Shedders to feel subjectively well. The findings also highlight important priority areas for health promotion in Sheds where a particular focus on physical activity, mental wellbeing and diet may be important for enhancing

Shedder wellbeing. Equally, initiatives which enhance sense of purpose and belonging may be particularly important for sustaining the engagement of Shedders as well as being health enhancing in their own right.

## **Chapter 4: The impact of COVID-19 on the health and wellbeing of Sheds for Life participants**

This chapter uses data gathered from baseline to 6 months to highlight the impact of COVID-19 on the health and wellbeing outcomes of SFL participants. It adds value to the research by providing insight into the impact the COVID-19 pandemic had on the health and wellbeing outcomes of SFL participants which may have impacted SFL findings more broadly. It makes a valuable contribution to knowledge in providing longitudinal data that outlines the impact COVID-19 has had on older, more vulnerable, men, Shed members and SFL participants.

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## Lay Summary

The COVID-19 pandemic will have wide-reaching implications on wellbeing, particularly on those who are older and more vulnerable. Evidence also suggests that COVID-19 disproportionately affects males. This study aimed to understand the impact that COVID-19 has had on men in the setting of Men's Sheds in Ireland. Two cohorts of men who were participating in a 10-week health and wellbeing programme (Sheds for Life) at different stages were followed over time. At six-months follow up the first Cohort had not experienced COVID-19 whereas the second cohort was actively experiencing the COVID-19 pandemic. We measured wellbeing using questionnaires, comparing both groups of men for differences. We found that the men who were experiencing COVID-19 had lower self-rated health, physical activity and life satisfaction as well as higher rates of loneliness, with those who were more lonely reporting lower wellbeing scores. We also found that men in rural areas were more physically active during COVID-19 and that those who were not active were more likely to become more inactive during COVID-19. This study suggests that support and guidance is needed to safely encourage this cohort back into Men's Sheds, settings that protect against loneliness and positively promote health and wellbeing.

## Abstract

**Background:** COVID-19 disproportionately affects males especially those who are older and more socio-economically disadvantaged. This study assessed wellbeing outcomes among Men's Shed members ('Shedders') in Ireland at baseline (T1), 3 (T2), 6 (T3) and 12 months (T4) in response to a 10-week health promotion programme "Sheds for Life" (SFL). Two cohorts participated in SFL commencing in March and September 2019. This study compares the T3 findings from one cohort carried out during the COVID-19 pandemic, (COVID cohort; n=185) with T3 findings from a comparator cohort (Pre-COVID cohort; n=195), completed pre-COVID-19.

**Methods:** Questionnaires assessing wellbeing (life satisfaction, mental health, loneliness, physical activity (PA), self-rated health and other lifestyle measures) were analysed in both clusters across T1, T2 and T3.

**Results:** Self-rated Health and life satisfaction decreased in the COVID cohort at T3 ( $p<0.001$ ), while loneliness scores increased ( $p<0.0005$ ). Higher loneliness scores were correlated with lower health ratings, life satisfaction and PA during COVID-19 ( $p<0.001$ ). Days PA decreased in the COVID cluster at T3 from T2 ( $p<0.01$ ) with those in urban areas reporting lower activity levels than rural areas ( $p<0.05$ ). Those sufficiently active at baseline managed to maintain PA during COVID-19 while those not meeting guidelines were more likely to report decreases ( $p<0.001$ ).

**Conclusions:** Sheddors experiencing COVID-19 restrictions are at an increased risk of poorer wellbeing and increased levels of loneliness. Support and guidance is needed to safely encourage this cohort back into men's sheds, settings that protect against loneliness and positively promote health and wellbeing.

## **4.1 Introduction**

### **4.1.1 Men and COVID-19**

In the vast majority of countries where data are available, men are consistently dying from COVID-19 at a higher rate than women, despite a similar number of confirmed cases in each sex (Global Health 50/50, 2020). This reflects a complex mix of sex and gender differences. The higher prevalence of pre-existing comorbidities in men than in women, including cardiovascular disease, diabetes, obesity and hypertension, has been highlighted as a critical factor in men's greater susceptibility to more severe and fatal outcomes from COVID-19 (Smith et al., 2020; WHO, 2018b). Gender differences in health behaviours (smoking and drinking), delayed help-seeking, and lower adherence to pandemic-specific containment measures (wearing of face masks, hand-washing) have also been highlighted as contributory factors to men's greater vulnerability to the disease (Baker et al., 2020). It is also becoming increasingly apparent that the pandemic disproportionately affects more socially and economically disadvantaged population groups in general, and males in particular (Wang et al., 2020). This reflects a more fundamental pattern of health inequities associated with a steeper social gradient in men's health, whereby more vulnerable and minority population groups of men carry a disproportionate burden of ill-health and mortality (WHO, 2018b). Although the WHO has recently called on countries to incorporate a focus on gender into their COVID-19 responses (WHO, 2020), to date considerations of how gender intersects with other social determinants of health to generate health and social inequities have been largely absent from efforts at a policy or practice level to respond to the pandemic (Smith et al., 2020).

### **4.1.2 Turning the spotlight on the wider ramifications of COVID-19**

Whilst most of the attention in the early months of COVID-19 has understandably been on public health measures to respond to and contain the disease, the focus is now beginning to broaden to the wider and longer-term ramifications, such as increased unemployment, economic burden and financial losses, delayed help-seeking for other health conditions (Smith et al.,



2020). Mass fear of COVID-19, termed “coronaphobia” (Asmundson & Taylor, 2020), has generated much uncertainty and anxiety across the different strata of society. There is now increasing concern about the wider psychosocial impact of COVID-19, particularly on more vulnerable groups such as older people and more marginalised communities who are likely to be disproportionately affected by this pandemic and need special attention (Dubey et al., 2020; Talevi et al., 2020). Hamm et al. (2020) highlighted that whilst older adults with pre-existing depression showed resilience in the early months of the COVID-19 pandemic, many also expressed concerns about the future, thus highlighting the need for increased supports for this cohort to maintain mental health and quality of life as the pandemic continues.

The COVID-19 pandemic has been identified as a possible trigger for increases in loneliness and social isolation particularly among older people due to the restrictions on movement and social interactions that many countries have put in place (Noone et al., 2020). Loneliness and social isolation are consistently identified as risk factors for poor mental and physical health in older people - an age cohort more likely to experience many of the risk factors that can cause or exacerbate social isolation or loneliness, such as living alone, the loss of family or friends, chronic illness, and sensory impairments (NASEM, 2020). The implications of loneliness and social isolation include disruption of social interactions and routines, reduced meaningful activity, reduced social and emotional support, potential for grief, loss, and trauma responses, limited access to resources, and reduced physicality (Campbell, 2020). Indeed, a substantial body of evidence demonstrates that social isolation presents a major risk for premature mortality, and is a particular cause for concern among low income, underserved, and vulnerable populations (NASEM, 2020).

The restrictions during COVID-19 have also led to concerns around the impact on PA particularly among vulnerable groups. Indeed, evidence suggests that PA in older adults has significantly decreased during COVID-19, with concerns that this may lead to increased risk of decline and disability (Roschel, Artioli, & Gualano, 2020; Yamada et al., 2020). Emerging evidence also suggests that the decline may be more prevalent in existing “at risk” groups, particularly

those not meeting current PA guidelines. These older adults are at an increased risk of serious complications from COVID-19 and PA can help to defend against COVID-19 symptoms by improving immune system responses to viral respiratory infections as well as facilitating social engagement, which is conducive to positive wellbeing, meaning that alternative solutions for exercise and social engagement are needed (Son et al., 2020).

#### 4.1.3 Tracking the impact of COVID-19 on 'hard to reach' groups: a case study from Ireland

This research emanated from a wider, ongoing study evaluating the implementation and scalability of a community-based men's health and wellbeing programme "Sheds for Life" (SFL) in the men's sheds ("Sheds") setting. The Men's Shed movement was first founded in Australia in the 1980's and has since expanded to other countries, first arriving in Ireland in 2011 and growing exponentially with over 450 Sheds now on the island and up to 10,000 members. Sheds are community-based, independent and self-autonomous, engaging in a range of activities, such as woodwork, gardening and music, that foster opportunities to participate in meaningful activities which encourage skill sharing, informal learning, comradery, sense of purpose and belonging all facilitated by a socially supportive and acceptable masculine environment (Bergin & Richardson, 2020; Kelly et al., 2019b; Wilson & Cordier, 2013). This salutogenic environment fostered by Sheds has led to the recognition of their inherent health-promoting nature (Lefkowich & Richardson, 2016; Wilson & Cordier, 2013), poising Sheds as alternative spaces to promote health (Kelly et al., 2019b; Nurmi et al., 2018; Taylor et al., 2018) and encompassing many of the principles for effectively engaging men in health promotion programmes (Bergin & Richardson, 2020). Sheds operate on minimal funding and are self-sustained. The Irish Men's Sheds Association (IMSA) supports the development of the network of over 450 Sheds in Ireland. Sheds typically attract more vulnerable or 'hard to reach' groups of men; that is, men who tend to be more isolated from or reticent about accessing formal health services or social support networks due to geography, experiences of mental health issues, unemployment, or changes in life course (Lefkowich & Richardson,

2016). Sheds for Life is a health promotion programme based in the safe space of the Sheds setting and employs gender-sensitive strategies in a tailored, supportive, collaborative approach involving multiple stakeholders (Shedders, partner organisations, service providers, research team). The key principles underpinning SFL were informed by a previous study (Bergin & Richardson, 2020), which sought to align the ethos of Sheds with the programme content and delivery. The IMSA has overseen the development of SFL which is structured as a ten-week intervention and comprises of a health check and three core modules of physical activity, mental wellbeing and healthy eating as well as other elective health, wellbeing and life skill components self-selected by Shedders (e.g. diabetes and cancer awareness, digital literacy, oral health promotion, suicide prevention workshop and CPR). The on-going evaluation consists of a hybrid type-two effectiveness-implementation study design (Curran et al., 2012), guided by implementation and evaluation frameworks (Damschroder et al., 2009; Koorts et al., 2018; Proctor et al., 2011) and employs a pragmatic, collaborative approach, which aims to enhance the implementation and sustainability of SFL. Measurements were made at baseline (T1), 3 (T2), 6 (T3) and 12 (T4) months on a range of demographic, health and social measures to assess effectiveness at the individual level with continuous assessment for wider implementation measures.

This study sought to answer the question; “What impact has the COVID-19 pandemic had on the wellbeing of Shedders?” It did so by comparing findings from the 6-month follow-up stage carried out during the COVID-19 pandemic in one cohort with the 6-month findings from a comparator cohort, completed pre-COVID-19. The study thus provides valuable longitudinal data on the impact of COVID-19 on wellbeing in an understudied and ‘hard to reach’ group. The study also enhances understanding of the interactions between geographical location, living situation and loneliness during the lockdown period of COVID-19. To date, there has been a dearth of evidence on the impact of COVID-19 on specific indices of health and wellbeing specifically among more vulnerable or ‘hard to reach’ groups. The study therefore addresses an important gap in the COVID-19 literature by (i) focusing attention

on the impact of the pandemic on a vulnerable, older cohort of males; and (ii) providing insight into the utility of a community outreach health promotion programme (SFL) to ameliorate at least some of the potentially deleterious physical and mental health effects of COVID-19 on a cohort of the population considered a priority group. The latter is noteworthy in the context of increasing calls for dedicated resources that prioritise more vulnerable and high-risk communities during COVID-19 and that address the social and economic barriers to overall well-being that these populations face during a pandemic (Wang, Behrman, et al., 2020).

## **4.2 Methodology**

With due regard both to capacity and resource constraints of partner organisations to deliver SFL along with the nuances, ethos and autonomy of the Sheds environment, the SFL ten-week intervention, was implemented on a phased basis across two clusters (Pre-COVID Cohort and COVID cohort). The Pre-COVID cohort had completed SFL T3 testing prior to COVID-19 restrictions. The COVID cohort was actively experiencing social restrictions due to COVID-19 at T3. These included social distancing of 2 metres, staying at home as much as possible, limited communication outside of the household with groups of no more than four people meeting outdoors, wearing of face coverings, a 5 kilometre travel limit, with older and vulnerable people recommended to cocoon by staying indoors apart from brief outdoor exercise (Government of Ireland, 2020).

### **4.2.1 Participants**

Respecting the autonomous and informal environment of the Sheds is an important factor in delivering health promotion through Sheds (Bergin & Richardson, 2020; Lefkowich & Richardson, 2016). Therefore, Sheds were recruited to participate in SFL via an expression of interest process with the objective to deliver SFL in diverse settings based on Shed size and geographical location (urban/rural). Individual Sheddors within Shed settings participated in SFL and the evaluation on a voluntary basis and provided informed consent. The first SFL programme delivery (Pre-COVID cohort) was

delivered over two counties comprising of 12 delivery settings and individual Sheddars (n=212) in March to May 2019. The two counties were County Kildare, in Ireland's Mid-East region with a population of circa 222,504, and Waterford in Ireland's South-East Region with a population of 116,176 (Central Statistics Office, 2017). The second SFL programme delivery (COVID cohort) was similarly delivered from September to November 2019 over two counties comprising of nine delivery settings and individual Sheddars (n=209). These two counties included; Co. Limerick, in Ireland's South-West region with a population of 194,899 and Co. Louth in Ireland's Mid-East Region with a population of 128,884 (Central Statistics Office, 2017). See Table 6 for geographical spread of delivery settings.

#### 4.2.2 Study Design and Data Collection

Self-reported outcomes were measured via a questionnaire that was completed by the participants one-to-one with a trained research team member. Participant demographics were recorded at baseline including date of birth, living situation, educational attainment, employment status relationship and ethnicity (See Table 6). At all time-points, loneliness was measured via the UCLA 3-item scale measuring three dimensions of loneliness; relational connectedness, social connectedness and self-perceived isolation (Russell, 1996). Life satisfaction was recorded using the Office of National Statistics subjective wellbeing 11-point scale (Office for National Statistics, 2015). Mental wellbeing was measured using the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS) with raw to metric score conversion where a change of 2+ is considered relevant (Stewart-Brown et al., 2009). Self-rated health was measured using a single question Likert scale with high reliability among older men (Lundberg & Manderbacka, 1996). Lifestyle behaviours were also recorded (smoking (number smoked per day) and alcohol consumption (days drinking and units consumed per drinking session)). The single-item PA measure was used to record PA levels (Milton et al., 2011). The Self-Efficacy for Exercise Scale (SEE) was used to measure physical activity self-efficacy (Resnick & Jenkins, 2000). Sheddars in the COVID cohort were asked during T3 under COVID-19 restrictions if they were

physically active “more than usual”, “about the same” or “less than usual” (See Table 7 for description of measures). Questionnaires were administered with Sheddors at baseline (T1; n=198), 3 months (T2; n=123), 6 months (T3; n=65) and 12 months (T4; n=156) in the Pre-COVID cohort. Follow up rates in the Pre-COVID cohort were 62, 70 and 80% respectively. Due to constraints associated with research capacity, specifically in terms of aligning data collection with Shed opening hours, follow up rates vary and rescheduling of data collection was not possible. At T3 in the Pre-COVID cohort a sub sample of 6 out of 13 Sheds were followed up with where 65 out of a potential 93 Sheddors were present to complete follow up i.e. 70%. Absence of data for participants does not necessarily indicate drop out. An estimated reach rate calculated on proportion of Sheddors eligible to attend SFL (n=565) against numbers who enrolled in SFL (n=421), along with mean attendance rates of SFL components was estimated at 73% across both Pre-COVID and COVID cohorts. Baseline (T1; n=185), 3 month (T2; n=106) and 6 month (T3; n=146) data were collected in the COVID cohort with 12 month (T4) pending. Follow up rates were 57% and 79% respectively. During the T3 follow up in the COVID cohort (n=146; June 2020), social distancing restrictions were in place; therefore questionnaires were administered via telephone. Questionnaires were adjusted to include questions which measured self-reported wellbeing outcomes prior to and during COVID-19.

#### 4.2.3 Data Analysis

Data were analysed using Statistical Packages for the Social Sciences (SPSS V 24). Descriptive statistics for each variable were calculated and data collected across time points were compared using inferential tests to identify potential significant differences between points in time within the Pre COVID and COVID cohorts. The Pre-COVID cohort was analysed as a comparator as the T3 data point was pre COVID. Scores at T3 in the Pre COVID and COVID cohorts were also compared for differences between the two cohorts, adjusting for mean values and any differences present at T2. Data gathered in the COVID cohort during COVID-19 at 6-month follow up were analysed for differences in outcome measures pre and during COVID-19.

### **4.3 Results**

In total, data pertaining to 383 men were analysed with 146 of same (COVID cohort) experiencing the impact of COVID-19 restrictions. Table 6 describes key characteristics of both cohorts and their Sheds.

**Table 6: 4.1: Participant and Shed characteristics**

		Pre-COVID cohort		COVID cohort		Overall Sample 383	
<i>Age Range</i>		27-89 years (n=198)	(N %)	30-90 years (n=184)	(N %)	27-90 years (n=383)	(N %)
<i>Mean years(SD))</i>		69.1 ±9.685		69.0 ± 8.532		69.0 ± 9.136	
<i>Ethnicity</i>	White Background					380	99.2
	Mixed Background					3	0.8
<i>Marital Status</i>	Married/Cohabiting	153	77.3	128	69.2	281	73.4
	In a relationship	2	1.0	1	0.5	3	0.8
	Widowed	20	10.1	16	8.6	36	9.4
	Separated/Divorced	8	4.0	14	7.6	22	5.7
	Single	15	7.6	26	14.1	41	10.7
<i>Education</i>	Primary education only	44	22.2	51	27.7	95	24.9
	Some/Completed Secondary	100	50.5	99	53.8	199	52.1
	Some/Completed Third Level	47	23.7	31	16.7	78	20.4
	Some/Completed Postgrad	7	3.5	3	1.6	10	
<i>Living Situation</i>	Lives alone	29	14.6	39	21.2	68	17.8
	Lives with family/partner	167	84.3	145	78.8	312	81.7
	Lives with friends	2	1.0	0	0	2	0.5
<i>Employment</i>	Employed (Full-time, Part-time or Self-employed, looking after home/family)	28	14.1	17	9.2	45	11.8
	Unemployed/looking for work	4	2.0	3	1.6	6	1.6
	Retired from paid work	153	77.3	155	83.8	308	80.4
	Student or Volunteer	3	1.5	2	1.1	5	1.3
	Unable to work due to long-term illness/disability	10	5.1	8	4.3	18	4.7
<i>No. of participants per shed (Range)</i>		8-26		14-37		8-37	



<i>No. of delivery settings</i>		13		9		22	
<i>Mean no. of SFL participants</i>		16.4 ± 6.331		23.2 ± 8.408		19.2 ± 7.854	
<i>* Geographic location of delivery setting</i>	Urban	10	77.0	4	44.0	14	64.0
	Rural	3	23.0	5	56.0	8	36.0

\* The Census definition of an urban area is a town with a total population of 1,500 or more. Towns with a population of less than 1,500 are considered rural areas (Central Statistics Office, 2019).

#### 4.3.1 Impact of COVID-19 on Shedders:

##### *Self-rated health*

Both cohorts experienced an increase in self-rated health after the SFL intervention (T2; post SFL  $z=-3.822$   $p<.0005$ ). Then, in contrast to the pre-COVID cohort who continued to increase significantly at T3 (Wilcoxon matched pairs test;  $z=-3.460$   $p<0.005$ ; See Table 7), there was a significant reduction in self-rated health for the COVID cohort  $z=-3.77$   $p<.0005$ . Previously there had been a significant increase in perceived health rating from T1 to T2. This trend was statistically similar in the PRE-COVID cohort.

**Table 7: 4.2: Wellbeing measures in Pre COVID and COVID cohorts at T1, T2 and T3**

<b>(N=383) %</b>		<b>Pre-COVID Cohort</b>			<b>COVID Cohort</b>			<b>Form of Measurement</b>	
		T1	T2	T3	Pre-Shed	T1	T2	Pre COVID	T3 (During COVID)
<i>Health Rating</i>		N=	N=	N=		N=	N=	N=	N=
		N%	N%	N%		N%	N%	N%	N%
<i>Excellent</i>		18	19	18		11	11	19	18
		9.1%	14.6%	26.1%		5.9%	10.3%	13.1%	12.4%
<i>Very Good</i>		54	40	30		55	50	45	40
		27.4%	30.8%	43.5%		29.7%	46.7%	31%	27.6%
<i>Good</i>		77	44	16		75	34	60	58
		39.1%	33.8%	23.2%		40.5%	31.8%	41.4%	40.0%
<i>Average</i>		43	25	5		35	11	20	27
		21.8%	19.2%	7.2%		18.9%	10.3%	13.8%	18.6%
<i>Poor</i>		5	2	0		9	1	1	2
		2.5%	1.5%	0.0%		4.9%	0.9%	0.7%	1.4%
		***T1 & T2 T2 & T3				*** T1 & T2		*** Pre-Covid & T3	
<i>Mean SD</i>									
<i>Loneliness (Mean+SD)</i>		4.810 ± 2.146 (n=195)	3.318 ± 0.868 (n=195)	3.088 ± 0.510 (n=68)	4.810 ± 2.146 (n=185)	3.297 ± 0.916 (n=185)	3.289 ± 0.836 (n=109)	3.131 ± 0.637 (n=145)	4.621 ± 1.845 (n=145)
		*** T1 & T2		**T2&T3	*** Pre Shed & T1		*** Pre Covid & T3		
<i>Life Satisfaction (Mean+SD)</i>		8.073 ± 1.780 (n=123)	8.4634 ± 1.553 (n=123)	8.275 ± 1.551 (n=69)		7.912 ± 1.465 (n=91)	8.681 ± 1.298 (n=91)	8.531 ± 1.225 (n=145)	7.828 ± 1.697 (n=145)
		** T1 & T2			*** T1 & T2		*** Pre Covid & T3		
<i>Life Worthwhile (Mean + SD)</i>		8.398 ± 1.602 (n=123)	8.740 ± 1.441 (n=123)	8.536 ± 1.481 (n=69)		8.1648 ± 1.522 (n=91)	9.099 ± 1.022 (n=91)	8.804 ± 1.240 (n=143)	8.475 ± 1.495 (n=143)

	** T1 & T2				** T1 & T2		*** Pre Covid & T3		
<i>Mental Wellbeing (Mean+SD)</i>	26.640 ± 4.758 (n=122)	29.916 ± 5.130 (n=122)	31.561 ± 4.230 (n=69)		26.949 ± 4.670 (n=91)	31.735 ± 4.018 (n=91)		30.657 ± 3.865 (n=86)	7-item Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS)
	*** T1 & T2				*** T1 & T2				
<i>Mean Days PA for 30+ mins (Mean+SD)</i>	2.956 ± 2.291 (n=123)	4.537 ± 3.265 (n=123)	3.840 ± 2.004 (n=69)		2.875 ± 2.702 (n=184)	4.049 ± 2.313 (n=102)	3.444 ± 2.563 (n=144)	3.451 ± 2.780 (n=144)	On how many days in the past week have you done a total of 30 minutes or more PA which was enough to raise your breathing rate? 0-7 Scale
	*** T1 & T2				*** T1 & T2			*T2&T3	
<i>Not meeting PA guidelines</i>	(n=135) 68.5%	(n=65) 50.4%	(n=41) 59.4%		(n=125) 67.9%	(n=57) 55.9%	(n=95) 66%	(n=88) 61.1%	Those who were active for 5+ days/week were classed as meeting pa guidelines
<i>Meeting PA Guidelines</i>	(n=62) 31.5%	(n=64) 49.6%	(n=28) 40.6%		(n=59) 32.1%	(n=45) 44.1%	(n=49) 34.0%	(n=56) 38.9%	
	*** T1&2				*** T1 & T2				
<i>Days walking for 10+ mins (Mean+SD)</i>	4.045 ± 2.516 (n=123)	5.062 ± 2.264 (n=123)	4.750 ± 2.285 (n=68)		4.549 ± 5.115 (n=184)	5.537 ± 2.314 (n=106)	5.576 ± 2.304 (n=144)	5.274 ± 2.370 (n=144)	During the last 7 days on how many days did you walk for at least 10 minutes at a time for leisure or transport? 0-7 Scale
	*** T1 & T2								
<i>Minutes Walking per day (Mean+SD)</i>	31.49 ± 23.92 (n=120)	40.09 ± 31.08 (n=120)	41.84 ± 23.53 (n=68)		35.10 ± 30.503 (n=184)	35.56 ± 23.87 (n=106)	39.10 ± 27.842 (n=144)	38.87 ± 30.11 (n=144)	How much time do you usually spend walking on those days? (minutes walking)
	** T1 & T2								

<i>PA Self-Efficacy (Mean+SD)</i>	53.331 ± 17.530 (n=121)	66.736 ± 21.060 (n=121)	66.019 ± 17.414 (n=68)		54.014 ± 22.159 (n=88)	64.306 ± 16.541 (n=88)		68.076 ± 16.487 (n=79)	The 9-item self-efficacy for exercise scale (SEE) Scores range from 0-90 with higher scores indicating higher self-efficacy
	*** T1 & T2				*** T1& T2		* T2 & T3		
<i>Physical Activity (PA)during COVID (T3)</i>	PA more than usual	PA about the same	PA less than usual						Since the COVID-19 pandemic I have been doing physical activity: More than usual, about the same, less than usual
<i>Overall (n=145)</i>	(n=41) 28.3%	(n=66) 45.5%	(n=38) 26.2%						
<i>Location: Urban</i>	(n=23) 25.6%	(n=35) 38.9%	(n=32) 35.6%						
<i>Location: Rural</i>	(n=18) 32.7%	(n=31) 56.4%	(n=6) 10.9%						
	* Urban & Rural								

\*\*\*Significant difference at  $p<0.001$  \*\* Significant difference at  $p<0.005$  \*Significant difference at  $p<0.05$

Table 7 describes differences between T1, T2 and T3 in the Pre-COVID and COVID clusters. "Prior to COVID" is in relation to the perceived ratings the COVID cohort reported for outcome measures before experiencing COVID-19 restrictions. "Prior to joining the shed" is in relation to loneliness scores and how respondents would have perceived their loneliness prior to becoming a men's shed member. Significant differences between time-points are marked with asterisk below the measure with time points indicated.

### *Subjective wellbeing*

There was a significant decrease in life satisfaction during COVID-19 restrictions (T3) compared to levels reported prior to COVID-19 restrictions, with a mean difference of  $-.70345$  (95% CI,  $-0.907$  to  $-0.499$ ),  $t=-6.818$ ,  $p<.0005$  in the COVID cohort (See Table 7). There had been a significant increase in life satisfaction in both cohorts at T1 and T2, with no significant change at T3 in the Pre-COVID cohort. A one-way ANCOVA was used to compare scores at T3 between both cohorts, adjusting for differences at T2. Data are adjusted mean  $\pm$  standard error. Life satisfaction was greater in the PRE-COVID cohort ( $n=53$ ;  $8.337 \pm 0.202$ ) compared to the COVID cohort ( $n=86$ ;  $7.722 \pm 0.158$ ) at T3  $p<0.05$ .

Similarly, there was a significant reduction in the extent Sheddars felt the things they do in life are worthwhile during COVID-19 compared to prior to COVID-19 with a mean difference of  $-0.329$  (95% CI,  $-0.468$  to  $-0.188$ ),  $t=-4.648$ ,  $p<.0005$ . Ratings had increased significantly in both cohorts at T1 and T2 (after the 10-week SFL intervention) with no significant change at T3 in the Pre-COVID cohort. A one way ANCOVA did not find significant differences between the two cohorts at T3.

### *Mental wellbeing*

There was a significant increase in SWEBMWS scores from T1 to T2 in both cohorts (see Table 7). Scores decreased from T2 to T3 in the COVID cohort during COVID-19 but not significantly. At T3 in Pre-COVID cohort scores continued to increase from T2 but not significantly. There was no significant difference in SWEBMWS scores between the Pre COVID and COVID cohorts at T3  $p=0.051$ .

### *Loneliness*

Sheddars in the COVID cohort were asked to rate their loneliness scores prior to joining the Shed and at T1, T2, prior to COVID-19 restrictions and during COVID-19 restrictions (T3; See Table 7). Sheddars reported increased feelings of loneliness prior to joining the Shed compared to T1 with a

statistically significant decrease. Similar mean scores were maintained until Shed closures at T3 in the COVID cohort where there was a statistically significant increase in loneliness scores of 1.489 (95% CI -1.775 to -1.230)  $t=10.306$ ,  $p<.0005$ . Sheddors in the Pre-COVID cohort had statistically similar loneliness scores up to T3 with loneliness scores continuing to decrease at T3 .423 (95% CI .168 to .678)  $t= 3.335$ ,  $p= .002$ . A one-way ANCOVA was used to compare scores at T3 between both cohorts, adjusting for differences at T2 (mean  $\pm$  standard error adjusted). Loneliness scores were significantly lower in the Pre-COVID cohort ( $n=53$ ;  $3.016 \pm 0.202$ ) compared to the COVID cohort ( $n=86$ ;  $4.837 \pm 0.158$ ) at T3  $p<0.0005$ .

An independent-samples t-test was used to determine if there were differences in loneliness ratings during COVID-19 restrictions (T3) between those who live alone ( $n=38$ ;  $4.679 \pm 2.121$ ) and with family ( $n=157$ ;  $3.936 \pm 1.517$ ). Those who lived alone reported significantly greater feelings of loneliness (CI 95% 1.329 to 1.310)  $t=2.148$   $p<0.05$ . No significant differences were found in feelings of loneliness between those living alone and those living with family prior to COVID-19. Those who scored between 3 and 5 on the UCLA scale were categorised as “not lonely” and those who scored between 6 and 9 were categorised as “lonely” according to Resnick and Jenkins (2000). There was a significant increase in those who fit the “lonely” category at T3 during COVID-19 ( $n=43$ , 29.7%) compared to before COVID restrictions ( $n=2$ , 1.4%)  $p<0.0005$ . Those in the “lonely” category at T3 also had significantly lower perceived health rating in comparison to the “not lonely” category  $p<.005$ . Those who were categorised as “lonely” ( $n=43$ ;  $6.837 \pm 1.938$ ) also had significantly lower life satisfaction ratings at T3 in the COVID cohort compared to those categorised as “not lonely” ( $n=101$ ;  $8.228 \pm 1.392$ ) with a mean difference of -1.390 (CI 95% -1.956 to -0.824)  $p<0.0005$ .

It was also noteworthy that those in the “lonely” category had significantly fewer days active per week ( $n=42$ ;  $1.976 \pm 2.493$ ) compared to the “not lonely” ( $n=101$ ;  $4.030 \pm 2.670$ ) category at T3 with a mean difference of -2.053 (CI 95% -2.903 to -1.268)  $p<0.0005$ . No significant differences existed prior to T3. Those in the “lonely” category were significantly more likely to report being active “less than usual” ( $n=19$ , 45.2%) compared to those in the “not lonely”

category (n=18, 18.2%), demonstrating significantly lower rates of PA in the “lonely” group at T3  $p < 0.0005$ .

#### *Alcohol and tobacco consumption*

Days drinking in the COVID cohort prior to COVID-19 ( $2.15 \pm 1.658$ ) reduced during COVID-19 (T3) ( $1.86 \pm 1.805$ ) alongside mean units consumed prior ( $5.84 \pm 5.219$ ) and during COVID-19 (t3) ( $4.37 \pm 3.471$ ). These results were found to be statistically significant for both days drinking ( $-0.250$  (CI 95%  $-0.406$  to  $-0.0294$ ),  $p = 0.27$ ) and units consumed ( $-1.435$  (CI 95%  $-0.257$  to  $-0.295$ ),  $p = 0.14$ ). Results were similar in the Pre-COVID cohort but there were no significant differences between T2 and T3. A small proportion of Sheddars (n=5) were reported to smoke and there was no significant difference in tobacco consumption.

#### *Physical activity*

Geographical location was measured for differences in physical activity rates during COVID-19. Men living in rural areas reported an increased rate of physical activity during social restrictions compared to urban areas ( $Z = -2.491$ ,  $p = 0.13$ ; See Table 7).

Physical activity was measured as mean days active, days walking and minutes walking (Table 7). Results were statistically similar in both cohorts with significant increases in days active and days walking between T1 and T2. There was a significant decrease in days active between T2 and T3 in the COVID cohort but not in the Pre-COVID cohort. There were no significant changes in days or minutes walking at T3 for either cohort. A one way ANCOVA did not find significant differences between the two cohorts at T3 across days active, days walking or minutes walking.

Total physical activity self-efficacy scores in the COVID and Pre-COVID cohorts increased significantly between T1 and T2. In the COVID cohort scores continued to increase significantly during COVID-19 restrictions at T3 with a mean increase to  $4.228$  (CI 95%  $0.114$  to  $8.341$ ),  $t = -2.046$ ,  $p = 0.04$ . Scores in the Pre-COVID cohort showed no significant change at T3. There



were no significant differences found in physical activity self-efficacy between the two cohorts at T3.

Those who were active five days or more were categorised as meeting the physical activity guidelines of 30 minutes or more five days per week, with the remainder categorised as not meeting the guidelines. There was a significant difference in those meeting the guidelines between T1 and T2 in both cohorts but no significant difference in those meeting the guidelines at T3 in either cohort. There was also no significant difference between groups meeting the guidelines at T3 (See Table 7). Independent-samples t-tests were run to determine differences in those meeting the guidelines and loneliness, subjective wellbeing, mental wellbeing and PA self-efficacy. Those meeting PA guidelines had significantly lower loneliness scores ( $n=55$ ;  $4.163 \pm 1.948$ ) compared to those not meeting PA guidelines ( $n=55$ ;  $4.997 \pm 1.947$ ; CI 95% 0.178 to 1.350)  $p<0.05$ . There was no significant difference between those meeting PA guidelines and loneliness scores prior to COVID-19. There was also a significant difference in PA self-efficacy scores at T3 between those meeting the guidelines ( $n=52$ ;  $79.923 \pm 11.117$ ) and those not ( $n=85$ ;  $63.964 \pm 18.861$ ; CI 95% -15.024 to -4.257)  $p<0.0005$ . PA self-efficacy scores were significantly lower in those not meeting guidelines at all-time points. Those who were meeting the guidelines were also more likely to report being more physically active ( $N=27$ , 48.2%), or to maintain PA levels ( $n=21$ , 37.5%) rather than be less active ( $n=8$ , 14.3%). Those not meeting the guidelines were less likely to report being more physically active ( $n=14$ ; 16.1%) with 49.4% ( $n=43$ ) reporting PA levels stayed the same and 34.5% ( $n=30$ ) reporting less physical activity during COVID-19. Differences were statistically significant with those meeting the PA guidelines more likely to increase activity during COVID-19 and those not meeting the guidelines more likely to decrease activity  $p<0.0005$ .

#### **4.4 Discussion**

This study sought to investigate the impact of the COVID-19 pandemic and its restrictions on an older cohort of men who were members of Irish Men's Sheds. Findings were harvested from a wider evaluation of a tailored health

promotion initiative (SFL). The strong theoretical underpinnings alongside the empirical longitudinal and comparator data provides unique and timely evidence on the impact of COVID-19 on wellbeing in older Shed members in Ireland. Findings provide valuable insights into the potential impact COVID-19 can have on exacerbating the social gradient in men's health (WHO, 2018c), as well as underlining the importance of gender-sensitive programmes such as SFL to engage and contribute to enhanced wellbeing outcomes among 'hard to reach' groups of men (Bergin & Richardson, 2020).

#### 4.4.1 Loneliness and wellbeing

One of the starkest findings to emerge from this study was the sharp increase in feelings of loneliness and loneliness scores among Sheddors during COVID-19 (1.4%-29.7%). Sheddors in the COVID cohort also reported increased feelings of loneliness before they joined the Shed compared to when they were Shed members. Mean scores rated before they became a Sheddor and at T3 (during COVID-19), when they could not attend their Shed were statistically similar. These findings suggest that Sheds are protective against loneliness, and the loss of the Shed during COVID-19 as well as other meaningful social interactions are correlated with the increased feelings of loneliness. Moreover, prior to COVID-19 there were no significant differences in loneliness between those living with family or living alone. Amongst the COVID cohort at T3, those living alone had significantly higher loneliness scores than those living with family, suggesting again that the Shed may be protective against loneliness for those at risk of isolation by providing meaningful social interaction with other Sheddors prior to COVID-19. In keeping with previous findings (Campbell, 2020; NASEM, 2020), higher rates of loneliness were correlated with reduced wellbeing in this study with Sheddors in the "lonely" category more likely to have poorer perceived health ratings, lower life satisfaction scores and lower rates of physical activity. This highlights the need for and the value of tailored interventions such as SFL to ameliorate the impact of loneliness among this vulnerable cohort of men.

Mental wellbeing scores increased significantly from baseline to ten weeks post SFL and were sustained at six months, with no significant differences

being reported between groups at T3. Nevertheless, loneliness is directly correlated with poor mental health (Santini et al., 2016), which suggests that the COVID cohort may be at increased risk over the medium term, particularly among the more vulnerable Sheddors with pre-existing mental illness as also suggested by Hamm et al. (2020). Subjective wellbeing scores at T3 for the COVID cohort were also significantly lower having increased following SFL and persisted in the Pre-COVID comparator cohort at T3. On a positive note, life satisfaction scores in the COVID cluster Sheddors are higher than those for adults over fifty years in Ireland (7.83 vs 7.56; OECD 2020) perhaps indicating that Shed membership and the SFL intervention supported them during the COVID-19 restrictions. Their feelings of subjective wellbeing may have been enabled through interaction facilitated through virtual and socially distanced contact with other Sheddors. For instance a previous report by McGrath (2020) highlighted how Sheddors used alternative means to communicate with one another during COVID-19, perhaps facilitated by the digital literacy component of the SFL intervention in some Sheds. Whilst there was a clear consensus that remote communication cannot replace the benefits of first person and group interaction in the Shed, the evidence that Sheddors have made efforts to continue to communicate with other Sheddors through phone and online platforms is encouraging and may protect against feelings of loneliness and poorer wellbeing. This also means that Sheddors who do not have access to this form of communication or lack basic IT skills may be at an increased risk of isolation (McGrath, 2020). It may be more pertinent now than ever in the face of a pandemic that requires social distancing that efforts are made to provide older adults with the necessary digital skills to communicate online and combat digital exclusion. Online mental health services have been widely adopted in China and are urged in other countries (Talevi et al., 2020) but a rapid review conducted to assess the effectiveness of video calls for reducing social isolation, loneliness and depression in older adults, found limited evidence of effectiveness (Noone et al., 2020). Findings also suggest the cohort of men in the Sheds value and thrive on face-to-face interaction and priority may be best focused on safeguarding the return of these men into the Sheds.

#### 4.4.2 Physical Activity

There were no significant differences in PA measures between the two cohorts at T3 suggesting that the observed PA increases due to the SFL intervention were maintained. The Irish Longitudinal Study on Ageing (TILDA) found that 42% of men over 50 years reach the recommended PA guidelines (Donoghue et al., 2016), whereas during COVID-19, 38.9% of Sheddars were meeting the PA guidelines. Previous work has highlighted that older adults are at increased risk of physical activity decline during COVID-19, potentially leading to poorer immune response, reduced mobility and overall quality of life (Roschel et al., 2020). Findings in this study suggest that over a quarter (26.2%) of Sheddars have become less physically active, reflecting the need for tailored interventions to facilitate physical activity and social engagement (Son et al., 2020).

An online survey investigating how lockdown impacted PA behaviour and well-being of Canadians found that inactive individuals were more likely to become less active, whereas active individuals were more likely to become more active (Lesser & Nienhuis, 2020). This was also the case in this study-Sheddars who were meeting PA guidelines were more likely to become more active or maintain their activity with those not meeting the guidelines more likely to become less active. The support of other Sheddars has been previously documented as having a positive impact on engagement in health promoting activities in Irish Sheds (Lefkowich & Richardson, 2016), with group exercises also found to be beneficial for older adults more widely (Komatsu et al., 2017). Thus, some men may particularly struggle with motivation with the loss of the Shed environment.

Rural dwellers in the COVID cohort reported higher levels of PA compared to the urban dwellers. This may seem contrary to expectation with urban areas more likely to facilitate accessibility and opportunities to be active. Similarly, cross sectional analysis in a nationally representative older adult cohort in Ireland found that those living in urban locations were 1.1-1.8 times less likely to meet the physical activity recommendations than rural dwellers (Murtagh, Murphy, Murphy, Woods, & Lane, 2014). Differences between urban and rural

Shedders were not significant prior to COVID-19. Reductions in PA levels may be due to the guidelines set in place by government limiting activity beyond the home. Shedders in rural areas possibly used PA as a form of leisure when social interactions were limited, finding it easier to maintain social distancing compared to Shedders cocooning in busier urban areas. Moreover, access to green spaces for leisure may have been more plentiful in rural areas compared to urban areas (WHO, 2017b). Increased physical activity enables a reset of physical and mental well-being. During periods of lockdown, it is recommended that exercise should be as vigorously promoted as social distancing itself (Matias, Dominski, & Marks, 2020). The findings above therefore highlight that vulnerable older adults in urban areas may need more tailored physical activity opportunities during and post COVID-19 restrictions alongside the 61.1% of Shedders not meeting the PA guidelines during COVID-19.

#### 4.4.3 Alcohol

Alcohol consumption significantly decreased among Shedders during COVID-19 follow-up. A report from the Central Statistics Office on the social impact of COVID-19 found that 20.9% of men increased their alcohol intake, with a much higher rate of male respondents (26.0%) reporting a decrease in alcohol consumption compared to females (8.6%). Over half of male respondents (53.1%) reported no change (Central Statistics Office, 2020). A stipulation for how COVID-19 has impacted males and females differently maybe be due to changes in caring responsibility (Biddle, Edwards, Gray, & Sollis, 2020). It may be that the cohort of men in Sheds consume alcohol as a means of socialising and due to pub closures under COVID-19 restrictions, alcohol consumption may have decreased. Coupled with the low rates of smoking these findings in relation to positive health behaviour change among a so-called 'hard-to reach group' are promising in the context of COVID-19, in that mitigation of the virus relies heavily on public health measures promoting health behaviour change to slow its spread (WHO, 2020).

## **4.5 Limitations**

As with every study, limitations exist, notably the subjective nature of the data and the inherent bias in the self-report format as well as inconsistencies in follow-up points. However, it is worth noting that constructs of wellbeing and perceived health status are subjective in their own right and the evaluation is pragmatic in its approach, capturing insights from Shedders in the real world context of a typically close-knit setting. Due to social restrictions during COVID-19, T3 follow ups in the COVID cohort were also moved from being conducted in person to phone administered. However, every effort was made to communicate questions and responses clearly and ensure participants responded independently. Moreover, Shedders would have completed the questionnaire on at least two previous occasions meaning that they were familiar with the researchers, process and format. Finally, while this research aims to measure the impact of COVID-19 on Irish Men's Shed members generally, it is reporting only on the impact of COVID-19 on those Shedders who had voluntarily participated in SFL, a health and wellbeing intervention.

## **4.6 Conclusions**

The study provides valuable longitudinal data on the impact of the COVID-19 pandemic on wellbeing in an understudied and 'hard-to-reach' group of Irish Men's Shed members. The findings demonstrate the potential deleterious effect of COVID-19 on a group of men who were already engaged with health and wellbeing as a result of a community-based men's health promotion programme (SFL), coupled with the inherently health promoting benefits of the Sheds. The COVID-19 restrictions alongside the loss of the Shed as a social and emotional outlet for Shedders has had a significant impact on the wellbeing of Shedders experiencing COVID-19, evident by the sharp rise in loneliness and decline in subjective wellbeing. Those who were lonelier fare less well in terms of health outcomes, and those who were already physically inactive appear to become more inactive under COVID-19. Therefore, attention should be focused on those who are most vulnerable and in need of tailored interventions to support their wellbeing during and post COVID-19. This research also highlights the importance of Sheds as a setting to adopt

and maintain positive health behaviours among this cohort of men. The Sheds safeguard against loneliness and provide opportunities to engage with health and wellbeing through inclusive, community based, gender sensitive approaches such as SFL. This strategy may be an effective approach in ameliorating the impact of COVID-19 on men in Sheds.

## **Chapter 5: The impact of Sheds for Life on the health and wellbeing outcomes of participants (quantitative)**

This chapter outlines the impact of Sheds for Life on the health and wellbeing outcomes of participants up to 12 months. This chapter has been published as: McGrath, A., Murphy, N., Egan, T. & Richardson, N. (2022). Sheds for Life: Health and Wellbeing outcomes of a tailored community-based health promotion initiative for Men's Sheds in Ireland. *BMC Public Health*: 22(1), 1590. doi:10.1186/s12889-022-13964-6



## **Abstract**

### **Background:**

Gender is increasingly recognised as a critical factor in designing community-based health promotion programmes. Men's Sheds ('Sheds') are community-based informal environments that represent a safe space in which to engage cohorts of hard-to-reach (HTR) men in health promotion. Sheds for Life (SFL), the first structured health promotion initiative evaluated globally in Sheds, is a 10-week initiative co-designed with Shed Members (Shedders) and delivered directly in the Shed setting in Ireland. This research describes the health and wellbeing outcomes experienced by SFL participants.

### **Methods:**

Purposive sampling was used to recruit a diverse representation of Shedders (n=421) participating in SFL alongside a wait list control (n=87). Questionnaires assessing constructs of health and wellbeing were administered one-to-one in Sheds at baseline, 3, 6 and 12 months. Descriptive data for health outcomes were generated for each time point and assessed for significant changes using inferential testing, while considering COVID-19 impact.

### **Results:**

Outcomes related to subjective wellbeing, mental wellbeing, physical activity, social capital and healthy eating significantly increased post SFL ( $p < 0.05$ ). Mental wellbeing scores (SWEMWBS) post SFL remained significantly higher than baseline despite COVID-19 impact ( $p < 0.05$ ). Binary logistic regression indicated that the odds of a meaningful SWEMWBS change was significantly higher for Shedders that had lower SWEMWBS (OR 0.804), less loneliness (OR 0.638) and lived alone (OR 0.456) at baseline. Shedders with lower SWEMWBS had higher odds of experiencing positive changes in life satisfaction (OR 0.911) and trust (OR 0.928), while Shedders who lived alone had also higher odds of experiencing positive changes in healthy eating (OR 0.481). Finally, inactive Shedders at baseline had higher odds of experiencing increased levels of physical activity (OR 0.582).

### Conclusions:

Findings suggest that the inclusive, community-based SFL model is effective in engaging Shedders and facilitating positive and sustained changes in health and wellbeing outcomes. Using gender-specific approaches in the informal and safe environment of the Shed are effective in engaging men in structured health and wellbeing initiatives, particularly those who may be more vulnerable, isolated or lonely.

### Trial Registration:

This study has been retrospectively registered with the 'International Standard Randomised Controlled Trial Number' registry (ISRCTN79921361) as of 05/03/2021

### Keywords

Men's Sheds; Men's health promotion; community; evaluation; gender-specific; implementation; physical activity; mental health

## 5.1 Background

### 5.1.1 Tailoring health promotion to men

In response to an unequal burden of ill-health and mortality in men, global health conversations and policies are increasingly calling for gender-specific health promotion strategies that target lifestyle and health behaviour change, particularly to so called 'hard-to-reach' (HTR) groups of men i.e. men who tend to be more isolated from, or reticent about accessing formal health services or social support networks due to geography, experiences of mental health issues, unemployment or changes in life course (Baker, 2018; Bergin & Richardson, 2020; Department of Health and Children, 2008; WHO, 2018b). Indeed, recent responses have focused on the underlying factors that contribute to men's avoidance of health promotion and health systems and on developing strategies to address these (Olliffe et al., 2019). This has been driven by a growing body of evidence that advocates for a greater understanding of how gender intersects with economic, political, environmental and social determinants of health to influence men's exposure to risk factors and health engagement (White et al., 2011; WHO, 2018b). In particular, understanding the complexities of how masculinities are constructed through men's engagement with health systems has focused attention on the need for gendered approaches towards engaging men with health at both policy and programme level (Baker et al., 2014; Baker et al., 2020). This approach requires a specific focus on tailored and targeted interventions that encourages sustained engagement by men (Baker, 2020; Lefkowich et al., 2015). Evidence suggests that men who feel required to align with dominant traits of masculinity are less likely than women to; perceive themselves at risk for illness; believe they have internal control over their health; contemplate changing unhealthy habits; and utilise health care (WHO, 2018). Barriers towards male help seeking are largely influenced by gendered practices and behaviour that conflict with reasons to seek help, as well as poor communication by health care professionals which can result in negative experiences of health services (Heise et al., 2019; O'Brien, Hunt, & Hart, 2005; Olanrewaju et al., 2019; Yousaf, Grunfeld, & Hunter, 2015). Moreover, within

health-care systems, unconscious gender biases and heuristics based on gender stereotypes all affect engagement with health, resulting in differential health outcomes for men, women and gender minorities (Heise et al., 2019). It is important that health initiatives: i) move away from a 'one size fits all' approach, ii) do not view men as a homogenous group, and iii) adopt a flexible approach to engage with different subpopulations of men (Robertson et al., 2016). Indeed, understanding how gender shapes men's health practices is a critical first step in developing effective health promotion strategies that appeal to men (WHO, 2018b). Responses require recognition that the burden of ill health in men is caused by multiple complex factors that are exacerbated for socially disadvantaged and HTR cohorts (Health Service Executive, 2017). There is an urgent need to address a key paradox in men's health, whereby men who are most in need of intervention are least likely to engage with health services. The task for men's health promotion is to reach beyond the 'worried well' by designing innovative and tailored programmes targeted to specific sub-population groups of HTR men (Nuzzo, 2020; Richardson & Carroll, 2018).

#### 5.1.2 The Men's Sheds as a setting for Health Promotion

Promoting health within the community setting enables the creation of supportive environments and the potential to encourage positive behaviour change through a focus on equity, inclusion and social coherence (WHO, 2020). In the case of men's health promotion, the community setting is conducive to a gender-sensitive environment that can facilitate a strengths-based, multi-sectoral approach in a non-clinical and informal atmosphere where men feel safe (Carroll et al., 2014; Milligan et al., 2015). Research has demonstrated that service providers can maximise the reach of interventions targeting at-risk cohorts of men in community settings through partnership and gender-sensitised recruitment strategies anchored within community groups (Sharp et al., 2018). Indeed, a range of community-level men's health initiatives that incorporate gender into their design and delivery have demonstrated the efficacy of this approach (Caperchione et al., 2017; Pringle et al., 2014; Richardson et al., 2017; van Doorn et al., 2020; Wyke et al., 2019;

Zwolinsky et al., 2012). The rise in popularity of Men's Sheds ('Sheds') is based on their community-based and non-clinical nature, alongside the sense of purpose, social support, camaraderie and reciprocity offered within the socially acceptable and masculine environment of the Shed (Golding, 2015). Sheds are autonomous, Shed member ('Shedder')-sustained, grassroots organisations that provide a space for men to socialise, work on projects, share goals and develop new skills (Lefkowich & Richardson, 2016; Nurmi et al., 2018). Originating in Australia in the 1980s, Sheds have flourished organically in Ireland since their arrival in 2011 and are testament to a need for men to identify with a space that facilitates meaning, social support, safety and belonging (Bergin & Richardson, 2020; Wilson & Cordier, 2013). Moreover, due to their organic and informal nature, research has found that Sheds appeal to HTR groups of men (McGrath et al., 2022b; Misan et al., 2017). Sheds are variable spaces in terms of physical size, location type and membership where activities consist of a focus on a primary utility function as well as social participation (Wilson, et al., 2015). These include activities such as woodworking, mechanics, bee keeping, gardening, art, music and card playing. While activities in different Sheds may vary, they offer men a sense purpose through a focus on work, independence and safety and respite within a male focused space (Mackenzie et al., 2017). Although Sheds appeal to predominantly retired men, they have demonstrated their inclusivity for men from diverse backgrounds and varying abilities, also offering opportunities for intergenerational learning (Carragher & Golding, 2015; Wilson & Cordier, 2013; Wilson et al., 2016). Although, Sheds are not explicitly considered health interventions (Wilson et al., 2015), research has demonstrated Shedders' agency in organising health promotion activities within Sheds such as mental health and prostate cancer talks, demonstrating a willingness to engage with health and wellbeing in Sheds (Foettinger et al., 2022; Wilson et al., 2019). Based upon their inherent health promoting qualities and ready access to men who may be reticent to engage with traditional health services, Sheds represent an attractive setting in which to build structured health initiatives. However, caution is warranted when attempting to fuse formal health promotion with the informal Shed environment. Indeed, research has highlighted this informal space as an integral element to the inherent health

promoting qualities of Sheds, and that efforts to provide pathways for Shedders to access support should not compromise the integrity of Sheds as peer run spaces, as to do so may be damaging to Shedders' wellbeing and Shed ethos (Bergin & Richardson, 2020; Kelly et al., 2021a; Lefkowich & Richardson, 2016).

### 5.1.3 Sheds for Life – Health Promotion ‘for Shedders by Shedders’

The first iteration of a health promotion programme for Sheds in Ireland was developed by the Irish Men's Sheds Association (IMSA) in 2016. 'Sheds for Life' (SFL) emanated from calls at a research, service provider (SP) and Shedder level to deliver health promotion in Sheds. This resulted in the piloting of a range of discrete health promotion initiatives in Sheds alongside scoping work which sought to reach a consensus on an acceptable and respectful approach to deliver SFL in Sheds (Bergin & Richardson, 2020). Over time, SFL evolved into a partnership network comprising the IMSA, academics, an advisory group (consisting of men's health promotion specialists and twelve allied SP organisations, along with Shedder representation). Sheds for Life is overseen by the IMSA and delivered by the SPs directly in the Sheds. It delivers targeted and tailored wellbeing and life skill components and has been co-designed with Shedders to ensure a respectful and appropriate delivery model. Sheds for Life is delivered over 10-weeks in the Sheds and commences with a health check for participants. It consists of three other core components of weekly physical activity sessions (walking or chair-based strength and mobility exercises), weekly healthy eating sessions for six weeks (Healthy Food Made Easy; HFME; a nutrition and cooking programme endorsed by the health services in Ireland) and a mental health workshop which aligns with the key pillars of Ireland's national men's health policy 'Healthy Ireland Men' (Health Service Executive, 2017). Several optional components are also available into which Sheds can self-select, aligning with the needs of Shedders (e.g. diabetes, cancer and oral health awareness, suicide prevention training, cardiopulmonary resuscitation training (CPR), digital literacy). A detailed outline of the evolution, content and structure of SFL

from its conception to a 10 week programme is available in a protocol paper (McGrath et al., 2021).

The underpinning vision of SFL is to normalise conversations about health and wellbeing in Sheds and encourage help seeking among Shedders. This vision potentially conflicts with traditional norms of masculinity that are characteristic of more HTR groups of men (WHO, 2018b). Central to this approach is the positioning of Shedders as key decision makers alongside SP organisations, researchers and the IMSA as part of a participatory research approach (McGrath et al., 2021). Established implementation frameworks (Damschroder et al., 2009; Koorts et al., 2018; Proctor et al., 2011) are used in applying principles of implementation science to guide the implementation and evaluation of SFL. These frameworks guide the engagement process in the implementation of SFL across the variable environment of the Sheds as well as accounting for the interaction between Sheds and SP organisations. They play an important role in facilitating acceptability and optimising recruitment, participation and engagement in SFL. The design and delivery of SFL draws heavily on gender-specific approaches layered upon the male-specific, safe, familiar environment and sense of social support inherent in Sheds. These approaches are outlined in detail elsewhere (McGrath et al., 2021), but notably involve; informal and interactive delivery, removal of costs barriers, trust building, the use of a comprehensive health check and non-typical health related components to engage men, and tailoring the SFL programme to each Shed to provide a sense of autonomy and control for Shedders. The study adopts a hybrid effectiveness-implementation design to consider the effectiveness of its implementation in order to promote translation into the real world context from the outset, while simultaneously understanding the impact of SFL on Shedders' wellbeing (Bauer & Kirchner, 2020; Curran et al., 2012; McGrath et al., 2021).

This particular research study focuses on the impact of the SFL initiative on the health and wellbeing outcomes of participants. Specifically, SFL targets health and wellbeing outcomes related to; subjective wellbeing (e.g. life satisfaction, life worth and self-rated health), health behaviours (physical activity, propensity to seek health information, diet and cooking skills), social

capital (belonging, close support and trust), self-efficacy, and mental health. Understanding the efficacy of SFL in enhancing the health and wellbeing outcomes of Sheddars will be critical to justification of scale-up. Moreover, while a body of research has highlighted the potential of Sheds to be health enhancing (Cordier & Wilson, 2014; Kelly et al., 2019b; Misan et al., 2017; Nurmi et al., 2018; Wilson, Cordier, et al., 2015), there remains limited high-quality or empirical research evidencing the impact of health promotion initiatives conducted in the Shed setting (Kelly et al., 2019b; Wilson & Cordier, 2013). This has been a noted limitation in assessing the Shed-health link. Further research is therefore needed in this area to demonstrate the impact of more formal health promotion programmes conducted in the Shed setting among Sheddars. Furthermore, while there have been calls to deliver more structured health promotion in Sheds, there has been no evidence to date of any formal evaluation of such endeavours. The aim of this research therefore is to determine the impact of SFL on the health and wellbeing outcomes of participants – the first formally evaluated health promotion initiative in Sheds.

## **5.2 Methods**

This study evaluates the effectiveness of SFL on the health and wellbeing outcomes of participants. A detailed protocol outlining the study design as well as the implementation approach is available (McGrath et al., 2021).

### **5.2.1 Participants and Sampling**

Respecting the autonomous and informal environment of the Sheds (Bergin & Richardson, 2020), purposive sampling by way of an expression of interest process was used to recruit Sheds to participate in SFL. The sampling process endeavoured to incorporate a diverse representation of Sheds (large/small, urban/rural). Sheds that expressed an interest in participating were then visited by the first author and members of the IMSA to discuss the SFL process and to recruit individual Sheddars. This purposive sampling approach was effective in reaching men in the familiar setting of the Shed creating a sense of acceptability and building trust and rapport between Sheddars and the SFL team. In total, 31 Sheds out of a potential 44 across the selected counties



opted into SFL –a response rate of 70%. Data were collected at the recruitment phase to establish the reach of SFL by identifying the number of Sheddors who regularly attended the participating Sheds. It was estimated that 565 of participating Shed members were active members at the time of recruitment, with the majority of these ( $n = 421$ ; 75%) opting to participate in SFL and the supporting evaluation. An assessment at baseline of the population who opted into SFL also suggested that this cohort of Sheddors met the criteria of being HTR in terms of factors such as; being older, out of work, with lower education and risk of isolation (see results; ‘profile of Sheddors’ ; McGrath et al., 2022b). Inclusion criteria comprised all adult males who were active Shed members, had a good proficiency in the English language, and could give informed consent. Due to capacity and resource constraints of SPs along with the capriciousness of Shed environments, SFL was implemented on a phased basis across two cohorts, each consisting of two counties in Ireland between March and May 2019 and September to November 2019 (for further detail on these areas see protocol (McGrath et al., 2021). During the course of delivery in the first cohort ( $n = 12$  clusters;  $n = 212$  Sheddors), a wait list control cohort served as a comparator ( $n = 3$  clusters;  $n = 87$  Sheddors), and these were a subset of the second cohort ( $n = 9$  clusters,  $n = 209$  Sheddors). During Shed visits, all participants had the details of the research clearly explained to them through verbal and written instruction and informed written consent was obtained by a member of the research team. Further details on consent, ethics and data management are available elsewhere (McGrath et al., 2021). The study received ethical approval from Waterford Institute of Technology Research Ethics Committee (REF: WIT2018REC010). This study has also been registered with the ‘International Standard Randomised Controlled Trial Number’ registry (ISRCTN79921361).

### 5.2.2 Data Collection

Questionnaires were administered to participants by the researcher one-to-one in the Shed setting to account for potential literacy issues, limit missing data and build rapport and trust between the researcher and Sheddors. Due to the informal nature of Sheds, absence of data does not necessarily indicate

drop out from SFL, rather due to constraints associated with research capacity, specifically in terms of aligning data collection with Shed opening hours, follow up rates vary and rescheduling of data collection was not possible. Questionnaires were administered at baseline (T1), 3M (T2: post the 10 week intervention), 6M (T3) and 12 months (T4) to Cohort 1 (C1) and Cohort 2 (C2). During T3 and T4 participants in C2 were actively experiencing COVID-19 restrictions and Sheds were closed due to the pandemic. Therefore, questionnaires were administered via phone in order to promote participant retention and complete follow-up to 12 months. The impact of COVID-19 will therefore be considered in the results where relevant. A range of participant demographics were recorded at baseline such as date of birth, living arrangements, marital status, educational attainment, employment status, ethnicity, length of Shed membership and frequency of attendance. Core health and wellbeing outcomes measured at all-time points up to T4 included subjective wellbeing and help seeking, lifestyle measures (physical activity (PA), physical activity self-efficacy, alcohol, smoking, and diet), mental wellbeing and social capital. Self-rated health (SRH) was measured using a single question Likert scale with high reliability among older men (Lundberg & Manderbacka, 1996). The single-item PA measure was used to record PA levels (Milton et al., 2011). The Self-Efficacy for Exercise (SEE) scale was used to measure physical activity self-efficacy (Resnick & Jenkins, 2000). Life worth and satisfaction were recorded using the Office of National Statistics subjective wellbeing 11-point scales (Office for National Statistics, 2015). Mental wellbeing was measured using the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS) with raw to metric score conversion where a change of 2+ was clinically meaningful (Stewart-Brown et al., 2009), along with constructs assessing changes in mental health perceptions. Loneliness was measured at all-time points using the UCLA 3-item scale (Russell, 1996). Social Capital was measured based on relevant recommendations from WhatWorksWellbeing (Whatworkswellbeing, 2018), capturing trust, belonging and close support. Interpersonal trust was measured using the Office of National Statistics 11-point scale (Office for National Statistics, 2015). Participants were asked about their levels of daily fruit and vegetable consumption, cooking style, cooking frequency and willingness to cook.

Confidence constructs around cooking and food preparation were measured via a 12 item scale (Garcia et al., 2017). Constructs included assessment of cooking using raw ingredients, following a simple recipe, planning meals before shopping, shopping for food on a budget, shopping for healthier food to eat, cooking new foods, cooking healthier foods, storing food safely, using leftovers to cook other meals, cooking whole raw chicken from scratch, and reading food labels and food hygiene. The six dimensions (physical functioning, social functioning, pain, role limitation, vitality and mental health) of the SF-6D were also assessed up to T4 to assess change in utility scores (Brazier et al., 2002). Utilities are preference weights, where preference can be equated with value or desirability and are measured on a cardinal scale of 0-1 where 0 indicates death and 1 indicated full health (Whitehead & Ali, 2010) (See protocol paper for more detailed information on instruments used; McGrath et al., 2021). Due to constraints associated with research capacity, specifically in terms of aligning data collection across multiple locations with a small research team and Shed opening hours with sporadic attendance, rescheduling of data collection was not possible and follow up rates varied.

### 5.2.3 Data Analysis

Questionnaire data were analysed using Statistical Packages for the Social Sciences (SPSS V 25). Descriptive statistics were generated for each variable. Intervention effect on health and wellbeing outcomes were determined by comparing measures across time periods using paired samples t-tests and repeated measures ANOVA models. Differences between the intervention group (IG) and control group (CG) as well as between C1 and C2 at different time points were determined via independent-samples t-tests. Data were analysed to assess measures from T1 to T2, immediately following the 10-week SFL intervention. Further data was then analysed to assess measures from T1 at T3 and T4. This analysis involved separating C1 and C2 as C1 did not experience COVID-19 restrictions at T3 and T4 whereas C2 were actively experiencing COVID-19 restrictions. The aim of this approach was to highlight the potential impact of COVID-19 on the results. An earlier publication from this study (McGrath et al., 2020) outlines the impact of COVID-19 on SFL

participants in further detail and also highlights similarities between the groups prior to COVID-19. Therefore C1 and C2 were only analysed separately as subsets of the IG for T3 and T4. Following this analysis, a binary logistic regression model was used to control for various factors when assessing the significance of the relationship between these factors. The selection of the dependent and independent variables was guided by previous work and specific patterns that emerged from the data (McGrath et al., 2022b). Covariates were selected for each regression model based on stepwise selection (Bursac, Gauss, Williams, & Hosmer, 2008), and previous work that highlighted relevant variables such as age, education, living situation, physical activity levels and baseline mental wellbeing as impacting on the respective dependent variable (Caperchione et al., 2017; Del Saz Salazar & Pérez, 2021; Donoghue et al., 2016; Emmering et al., 2018; Garcia et al., 2017; Joshanloo & Jovanović, 2020; McGrath et al., 2022a; McLaren, 2020; Ueshima et al., 2010; Yousaf et al., 2015) as well as trends that emerged during data analysis across time points. For example, literature suggests that variables such as age, gender and education impact on levels of life satisfaction (Del Saz Salazar & Pérez, 2021; Joshanloo & Jovanović, 2020), while further studies cite the role of living situation and loneliness as impacting on levels on mental wellbeing (Misan et al., 2017; Taylor et al., 2018). Regression analysis as a multivariate technique examines more than two variables at a time and allows assessment of significant relationships while controlling for other variables. Changes between these variables from baseline (T1) to 3 months (T2) were used for this analysis as the SFL intervention lasted for 10-weeks, and because measures at 3 months were not subject to COVID-19 as a confounder as highlighted in Table 9. The chosen regression type was binary logistic regression and the dependent variables used were; (a) Positive Change in life satisfaction from T1 to T2 (0=No, 1=Yes); (b) Positive change in SWEMWBS above a threshold gain of 2 (0=No, 1=Yes ), as this change is considered clinically meaningful (Stewart-Brown et al., 2009); (c) Positive change in weekly PA of 1 plus day( 0=No, 1=Yes); (d) Positive change in food preparation and cooking confidence (0=No, 1=Yes); and (e) Positive change in trust (0=No, 1=Yes). For such regression models, the interpretation is typically of odds ratios and this varies depending on whether the independent

variables (IV) are categorical or continuous - with odds ratios of greater than 1 indicating events that are more likely to occur as the predictor increases and vice versa.

## **5.3 Results**

### **5.3.1 Reach and follow-up rates**

The overall estimated reach of SFL was 74.51% based on the numbers who enrolled (n=421) compared to those who were eligible to enrol from participating Sheds (n=565). Mean percentage attendance rates of individual components were calculated by combining data on attendance rates gathered via SPs attendance records and participants' self-reported data. The average attendance rates across the 10 weeks for the core components of PA, mental health and HFME were 73.0%, 72.86% and 73.2% respectively. Of those signed up to participate in cancer, diabetes and oral health awareness, the rates were 73.45%, 74.0% and 62.1% respectively. Of those who participated in suicide prevention training, CPR and digital literacy the rates were 73.0%, 76.2% and 61.6% respectively. Some 384 participants (91.2%) completed the health check at the commencement of SFL. Questionnaires were administered at T1 (n=383), T2 (n=229), T3 (n=211) and T4 (n=285), demonstrating an average follow up rate of 63.1%.

### **5.3.2 Profile of Sheddors**

The baseline characteristics of SFL participants (n=384), including demographics as well as objective and subjective health measures, have been described in detail elsewhere (McGrath et al., 2022b). Overall the results highlighted that a majority of this population of Sheddors were over 65 years (77.2%) with a mean age of  $69.1 \pm 9.14$  within a range of 27-90 years. The majority (77%) had no more than some secondary level education with almost a quarter (24.9%) of participants with no more than primary education. Most participants were not currently in employment (88.6%; 80.4% retired and 8.2% unemployed or unable to work), while the majority were married (74.2%), with over a quarter (25.8%) separated or divorced and 17.8% living alone. In terms

of health status, an earlier publication from this study (McGrath et al., 2022b) has indicated that while the majority of Sheddars rate their subjective wellbeing in positive terms, their objective health measures place them in an 'at-risk' category in terms of hypertension (84.1%), overweight and obesity (86.8%) and high waist circumference (78.3%), with the majority (68.2%) physically inactive. Following their initial health check, the vast majority of Sheddars (79.6%) were referred to their GP based on a parameter of concern arising from the health check results. Further detail on baseline characteristics of this cohort at baseline can be found in previous work (McGrath et al., 2022b).

### 5.3.3 Initial Impact of SFL (Baseline to 3 months)

Table 8 highlights change scores in wellbeing and lifestyle outcomes up to 3 months, immediately following the SFL 10-week programme in the IG compared to the CG, along with significance testing. It also shows mean p values in differences between the IG and CG at T1 and T2. While significance testing at baseline between these groups may be viewed as superfluous by some researchers (de Boer et al., 2015), it was decided that since the groups had not been randomised, mean p values ought to be displayed at T1 to demonstrate similarities between groups. Table 8 demonstrates that the vast majority of variables at T1 were similar in values when comparing the IG and CG and, consequently, no significant differences were found between these variables at baseline. At T2, following the SFL intervention, there is a clear divergence in values between the two groups with IG experiencing significant positive improvements compared to largely maintained values in the CG from T1 to T2. Some of the notable trends from T1 and T2 include:

#### 5.3.3.1 Subjective wellbeing and mental health

There were significant increases in the IG in subjective wellbeing; life satisfaction, life worth and SRH; this compares to no significant changes in life satisfaction and life worth for the CG, although this group did experience a positive improvement in SRH. The IG also reported an increased propensity to seek information about their health following SFL (at T2), while there was

no significant change in the CG, meaning that the difference between the two cohorts became significant at T2.

There was a significant improvement in Mental Wellbeing scores (SWEMWBS) for the IG at T2 and these scores were also significantly higher than that of the CG. Similarly, there was a positive decline in depression prevalence scores for the IG with Sheddors in this cohort also reporting increased levels of certainty in managing their mental health, comfort having a conversation about mental health and feeling equipped with practical supports to maintain their mental health. There were no significant changes in these scores at T2 among Sheddors in the CG who had not yet received the SFL intervention, while the differences between the IG and CG following SFL were significant. There were no significant differences in loneliness scores between the IG and CG at baseline or following SFL at T2.

Sheddors' trust ratings increased significantly for the IG at T2 compared to no change for the CG with a significant difference between groups at T2. In the IG, Sheddors reported an increased sense of belonging to their Shed at T2. The CG did not experience this change although differences between groups were not significant at T2. Sheddors' sense of having close support significantly increased at T2 from baseline with no change for the CG and a significant difference between groups.

Utility scores which comprise the six dimensions of the SF-6D (physical functioning, social functioning, role limitation, vitality, mental health and pain) significantly improved for the IG compared to minimal change for the CG at T2 where differences between the two groups became significant. This is discussed in the context of programme cost effectiveness elsewhere (McGrath et al., 2022a).

#### *5.3.3.2 Physical activity and lifestyle*

The number of days that Sheddors were physically active significantly increased for the IG at T2 and was significantly higher than the CG at this time point. Prior to this, there were no significant differences between groups in terms of weekly PA. A similar trend can be seen in days spent walking for >10

minutes, with significant increases occurring in the IG at T2 compared to no significant change for the CG. Similarly, the IG experienced a significant improvement PA self-efficacy from T1 to T2 compared to significant change in the CG. Alongside this trend, there was a significant increase in IG members meeting the PA guidelines at T2.

In relation to smoking, a minority of Sheddars reported as current smokers (IG, 8.4%; CG, 13.8%). There were no changes in smoking rates at T2 and no significant differences between the IG and CG. A similar proportion of Sheddars reported consuming alcohol (IG, 68.3%; CG, 67.8%) at baseline. There was a significant reduction in days per week spent consuming alcohol for the IG at T2 compared to no significant difference for the CG. Units of alcohol consumed per session also reduced significantly for the IG at T2 while increasing significantly for the CG, with a significant difference between the two groups at T2.

There was a significant increase in fruit and vegetable consumption between T1 and T2 for the IG while levels in the CG remained constant. There was also a significant increase in the number of Sheddars reporting a positive change in their cooking habits (i.e. cooking meals from scratch vs using microwave ready meals) between T1 and T2 in the IG. No such change was observed in the CG with a significant difference in cooking habits occurring between the groups at T2. There was also a significant increase in cooking frequency in the IG. Total scores in relation to cooking and food preparation confidence significantly increased for the IG at T2, and were significantly different between the IG and CG at T2.



**Table 8: 5.1: Wellbeing and lifestyle outcomes up to T2 with control comparison**

	IG (Mean ± SD (n=382)	T1 CG (Mean ± SD (n=87)	p-value (IG vs CG at T1)	IG (Mean ± SD (n=236)	T2 CG (Mean ± SD (n=75)	p-value (IG vs CG at T2)
Life Satisfaction	7.98 ± 1.71	7.76 ± 1.71	0.285	8.56 ± 1.45**	7.69 ± 1.64	0.000 *
Life Worth	8.20 ± 1.61	7.91 ± 1.66	0.063	8.89 ± 1.29**	7.93 ± 1.72	0.000*
Self-rated health [1= Excellent 5=Poor]	2.84 ± 0.96	3.18 ± 0.91	0.002 *	2.54 ± 0.94**	2.92 ± 0.94**	0.003 *
Like finding out about one's health [1=Often 4=Never]	1.82 ± 0.84	1.83 ± 0.87	0.910	1.43 ± 0.70**	1.77 ± 0.92	0.001*
Mental Wellbeing (SWEMWBS)	26.78 ± 4.89	26.94 ± 4.77	0.776	30.81 ± 4.79**	26.62 ± 4.93	0.000 *
Depression Prevalence [1= probable depression 4=high mental wellbeing]	3.34 ± 0.70	3.40 ± 0.63	0.466	3.73 ± 0.53**	3.35 ± 0.73	0.000 *
Certainty managing mental health [1= very certain 5=very uncertain]	2.11 ± 0.96	2.09 ± 0.90	0.831	1.38 ± 0.72**	2.16 ± 0.98	0.000 *
Comfort conversing about mental health [1= very certain 5=very uncertain]	2.11 ± 0.96	2.09 ± 0.90	0.831	1.38 ± 0.72**	2.16 ± 0.98	0.000 *
Feel equipped with mental health supports [1= very certain 5=very uncertain]	2.37 ± 1.08	2.33 ± 1.07	0.744	1.44 ± 0.72**	2.33 ± 0.99	0.000 *
Loneliness (3-item UCLA)	3.31 ± 0.89	3.25 ± 0.79	0.602	3.40 ± 0.97	3.32 ± 1.05	0.539
Social Capital Trust	6.82 ± 1.98	6.38 ± 1.64	0.053	7.51 ± 1.87**	6.44 ± 1.42	0.000 *
Social Capital: Belonging [1=Strongly Agree 4=Strongly Disagree]	1.32 ± 0.54	1.22 ± 0.44	0.120	1.11 ± 0.33**	1.12 ± 0.34	0.634
Social Capital: Close support [1=Strongly Agree, 4=Strongly Disagree]	1.29 ± 0.51	1.35 ± 0.61	0.355	1.11 ± 0.35**	1.27 ± 0.50)	0.002 *
Utility Scores [Scale 0-1, higher scores indicate improved utility]	0.79 ± 0.12	0.78 ± 0.12	0.195	0.83 ± 0.10**	0.79 ± 0.13	0.005 *
Days of Week Physically Active	3.07 ± 2.57	2.83 ± 2.40	0.434	4.32 ± 2.86**	3.09 ± 2.49	0.001 *
Days walking per week for ≥10 mins	4.14 ± 2.78	4.14 ± 2.39	0.997	5.78 ± 2.29**	4.05 ± 2.46	0.000 *
Physical activity self-efficacy	53.17 ± 20.99	52.54 ± 21.23	0.801	64.85 ± 19.67**	50.72 ± 22.15	0.000 *
Meeting Physical Activity Guidelines	32%	29%	0.732	47%**	36%	0.000 *
Portions of Daily Fruit & Vegetables	3.36 ± 1.76	3.15 ± 1.71	0.310	3.88 ± 1.77**	3.27 ± 1.77	0.010 *
Cooking Habits [1=don't cook at all, 4 = cook meals from scratch]	2.83 ± 1.37	2.56 ± 1.39	0.100	3.12 ± 1.31**	2.52 ± 1.45	0.001 *

Cooking Frequency [1= <i>Often</i> 4= <i>Never</i> ]	2.12 ± 1.13	2.14 ± 1.06	0.911	1.88 ± 1.01**	2.13 ± 1.09	0.076
Total cooking and food preparation confidence scores (higher scores indicates increased confidence)	33.16 ± 10.55	31.64 ± 10.98	0.232	39.30 ± 8.68 **	32.25 ± 10.79	0.000*
Alcohol Days per week	1.58 ± 1.71	1.44 ± 1.81	0.519	1.22 ± 1.59 **	1.42 ± 1.76	0.351
Alcohol Units per session	5.81 ± 8.08	4.83 ± 4.79	0.301	3.59 ± 3.97**	6.54 ± 8.60**	0.000*

\* Difference between IG and CG is significant at  $p \leq 0.05$  \*\* Change scores from T1 to T2 are significant at  $p \leq 0.05$  in IG and CG

IG= Intervention group CG=control group T1=Baseline T2= 3 months

#### 5.3.4 Medium-term impact of SFL (Baseline through to 12m)

In addition to T1 data collection which assessed for initial changes in health and wellbeing outcomes at 3 months following the 10-week SFL intervention, data collection was repeated at 6 months (T3) and 12 months (T4) to assess for potential maintenance of positive behaviour change following the intervention. Table 9 highlights the mean scores at T3 and T4 and assessed for significant changes from baseline (T1) in the IG. Considering that COVID-19 is a potential confounder in the results for C2 at T3 and T4, Table 9 also has a breakdown of both cohorts (C1 and C2) at these time points to account for this. COVID-19 was also a contributing factor to limitations in the control group and data for the CG is not available after 3 months; hence all data in Table 9 relates to the IG only.

##### *5.3.4.1 Subjective wellbeing and mental health*

Two variables (life satisfaction and SWEMWBS) have notable trends in these analyses. Firstly, trends for both cohorts for life satisfaction from T1 to T4 are shown in Figure 2 which highlights that the increase in life satisfaction remained above baseline levels for C1 through to T4 (and the difference between C1 and C2 was significant at T4), suggesting that COVID-19 restrictions and subsequent Shed closures at these time points may have had a negative impact on life satisfaction for C2 (see also Table 9).

Mental wellbeing (SWEMWBS) remained significantly higher for the IG up to 12 months (T4) as shown in Figure 3. This shows that both C1 and C2 experienced sustained improvements in their mental wellbeing scores; however a significant difference between the two cohorts emerges at T3 and T4 with lower scores in C2, suggesting that COVID-19 may have impacted on overall mental wellbeing.

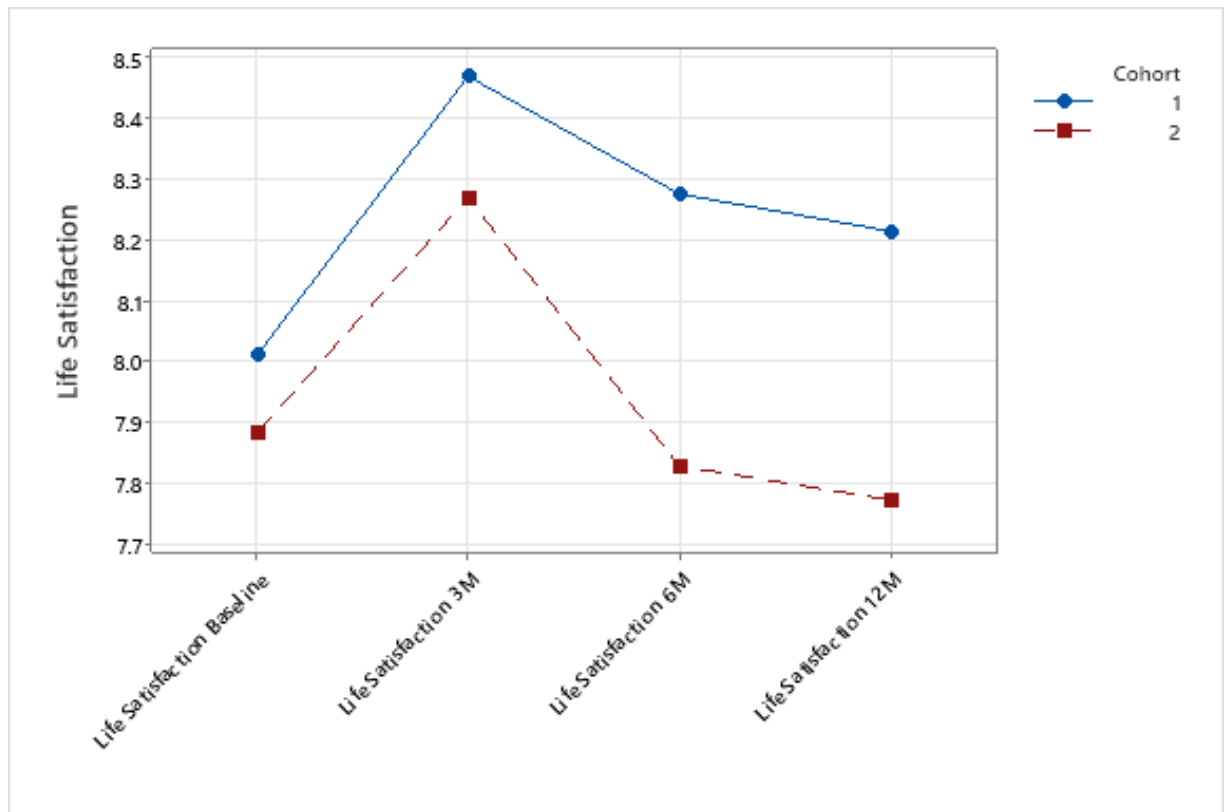
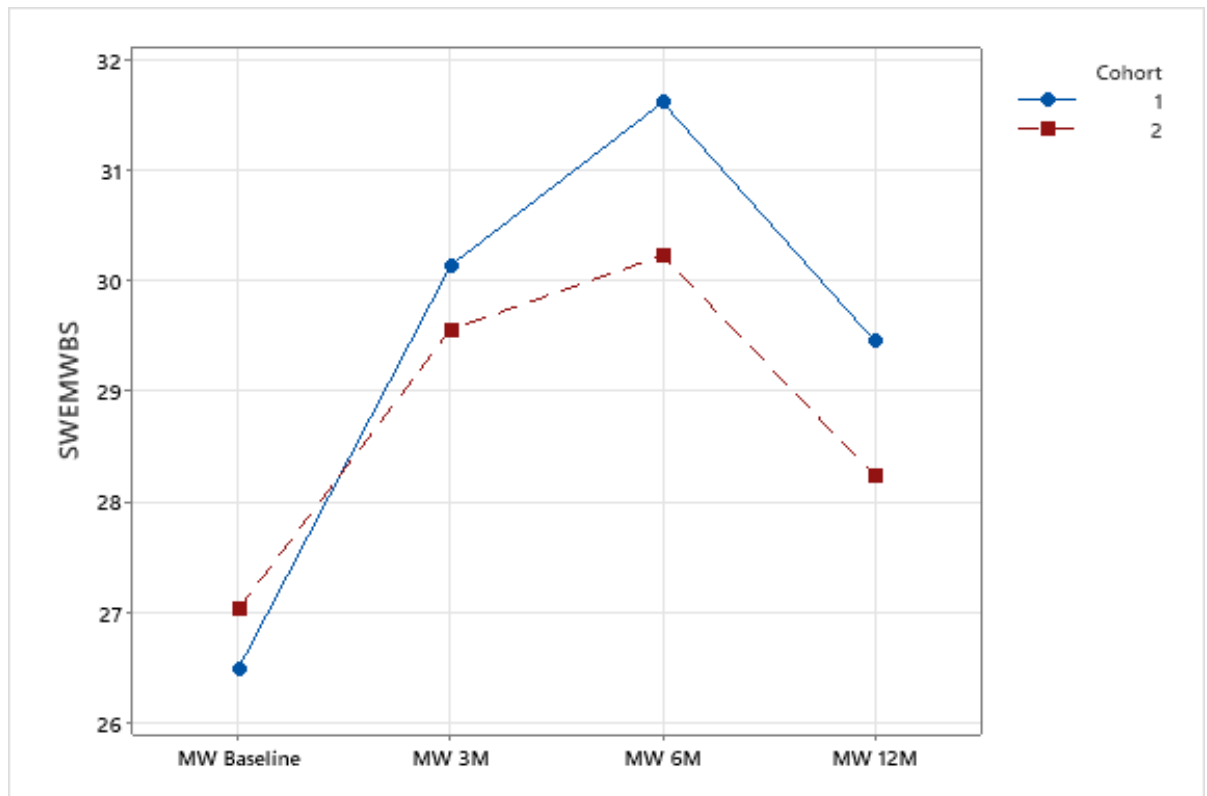


Figure 2: 5.1: Life satisfaction across time period by cohort

IG= Intervention group C1= Cohort 1 (pre-COVID cohort) C2= Cohort 2 (COVID cohort)



**Figure 3: 5.2: SWEMWBS across time period by cohort**

IG= Intervention group C1= Cohort 1 (pre-COVID cohort) C2= Cohort 2 (COVID cohort) MW=Mental Wellbeing

Depression prevalence remained significantly lower from T1 to T3 and T4 for the IG. This reduction was also observed in both cohorts. There was however a significant difference between depression prevalence scores at T4, highlighting again that C2 may have begun to experience a slight decline in mental wellbeing under COVID-19 restrictions. Significant improvements in certainty about managing mental health between T1 and T2 were maintained up to T4. Despite a slight decline from T1 to T2, Shedd's levels of comfort in having a conversation about their mental wellbeing remained significantly above T1 values for both C1 and C2.

Significant increases in life worth between T1 and T2 for the IG were sustained up to T4. There were no significant differences between C1 and C2 for life worth. For SRH, Shedd's health ratings remained significantly improved at T3 and T4 for the IG. This improvement did not appear to be sustained in C2

with a significant difference between the two cohorts at T3, suggesting COVID-19 may have contributed to this decline.

While SFL did not appear to significantly impact loneliness scores, there was a clear divergence between the two cohorts at T3 and T4. The non-COVID-19 cohort (C1) largely maintained lower loneliness scores while the COVID-19 cohort (C2), experienced a significant increase in loneliness during COVID-19 restrictions and Shed closures, with a significant difference between the two cohorts. In terms of social capital, trust ratings for the IG remained significantly higher than baseline up to T3. While both groups experienced a reduction, trust ratings remained significantly higher for C1 at T4, whereas C2 may have experienced an accelerated decline. Shedd's sense of belonging remained significantly higher post SFL at T3 and T4. While sense of belonging was largely maintained for both groups, the increase did not remain significantly different for C2 at T4. Similar trends were observed in relation to Shedd's sense of close support. There was a significant and sustained improvement in close support up to T4 for the IG but the difference did not remain significant for C2 up to 12 months. Mean utility scores continued to increase from T2 to T3 and while there was a slight decline at T4, scores remained significantly higher than baseline for both cohorts up to T4.

#### *5.3.4.2 Physical activity and lifestyle*

Days physically active remained significantly higher than baseline for the IG and, while there was no significant difference between C1 and C2, this was not sustained for C2. While mean days physically active remained higher at T4 compared to T1 for C1, this cohort did experience a decline. However, C2 experienced a significant increase in days physically active at T4, having previously experienced a reduction. This trend can also be seen in days spent walking where levels remained significantly higher than baseline up to T4, however C2 surpassed C1 for in terms of days walking at T4, suggesting that COVID-19 encouraged an increase in physical activity for C2 during Shed closures.

In relation to diet and cooking habits, fruit and vegetable consumption remained significantly higher up to T4 compared to baseline for the IG in C1 and C2. Positive changes in cooking habits were also sustained post SFL up to T4 for the IG in both cohorts. In terms of cooking frequency, it appears at T3 that the positive increase from T2 was not sustained. However, in C1 this trend had continued in a positive direction with a significant difference being recorded between T1 and T2. The opposite was observed for C2 where this cohort had begun to revert towards baseline ratings. At T4 however, the improvement was again significant for both cohorts. Total cooking confidence scores remained significantly higher for the IG in both cohorts up to T4. There was a significant difference in scores between C1 and C2 at T3 where C2 had declined and scores for C1 continued to increase. Scores became similar at T4 where both groups appeared to maintain confidence levels experienced post SF. Similarly to T2, there was no significant variations in days consuming alcohol. Alcohol units per session remained significantly lower than T1 for the IG in both cohorts however there was a gradual increase from T3 onwards.

**Table 9: 5.2: Wellbeing and lifestyle outcomes at T3 and T4 for the IG by Cohort**

	T3				T4			
	IG (Mean n=214)	C1 (Mean n=69)	C2 (Mean (n=145)	p-value (C1 v C2)	IG (Mean n=272)	C1 (Mean n=145)	C2 (Mean (n=127)	p-value (C1 v C2)
Life Satisfaction	7.97 ± 1.66	8.76 ± 1.55 **	7.83 ± 1.69	0.065	8.00 ± 1.56	8.21 ± 1.33	7.77 ± 1.76	0.021
Life Worth	8.50 ± 1.49 **	8.54 ± 1.48 **	8.48 ± 1.46 **	0.781	8.42 ± 1.47	8.52 ± 1.34	8.30 ± 1.25	0.207
Self-rated health [1= Excellent 5=Poor]	2.51 ± 0.97**	2.12±0.88 **	2.69 ± 0.96	0.000*	2.61 ± 0.93 **	2.12±0.91 **	2.71±0.94	0.910
Like finding out about one's health [1=Often 4=Never]	1.33 ± 0.59**	1.25 ± 0.60**	1.37 ± 0.59**	0.171	1.52 ± 0.78**	1.52 ± 0.84**	1.53 ± 0.71**	0.944
Mental Wellbeing (SWEMWBS)	30.67 ± 4.46**	31.62 ± 5.00 **	30.23 ± 4.13 **	0.035 *	28.89 ± 4.63**	29.46 ± 4.21 **	28.24 ± 5.01 **	0.033 *
Depression Prevalence [1= probable depression 4=high mental wellbeing]	3.78 ± 0.53 **	3.77 ± 0.57 **	3.79 ± 0.51 **	0.835	3.62 ± 0.59 **	3.72 ± 0.52**	3.51 ± 0.64 **	0.006
Certainty managing mental health [1= very certain 5=very uncertain]	1.56 ± 0.74 **	1.61 ± 0.61 **	1.60 ± 0.77**	0.416	1.76 ± 0.92 **	1.72 ± 0.95 **	1.82 ± 0.88	0.387
Comfort conversing about mental health [1= very certain 5=very uncertain]	1.56 ± 0.77 **	1.62 ± 0.86 **	1.54 ± 0.75**	0.576	1.57 ± 0.82 **	1.57 ± 0.87 **	1.58 ± 0.75**	0.911
Feel equipped with mental health supports [1= very certain 5=very uncertain]	1.80 ± 0.93 **	1.58 ± 0.72**	1.88 ± 0.98 **	0.041 *	1.93 ± 1.03 **	1.89 ± 1.10**	1.88 ± 0.88 **	0.507
Loneliness (3-item UCLA)	4.13 ±1.71 **	3.08 ± 0.51	4.62 ± 1.84 **	0.000 *	4.17 ± 1.79 **	3.51 ± 1.08	4.93 ± 2.11**	0.000 *
Social Capital Trust	7.35 ± 1.89 **	7.61 ± 2.01 **	7.23 ± 1.81	0.160	7.10 ± 1.86	7.27 ± 1.67 **	6.91 ± 2.05	0.119
Social Capital: Belonging [1=Strongly Agree 4=Strongly Disagree]	1.11 ± 0.37 **	1.10 ± 0.30 **	1.11 ± 0.39 **	0.868	1.14 ± 0.36**	1.11 ± 0.39 **	1.17 ± 0.40	0.124
Social Capital: Close support [1=Strongly Agree, 4=Strongly Disagree]	1.07 ± 0.27 **	1.03 ± 0.24 **	1.09 ± 0.28 **	0.135	1.14 ± 0.48 **	1.11 ± 0.39 **	1.18 ± 0.56	0.193



Utility Scores [Scale 0-1, higher scores indicate improved utility]	0.85 ± 0.09**	0.87 ± 0.87**	0.84 ± 0.97**	0.570	0.84 ± 0.09**	0.84 ± 0.87**	0.83 ± 0.10**	0.524
Days of Week Physically Active	3.58 ± 2.56**	3.84 ± 2.00**	3.45 ± 2.78	0.300	3.77 ± 2.43**	3.45 ± 2.37	4.13 ± 2.45**	0.240
Days walking per week for ≥10 mins	5.12 ± 2.34**	4.75 ± 2.24**	5.27 ± 2.37**	0.128	4.87 ± 2.53**	4.44 ± 2.43	5.34 ± 2.45**	0.004 *
Physical activity self-efficacy	67.32 ± 17.34**	65.91 ± 16.87**	68.02 ± 17.58**	0.411	65.85 ± 21.79**	64.2 ± 20.19**	66.99 ± 23.49**	0.430
Meeting Physical Activity Guidelines	39.4%**	40.6%*	38.9%	0.81	42.7**	37.4	48.8**	0.060
Portions of Daily Fruit & Vegetables	3.88 ± 1.72**	3.87 ± 1.74**	3.89 ± 1.73**	0.310	3.78 ± 1.60**	3.69 ± 1.71**	3.89 ± 1.47**	0.929
Cooking Habits [1=don't cook at all, 4 = meals from scratch]	3.15 ± 1.31**	3.36 ± 1.18**	3.04 ± 1.36**	0.098	3.27 ± 1.23**	3.31 ± 1.24**	3.23 ± 1.23**	0.674
Cooking Frequency [1=Often 4=Never]	1.92 ± 1.00	1.61 ± 0.89**	2.06 ± 1.01	0.002 *	1.86 ± 0.99**	1.85 ± 0.98**	1.90 ± 1.01**	0.606
Total cooking and food preparation confidence scores (higher scores indicates increased confidence)	39.12 ± 9.61**	42.35 ± 7.63**	37.56 ± 10.07**	0.001	39.13 ± 9.01**	39.49 ± 8.68**	38.73 ± 9.37**	0.506
Alcohol Days per week	1.61 ± 1.68	1.26 ± 1.44	1.86 ± 1.81	0.290	2.09 ± 1.86**	2.18 ± 1.88	1.97 ± 1.83	0.466
Alcohol Units per session	4.36 ± 3.44**	4.35 ± 3.44**	4.38 ± 3.47**	0.000	6.30 ± 4.85	7.17 ± 5.28	5.05 ± 3.86**	0.004

\* Difference between C1 and C2 is significant \*\*Difference is significant from T1 for IG, C1 and C2  
T3=6months T4=12 months  
IG= Intervention group C1= Cohort 1 (pre-COVID cohort) C2= Cohort 2 (COVID cohort)

### 5.3.5 Binary Logistic Regression

The output from these regression models is shown in Table 3 (5.3).

**Table 10: 5.3: Binary logistic regression analysis for changes in dependent variables (baseline to 3months)**

Dependent Variable	Positive Change in Life Satisfaction		Positive Change in Mental Wellbeing Above Threshold of 2		Positive change in Physical activity 1+ day		Positive change in food preparation & cooking confidence		Positive change in trust	
<i>Independent Variables</i>	<i>Odds Ratio</i>	95% CI	<i>Odds Ratio</i>	95% CI	<i>Odds Ratio</i>	95%CI	<i>Odds Ratio</i>	95% CI	<i>Odds Ratio</i>	95% CI
Age	0.99	0.95-1.01	1.03	0.99-1.07	0.99*	0.95-1.02	0.99	0.95-1.02	1.01	0.97-1.04
Education	1.09	0.78-1.54	1.38	0.93-2.06	1.48	0.99-2.19	0.95	0.65-1.37	0.84	0.59-1.18
Living Situation	1.16	0.60-2.25	0.46*	0.19-1.06	0.87	0.40-1.89	0.48*	0.22-1.05	0.84	0.45-1.63
Days PA at Baseline	1.00	0.90-1.12	0.90	0.79-1.02	0.58**	0.50-0.67	0.91	0.81-1.03	0.98	0.88-1.09
Loneliness at Baseline	0.92	0.68-1.25	0.64*	0.46-0.92	1.30	0.86-1.99	1.48	0.97-2.27	0.98	0.73-1.32
Mental Wellbeing at Baseline	0.91**	0.86-0.97	0.80**	0.76-0.87	1.03	0.96-1.09	1.00	0.94-1.07	0.93*	0.88-0.98
Group	5.42**	2.65-11.07	17.82**	9.76-28.92	5.96**	2.93-11.82	9.38**	4.72-18.63	3.55**	1.82-6.94
N	285		277		280		273		276	

\* Significant at 5% level \*\* Significant at 1% level Education: 1=primary education 4=postgraduate education Living situation 1=living alone 2=living with others Group: 0=Intervention 1=Control

Using a change in life satisfaction as the dependent variable, a significant relationship with baseline levels of mental wellbeing is found i.e. those with lower baseline levels of mental wellbeing have almost 9% ( $1-0.911=0.089$ ) higher odds of experiencing an improvement in life satisfaction from T1 to T2. An odds ratio of 5.419 also suggests that the IG is over 400% more likely to experience this change compared to the CG. Using a change in SWEMWBS above a threshold of 2 as the dependent variable, Sheddars who live alone have higher odds of experiencing a clinically meaningful change in SWEMWBS compared to Sheddars who live with others. Sheddars with lower loneliness scores however have higher odds of experiencing positive change in SWEMWBS compared to Sheddars with higher loneliness scores. Sheddars with lower mental wellbeing at baseline have also higher odds of experiencing a meaningful change in SWEBMWS. Sheddars in the IG are almost 18 times more likely to experience a positive change in SWEMWBS compared to Sheddars in the CG. Using positive change in PA as the dependent variable, younger Sheddars have higher odds of experiencing a positive change in their weekly PA. Sheddars who were more inactive at baseline are also more likely to increase their weekly PA by one day or more compared to active Sheddars. Sheddars in the IG also have over five times more likelihood of increasing their PA compared to the CG. In relation to positive change in food preparation and cooking scores, Sheddars who live alone are over twice as likely to experience a positive improvement. The IG are over eight times more likely to experience positive improvements in food preparation and cooking confidence compared to the CG. In terms of positive change in trust, Sheddars with lower SWEMWBS have higher odds of experiencing an improvement in trust and the IG was 255% more likely to experience an improvement in trust compared to the CG.

## **5.4 Discussion**

This study describes the impact of a 10-week health promotion programme (SFL) on the health and wellbeing outcomes of Sheddars and is the first evaluation of a structured health and wellbeing initiative co-designed and

delivered in Men's Sheds. Results suggest that the gender-specific approach of SFL is effective in engaging cohorts of HTR (older, lower educated, retired, inactive, obese, hypertensive) men within Sheds (McGrath et al., 2022b). Moreover, whilst asking Sheddors to opt into SFL might be seen as a potential limitation in terms of how representative the sample was of this cohort, this was offset by a reach rate of almost 75%, indicating that the majority of Sheddors opted into SFL. The diverse backgrounds of Sheddors may have been conducive towards enriching the learning and engagement of participants, particularly for men who may have been more reticent about participating in SFL (Carragher & Golding, 2015). Notably, the majority of participants reported themselves as 'White Irish'. Whilst this is reflective of the current profile of older men in Ireland (Central Statistics Office, 2016), due consideration should be paid to encouraging more diversity within Sheds and with engagement with SFL.

Research indicates that men tend to report lower life satisfaction scores compared to women, but that life satisfaction increases for men in later years (Joshi & Jovanović, 2020). Life satisfaction scores for this older cohort of Sheddors were indeed high at baseline (7.98). These were comparable to ratings for men over 50 years in Ireland (7.56) (OECD, 2020) and positively correlated with age at this time point (McGrath et al., 2022b). Younger Sheddors were more likely to experience a positive change in life satisfaction at T2 however. The positive increase in life satisfaction in the IG suggests that SFL had a positive impact on life satisfaction. While life satisfaction remained higher than baseline, the trajectory of these scores in C1 suggests that scores began to naturally decline a year later. This decline can also be seen in C2 but results suggest that the impact of COVID-19 restrictions accelerated this decline in C2. Sheddors' sense of life worth also positively increased following SFL and while it remained higher than baseline 12 months later, a similar trend can be observed where scores begin to level off, yet this did not appear to be impacted by COVID-19. The use of the single-item self-rated health measure is recognised as a reliable way of measuring health despite potential discrepancies in one's internal view of one's health misaligning with medical diagnoses (Cislaghi & Cislaghi, 2019). Indeed, while Sheddors reported their

SRH in positive terms at baseline, this did not align with objective measures of health and suggests that Sheddors may prioritise other aspects of wellbeing when evaluating their health (McGrath et al., 2022b). This is an important finding and highlights the importance of the co-design process in SFL and men's health promotion more broadly, where understanding of the priorities for 'health' among service providers and Sheddors may not always align. Self-rated health did significantly improve following SFL, a change that was sustained a year later for C1 but not C2, suggesting that SFL is capable of having a sustained improvement on SRH outside of COVID-19.

The significant and sustained improvement in those wanting to seek information about their health is a positive indication that the gender-specific approaches which underpinned SFL such as: fostering the non-clinical, safe environment and utilising a strengths-based approach was conducive towards encouraging positive attitudes towards health engagement. Male patients are also more likely to default on appointments than female patients (Thompson et al., 2016). Considering almost 80% of Sheddors were referred to their GP following their health check in the Shed highlights the importance of this intervention to pick up on risk factors that may otherwise go undetected. Of the Sheddors referred to their GP, a considerable proportion (41.7%) reported actually following up with their GP at T3. While one would hope to see a majority follow through, considering the cohort of Sheddors, this should be regarded as a positive response.

Similarly to previous research that has focused on engaging hard-to-reach men at community level, particularly 'Men on the Move' and 'Football Fans in Training' (Kelly et al., 2019a; Wyke et al., 2019), SFL achieved a positive mental wellbeing effect with significant increases in SWEMEBS scores that are considered clinically meaningful in the IG (Stewart-Brown et al., 2009). Those with lower SWEMEBS scores at baseline also experienced the most improvement in mental wellbeing (OR 0.804) life satisfaction (OR 0.911) and trust (0.928), suggesting that SFL had a positive impact in those with poorer mental health. In addition, while there was a marked difference between C1 and C2 in SWEEMWBS at 12 months, results suggest that, despite COVID-19, Sheddors retained an improvement in mental wellbeing as well as a

sustained reduction in depression prevalence. It is widely accepted that men experience barriers with engaging in conversations about mental health, often exacerbated by social constructs of what it means to be 'masculine' (King et al., 2020; Seidler et al., 2016; Seidler et al., 2018). This narrative has been challenged by research that highlights that when men are familiar with problem-solving strategies to maintain their mental wellbeing, they are open to using them (Fogarty et al., 2015; Milner et al., 2019; Sharp et al., 2022). Indeed SFL mirrors these findings where significant and sustained improvement in Shedd's own self-efficacy in relation to managing and talking about mental health, demonstrates the efficacy of the SFL initiative in creating an environment where Shedd's can openly discuss and feel supported with their mental wellbeing. It is important to note that while scores for these constructs remained significantly enhanced, scores began to revert at 6 and 12 months which highlights the importance of identifying strategies for Shedd's to maintain the benefits gained from the initial 10-weeks of SFL.

The Shed environment is recognised as a setting which promotes social support and protects against isolation and loneliness (McGrath et al., 2022b; Moylan et al., 2015). This inherent Shed benefit was reflected in Shedd's lower loneliness scores at baseline and the steep rise in loneliness in C2 at 6 and 12 months following Shed closures during COVID-19 (McGrath et al., 2020). This suggests that SFL did not impact Shedd's loneliness significantly as Shedd's reported minimal loneliness at baseline possibly due to an organic Shed effect. While it appears Sheds may indeed have a protective effect against social isolation, constructs of social capital (trust, belonging and feelings of having close support) also positively improved following SFL. This suggests that SFL further enhanced the sense of social capital in Sheds, which may have been a result of the enhanced sense of social cohesion during SFL, where research suggests that Sheds with a primary aim on social participation offer meaningful opportunities for inclusivity of a diverse range of Shedd's (Wilson et al., 2015; Wilson et al., 2016; Wilson, Stancliffe, et al., 2015). Older men who are more vulnerable, such as those who live alone, are at risk of depressive symptoms due to lower levels of sense of belonging (McLaren, 2020). Previous research on Sheds highlighted the importance of the Shed

space for older men in reducing isolation aided by access to programmes (Nurmi et al., 2018) and the significant increase in those who felt like they belonged to their Shed highlights the potential of SFL to build upon, and further enhance the social support inherent in Sheds. Research also highlights the relationship between social capital and wellbeing in particular its influence on physical activity and health engagement (Emmering et al., 2018; Ueshima et al., 2010). Alongside the significant improvement in belongingness, SFL participants also experienced a significant enhancement in feelings of close support and general trust, suggesting that SFL had a positive impact on social capital which may have also encouraged engagement with other positive health behaviours and practices within SFL. While improvements in social capital constructs were sustained in large part for C1, they did begin to revert with an observed accelerated decline in C2, again suggesting the need for SFL to devise strategies to maintain positive benefits beyond the 10 week intervention.

The number of Shedders (68.2%) not meeting the recommended PA levels of 30 minutes or more for 5 days per week at baseline was higher than reported in a comparable study 'the Irish Longitudinal Study on Ageing' (TILDA) which found that 58% of men over 50 years did not reach the recommended PA guidelines (Donoghue et al., 2016). Older Shedders more likely to meet the PA guidelines than younger Shedders (McGrath et al., 2022). While again there was some reversion in PA levels, days physically active remained higher than baseline one year later for the IG as did days spent walking. Overall, it appeared that there was a natural reversion in C1 highlighting the need for a maintenance phase in Sheds to encourage sustainment and further improvement of PA levels. In C2 days physically active, and days spent walking in particular, saw an increase at 12 months which may have been in part due to COVID-19 and the limitation of other recreational activities for older citizens beyond outdoor PA (McGrath et al., 2020). Regression work suggests that those who were less active at baseline were more likely to increase their PA levels (OR 0.582), also highlighting that SFL may have been effective in mobilising more inactive Shedders. Moreover younger Shedders experienced greater improvements in their PA levels. This is a positive finding considering

that older Sheddors were significantly more physically active at baseline, with research suggesting that younger Sheddors may attend the Shed due to poorer health (McGrath et al., 2022b). The significant and sustained improvement in PA self-efficacy is also a positive finding that suggests SFL was effective in enhancing self-efficacy which may be a stronger predictor of sustained engagement with PA compared to self-rated PA, as well as being strongly and independently associated with cardiovascular events in men (Bergström et al., 2015).

Alongside active living, healthy eating is a key priority of the Healthy Ireland Men's Action Plan with increased morbidity and mortality rates linked to lifestyle based determinants such as eating behaviours (Health Service Executive, 2017). Men are more vulnerable to poor nutrition due to a variety of social determinants such as food shopping, preparation and cooking traditionally organised by women, with advertising, health literacy and health promotion messages related to healthy eating targeted towards, and subsequently engaging, more women (Tani et al., 2020; Yahia et al., 2016). This is particularly the case for more vulnerable men such as those who are older, live alone, or have lower educational attainment (Stephens et al., 2018; Taylor et al., 2018). Similar to the HATRICK approach which uses informal environments and social engagement opportunities to deliver messages around healthy eating, while also appealing to practical elements of cooking for men (Caperchione et al., 2017), SFL has demonstrated a positive and sustained change in food preparation and cooking confidence. Alongside this, Sheddors who lived alone were more likely to experience positive changes in their cooking confidence and food preparation (*OR* 0.481) suggesting that SFL was effective in enhancing outcomes for more HTR Sheddors. Moreover, a significant proportion of Sheddors (25.8%) were either separated or divorced at baseline, highlighting the utility of the Sheds to attract HTR cohorts of men. The positive outcomes post SFL in relation to healthy eating and cooking behaviours suggest that the Healthy Food Made Easy programme within SFL has been successful in engaging men with messages around healthy eating behaviours and encouraging positive and lasting changes. Less than 10% of Sheddors reported drinking more than the recommended 17 standard drinks



per week at baseline (McGrath et al., 2022b). Previous studies which seek to engage men note a similar findings which may be in part due to age profile or self-report bias (van Doorn et al., 2020). While there may be inaccuracies in self-reporting of alcohol units consumed versus actual consumption, days spent consuming alcohol per week as well as alcohol units reduced significantly following SFL. This change was not sustained with a significant increase in days spent consuming alcohol at 12 months. While SFL did not have a specific focus on alcohol behaviour, overall alcohol consumption and frequency of binge drinking is higher in men than in women with up to 54% of Irish men classified as heavy episodic drinkers and is therefore an important consideration for SFL going forward (Health Service Executive, 2017; Manthey et al., 2019) .

## **5.5 Conclusions**

This research has demonstrated that SFL is an effective model that engages Sheddors with health and wellbeing and encourages positive and sustained change in terms of health and wellbeing outcomes such as mental wellbeing, social capital, diet and cooking confidence, subjective wellbeing and physical activity. It highlights the conducive environment of the Shed as a setting in which to activate gender-specific approaches built upon the organic health promotion qualities of the Shed, that effectively engage men in a safe, familiar and informal way while providing opportunities for structured health and wellbeing initiatives through this inclusive, community-based approach. The findings highlight the potential of SFL to improve the health and wellbeing of all Sheddors but in particular it's potential to encourage more positive gains for Sheddors who may have been harder to reach at baseline, highlighted by the increased gains made by men who lived alone and with lower baseline levels of mental wellbeing, subjective wellbeing and physical activity. The successful reach of SFL in targeted Sheds is a testament to its potential for scale-up alongside its sustained effect across implementation environments which highlights the capability of the SFL approach to be transferrable across multiple and variable Shed settings. While COVID-19 had an impact on the trajectory of Sheddors' wellbeing outcomes over the 12 month follow up period, many outcomes were not impacted at a significant level and

importantly, Sheddors who experienced COVID-19 maintained improvements in mental health despite a significant increase in loneliness as well as improving their physical activity levels. It is important that SFL remains true to its ethos as it evolves over time to respect the environment of the Sheds and continually respond to needs of Sheddors, particularly in the wake of COVID-19. The findings highlight the importance of the co-design approach of SFL and for men's health promotion more broadly where service providers and practitioners should give due consideration to understanding what Sheddors prioritise in terms of their wellbeing. While SFL has demonstrated efficacy in engaging HTR men, it also highlights that lonely Sheddors are more at risk of poorer mental wellbeing and efforts at engaging more vulnerable Sheddors should be prioritised, particularly in the wake of COVID-19 which has clearly exacerbated loneliness. It is also important to highlight that while health outcomes did improve, there was evidence of reversion a year later and it is recommended that the SFL design adapts to incorporate a maintenance phase in order to sustain the positive improvements Sheddors gained within the 10-week intervention. The SFL programme has highlighted the potential that tailored and targeted men's health interventions can have in terms of addressing gender inequalities in health and can inform health promotion strategies in Sheds as well as other community-based settings that engage men with health.

## **5.6 Limitations**

There are clear limitations in this study which should be noted. Firstly, due to capacity constraints at the time of data collection further compounded by the onset of COVID-19, the control group was small in comparison to the intervention group. However, research has demonstrated that there is value in having a small control with a larger intervention group in community-based programmes where there are often capacity constraints (Hutchins et al., 2015). The recruitment of participants into SFL was a sensitive process facilitated by gender-specific approaches where buy-in and trust building is critical to engagement. Therefore, respecting the autonomy of Sheddors to opt in/out of the programme on their terms took precedence over any attempts to generate a larger size control group. The advent of COVID-19 also meant that it was not

possible to recruit a further control group and the wait-list control group received the SFL intervention with concentration on the intervention group for the remainder of the study due to reduced resources. COVID-19 also became a significant confounder in relation to follow up periods made visible by the impact in the health and wellbeing of Sheddars (McGrath et al., 2020). This also removed the potential for multivariate modelling up to 12 months that could accurately capture SFL impact. However, separate analysis of both cohorts helps to limit this impact. The subjective nature of the data and the inherent bias in the self-report format should also be noted, particularly considering the study design where participants are aware they have received an intervention. While the evidence suggests that the recruitment strategy was effective in engaging the target group of Sheddars, this approach may lead to a potential selection bias when applied to HTR groups outside of Sheds. Finally, while comparisons can be made between Sheddars and the general population of older males in Ireland, SFL is an initiative tailored to the Sheds setting, and therefore, generalizability is limited to the Shedder population.

#### List of abbreviations

*C1*: Cohort 1

*C2*: Cohort 2

*CG*: Control Group

*CPR*: Cardiopulmonary resuscitation training

*HFME*: Healthy Food Made Easy

*HTR*: Hard-to-Reach

*IG*: Intervention Group

*IMSA*: Irish Men's Sheds Association

*OR*: Odds Ratio

*PA*: Physical Activity

*PA*: Physical activity

*SF-6D*: Short Form 6D

*SFL*: Sheds for Life

*Sheddars*: Men's Shed members

*Sheds*: Men's Sheds

*SPs*: Service provider organisations

*SPSS*: Statistical Packages for the Social Sciences

*SRH*: Self-rated health

*SWEMBWS*: Short Warwick-Edinburgh Mental Wellbeing Scale

*T1*: Baseline

*T2*: 3 month follow up

*T3*: 6 month follow up

*T4*: 12 month follow up

*TILDA*: The Irish Longitudinal Study on Ageing

## **Declarations**

### **Ethics approval and consent to participate**

All experiment protocol for involving human participants was in accordance with institutional guidelines. The study received ethical approval from Waterford Institute of Technology Research Ethics Committee (REF: WIT2018REC0010). This study has also been registered with the 'International Standard Randomised Controlled Trial Number' registry (ISRCTN79921361). All participants had the details of the research clearly explained to them through verbal and written instruction and informed consent was obtained prior to participation in the research.

### **Consent for publication**

NOT APPLICABLE

### **Availability of data and materials**

The data sets analysed during the current study are available from the corresponding author on reasonable request. A detailed protocol paper can be found at:

<https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-021-10823-8>

### **Competing Interests**

The authors declare that they have no competing interests.

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### **Author's Contributions**

Conceptualisation, A.M., N.M. and N.R.; Methodology, A.M., N.M. and N.R.; Funding acquisition, A.M., N.M. and N.R.; Investigation, A.M.; Project administration, A.M., N.M. and N.R.; Formal analysis, T.E., and A.M.; Supervision, N.M. and N.R.; Validation and Visualisation, A.M., T.E., N.M. and N.R.; Writing—original draft, A.M.; Writing—review and editing, A.M., T.E., , N.M. and N.R. All authors have read and agreed to the published version of the manuscript

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## **Chapter 6: Shedders experiences of the impact of Sheds for Life**

This chapter is under review as: McGrath, A., Murphy, N. & Richardson, N. (2022). 'Sheds for Life': Delivering a gender transformative approach to health promotion in Men's Sheds. *Health Promotion International*

This paper uses qualitative methods to capture Shedders' experiences of Sheds for Life in practice. It makes a valuable contribution to knowledge as the first study to qualitatively capture Shedders' experiences of health promotion in Sheds and demonstrates the utility of this approach to be gender transformative.

## **Abstract**

Research has highlighted the importance of gendered approaches to engage men with health. Sheds for Life (SFL) is a health and wellbeing initiative that utilises evidence-based and gender-specific approaches to engage hard to reach men with health promotion directly in the Men's Sheds (Sheds) setting. To understand the impact of Sheds for Life and how participants (Shedders) experienced SFL in practice, this qualitative study applied a framework of constructivism and aimed to explore how gendered approaches impacted engagement with SFL through Shedder's own accounts of their attitudes, opinions and experiences. Qualitative methods incorporating ethnographical observations, focus groups (n=8) and short semi-structured interviews (n=16) were conducted with SFL participants in the Shed setting. Reflexive thematic analysis was used to analyse the data to faithfully capture Shedders' experiences while acknowledging the reflexive influence of the researcher. Findings led to three key themes; Creating the 'right environment'; Normalising meaningful conversations; a legacy for 'talking health' with subthemes of creating safety and trust and strengthening of bonds and; transforming perceptions of how men 'do health' with subthemes of reaping the benefits of engaging with health and reframing attitudes towards health. This is the first study to capture Shedders' experiences of a structured health promotion initiative in the Shed setting. Findings highlight the value in utilising the Shed setting to engage men with health and the importance of gender-specific strategies which encourage a gender transformative approach to men's health promotion.

## 6.1 Introduction

### 6.1.1 Masculinity and men's health

A notable paradox in men's health is that despite historically enjoying a 'patriarchal dividend' (Connell, 1995), men's health outcomes have lagged behind those of women. Despite being positioned as having access to more privileged resources compared to women, this has not transferred into a health and wellbeing advantage for men (Heymann et al., 2019). Indeed, men are often understood to be both at-risk and risk takers in terms of health (Verdonk et al., 2010). The term 'hegemonic masculinity' defines ideal and culturally-specific masculine attributes, against which other forms of masculinity are judged within a power-relations context of patriarchal societies (Connell & Messerschmidt, 2005). The pursuit of more dominant or hegemonic masculinity, whilst privileging men overall, simultaneously fosters increased risk to their health and wellbeing (Fleming et al., 2014; Pan American Health Organisation, 2019). Prevailing cultural beliefs that men ought to be independent, self-reliant, strong and resilient intersect with other aspects of identity to influence attitudes towards health behaviour in men (O'Donnell & Richardson, 2018). Focusing on the socio-cultural context of men's lives offers important insights as to why lifestyle and individual behaviour are heavily influenced by gender as it intersects with other aspects of identity such as ethnicity and sexuality (Connell, 2020; Hooker et al., 2012). Positively, research has demonstrated that in terms of a range of physical health conditions, there are no statistically significant gender differences in health service use (Hunt et al., 1999; Wang et al., 2014; Wang et al., 2013). However, recent works have highlighted the need for attention to be placed on understanding the complex structural and attitudinal barriers in place for men who do seek help, particularly in the case of mental health service use (Heise et al., 2019; Seidler et al., 2018; Seidler et al., 2022; Whitehead et al., 2020). Indeed, for certain groups of men, help-seeking may be strongly associated with shame and embarrassment, as it represents a failure to uphold a valorised ideal of their masculinity, perceiving these emotions as 'feminine' and void of emotional strength and resilience (Cleary, 2012; Keohane & Richardson,



2017; O'Donnell & Richardson, 2018). Consequently, men in a position to provide support to male peers can respond in a dismissive or disapproving manner in the face of their own vulnerabilities when discussing personal and emotional issues in their friendships. This can create a further road-block for men in finding comfort and support (Sweeney et al., 2015). These attitudes are also reflected in low health service use by men for mental wellbeing and psychosocial concerns, which is consistently observed across Western countries (Sagar-Ouriaghli et al., 2019). Lack of knowledge and limited availability of treatment are also reasons why men delay help-seeking, particularly those who are more marginalised (Yousaf et al., 2015). Marginalised groups of men, in particular, may have a distrust of health services generally which can act as a further barrier towards help-seeking (O'Donnell et al., 2016). Moreover, men who are considered 'hard-to-reach' (HTR) in terms of engaging in health endeavours or social support networks - due to geography, experiences of mental health issues, social disadvantage, unemployment, low educational attainment or changes in life course - are at an increased risk of poorer health outcomes (WHO, 2018b). Men from more socially disadvantaged backgrounds may be more likely to subscribe to more negative constructions of 'reputational masculinity', which are not conducive to health promoting behaviour (Kogan et al., 2017). Recent research has demonstrated that men who identified with traditional forms of masculinity, defined as overacting male roles, showed significantly higher suicide rates (Feigelman et al., 2021). Moreover, while it may be perceived that traditional masculine ideals which impede positive men's health behaviours are more typical of older men, evidence suggests these barriers remain a systemic issue that continue to pervade through generations (McGraw et al., 2021). Socio economic status exacerbates the cause of all male morbidity and mortality and places HTR groups of men at a disadvantage in terms of health and life expectancy (Health Service Executive, 2017). Evidence suggests that further efforts are required in men's health strategies to address most vulnerable and HTR groups of men (WHO, 2018b).

#### 6.1.2 Reframing masculinities within a gender transformative approach to health

While the construction of masculinities can have negative repercussions for men's health, this should not be blamed as the sole cause of men's poor health behaviour. Doing so can reinforce negative stereotypes, further exclude men from health engagement and lead to practitioner biases (Mahalik et al., 2012). Waling (2018) argues that while the masculinities literature has highlighted a number of important issues regarding men's health, there has been a tendency to overlook the role of agency and reflexivity in men's experiences. This is a concept vital to feminist research, and it is important that studies of masculinity move away from theorising masculinity from the perspective of men as powerless against the influence of masculinity, and instead focus on men's agency and reflexive engagement with masculinity. Moreover, the use of masculinity in a negative and pejorative way also fails to account for broader complex social, cultural, environmental and political factors beyond the individual, meaning that masculinity should not be viewed as the "cause" of poor health outcomes (WHO, 2018b, Robertson et al., 2016). Rather, research on masculinity should be used to understand the challenges for men's health but also the potential advantages masculinity can present which encourages men to protect their health (Robertson et al., 2016). By starting from a 'positive masculinity' framework, masculine qualities such as self-reliance and responsibility are positioned as valuable when dealing with health issues (Sagar-Ouriaghli et al., 2019). The focus on addressing gender inequality in health programming has become more clearly conceptualised as a gender-transformative approach (Ruane-McAteer et al., 2019). Gender-transformative approaches benefit men in broadening the interpretation of masculinity and the socially acceptable ways in which masculinity can be expressed. The WHO (2018b) advocates for gender-transformative approaches to health promotion as a means to improve health outcomes by redefining harmful gender norms, challenging gender stereotypes and developing more equitable gender roles and relationships. Effective interventions that utilise gender transformative approaches, challenge unhelpful gender norms to make health engagement and help seeking among men more normalised and acceptable within a wider masculinities context. On the other hand, health promotion initiatives that fail to take gender perspectives into account are usually less effective and may sometimes perpetuate gender

stereotypes in a way that is counterproductive to achieving sustainable health outcomes and gender equality (WHO, 2018b).

### 6.1.3 Sheds for Life – meeting men where they are at

Men have traditionally been positioned as ‘difficult’ or unwilling to engage in health promotion programmes, and this pervading belief reinforces harmful gender biases at policy and practice level (Heise et al., 2019; WHO, 2018). Research has called for an increased focus on the failure to account for gender as a key driver of health behaviour and programme engagement, and as key underlying reason for such lack of engagement (Baker, 2018). Indeed, the field of gender and men’s health has been developing for over 20 years, including at policy level in Ireland (Department of Health and Children, 2008), leading to an increased focus on gender-specific approaches to health care delivery (Courtenay, 2000; Hunt et al., 2020; Kelly et al., 2019; Richardson & Carroll, 2018; Robertson & Baker, 2016; Sharp et al., 2018). This research area has demonstrated that, in the right environment where gender is considered as part of wider strategic approach and programme design, men are willing to engage with health (Carroll et al., 2014; Lefkowich et al., 2015; Sharp et al., 2022). Baker (2018) argues that gender-specific strategies responding to men’s health should focus on a ‘whole systems’ partnership approach which includes contributions from health providers as well as from workplaces and education, housing and transport services among others. This approach already underpins Ireland’s national men’s health policy where, in particular, community engagement has been cited as a catalyst for the creation of more sustainable health promotion activities that appeal to men (Department of Health and Children, 2008). Sheds for life (SFL) is the first structured health promotion initiative designed for Men’s Sheds (‘Sheds). Prior to the conception of SFL, Sheds, as grassroots autonomous spaces for men, had long been recognised as settings that offer inherent health promoting qualities for its members (Shedders) by virtue of the camaraderie, sense of belonging and social support they offer, as well as by fostering the creativity of Shedders and providing opportunities to learn new skills, work on projects, share goals and

decision making and provide services to local communities (Golding, 2021). Research demonstrated that the community-focused philosophy of Sheds fostered benefits beyond occupational activities such as mentoring, engagement in community activities, volunteerism, health promotion and targeting of vulnerable populations (Cordier & Wilson, 2014). It also became apparent that, alongside a top-down offering of health promotion activities from statutory services, there was a level of agency and appetite for health promotion in the Sheds where, in addition to health promotion resources distributed by the Men's Sheds associations, specific health promotion activities began to be initiated from an individual Shed level (Bergin & Richardson, 2020; Wilson, Cordier, et al., 2015). Research also demonstrated that participating in traditionally male activities allows Shed members permission to become more open with one another in discussions (Milligan et al., 2016). A study which uses a gender relations framework to explore masculinities in Men's Sheds highlighted diverse masculinities within and among Shed members (Mackenzie et al., 2017). This work suggested Shed members value a focus on work, independence, self-reliance and a need for male-focused spaces. Moreover, the study implicated that Shed members subscribe to dominant masculinity values and beliefs and yet also counter these norms within flexible masculine practices, with particular degrees of fluidity of multiple masculinities among older male members of Sheds. This research demonstrates the importance of embedding gender-specific strategies that account for a diversity of masculinities as foundations to health promoting endeavours in Sheds, particularly where aspects of identity such as sexual orientation may remain hidden within what tends to be an older, white, heteronormative environment. Sheds also appeal to practitioners as they provide access to cohorts of men which have traditionally been seen as more challenging for health services to engage (McGrath et al., 2021). Sheds for Life was therefore developed by the Irish Men's Sheds Association (IMSA) in response to both the agency and wishes of Sheddors, as well as a top down policy-directive calling for an increased focus on men's health initiatives (Bergin & Richardson, 2020). Currently, SFL comprises a 10-week intervention consisting of core components of a health check, physical activity, healthy eating and mental health and optional components Sheddors can

select to tailor to their Sheds needs that focus on disease prevention and life skills. The initiative is delivered by allied provider organisations and is co-designed with Sheddors to ensure it is an appropriate fit within the Shed environment and ethos. The initiative seeks to build upon the organic health promotion in Sheds while applying a gendered approach to engage men with a view to normalising meaningful conversations about health within Sheds. A detailed protocol outlining the design and evaluation of SFL is available elsewhere (McGrath et al., 2021). While this particular research study aims to qualitatively capture Sheddors' experience of the SFL intervention, more broadly SFL has been evaluated using an implementation science approach, namely a hybrid effectiveness type 2 design with a view to demonstrating both the programme impact on Sheddors as well as capturing the process and effectiveness of implementation (McGrath et al., 2022a, McGrath et al., 2021). Within the broader evaluation was an aim to capture Sheddors' lived experiences of SFL and this particular research study details the qualitative findings from this work. Overall the aim of this qualitative study was to (i) capture Sheddors' experiences of the co-design and participatory research approach, with an emphasis on positioning Sheddors' voices to the fore and continuing to work with Sheddors in a way that respects the autonomy, independence and ethos of Sheds ; (ii) delve more deeply into Sheddors' experiences of the 'how' of SFL to gain insights into what can be learned about the methodology and engagement process that facilitated positive outcomes; and (iii) establish whether SFL has had a truly gender-transformative impact, by delving more deeply into changes (if any) in the values and attitudes that Sheddors had in relation to their health and to identify changes with Shed practice that may reflect this.

## **6.2 Methods**

As part of the wider implementation study, the researcher spent a considerable amount of time directly in Sheds, observing SFL in practice and building relationships with Sheddors within the co-design and participatory research process that was critical to the development and implementation of the SFL

intervention. This also lent an ethnographical perspective to the study (McGrath et al., 2021). In terms of positionality therefore, the subjectivity and reflexive engagement of the researcher was deemed to be core to the gathering and interpretation of data, on the basis that emergent themes cannot exist separately from the researcher (Braun & Clarke, 2021b). For this reason, the principles of reflexive thematic analysis was used whereby the coding of data was seen as an inherently subjective process (Braun & Clarke, 2021b). This research adopted a constructionist epistemology in keeping with the underlying philosophy of reflexive thematic analysis. This meant that, in addition to the recurrence of perceptibly important information, meaningfulness was considered as being highly influential in the development of themes (Byrne, 2021). In addition, in keeping with the principles and ethos of reflexive thematic analysis, the concept of 'data saturation' was viewed as inconsistent with the values and assumptions of reflexive thematic analysis and more consistent with a straightforward realist ontology (Braun & Clarke, 2021c). Rather, assumptions of reflexive thematic analysis align with the view that when research is situated as a reflexive practice of knowledge generation, there is always potential for new insights or understanding (Braun & Clarke, 2021c). For this reason, the concept of information power was applied- where the larger information power the sample holds the less participants are needed (Malterud, Siersma, & Guassora, 2016).

#### 6.2.1 Participants

As part of the wider SFL evaluation, 421 Sheddors provided informed consent to participate across  $n = 22$  Shed settings. Observational data was obtained from these Sheds and Sheddors throughout the implementation process. In addition purposive sampling was used to recruit a diverse sample of Sheddors ( $n=96$ ) based on age, Shed size and location (urban/rural) from the larger cohort ( $n=421$ ) of SFL participants, who participated in  $n=8$  focus groups (FG) and  $n=19$  short interviews (conducted ad-hoc during Shed visits). Sheddors were deemed individually eligible to participate in the study based on their ability to provide informed consent. Participation was voluntary and

participants were fully informed of the aims and procedures involved in the study before providing informed consent. Shedders were all men with a mean age of 69 years and predominantly white Irish, retired or unemployed. A detailed description of the baseline characteristics of participants is available elsewhere, which highlights that SFL engaged a cohort of HTR men in terms of being older, not in current employment, and with poorer objective health status (McGrath et al., 2022b).

### 6.2.2 Procedures

This study received ethical approval from Waterford Institute of Technology Research Ethics Committee (WIT2018REC0010). In line with the implementation science and participatory research approaches of the broader implementation work, the researcher visited individual Sheds to recruit participants into the research and spent time within the Sheds settings to build rapport and trust with Shedders. Throughout the research process, the researcher visited the Sheds to monitor the implementation of SFL and capture Shedders' experiences of SFL. This process of visiting Sheds took place over a period of 18 months from September 2018 to March 2020. Throughout this time the first author spent approximately 500 hours among participants within the Sheds setting which facilitated direct observation of SFL in practice as well as observation of Shedders' experiences of SFL, captured through field notes and reflective journaling. Focus groups and interviews were conducted during follow-up visits post the SFL intervention. Data collection took place within the Sheds setting. Data were collected through focus groups, interviews and observations. A semi structured topic guide and interview schedule guided data collection. Topics covered included Shedders' perceptions, attitudes and experiences of SFL at both an individual and Shed level. A detailed SFL protocol which outlines this process is available (McGrath et al., 2021). Whilst the topic guide and interview schedule were revised during the process of data collection, in keeping with the reflexive process, in-depth analysis of the data did not begin until data collection was completed.

#### 6.2.4 Data analysis

Interviews and focus groups were transcribed verbatim. Data were de-identified to ensure the anonymity of participants. Field notes and reflective journals were also interpreted and analysed, alongside transcripts through reflexive thematic analysis. Data analysis involved six recursive phases of familiarisation; coding; generating initial themes; reviewing and developing themes; refining, defining and naming themes; and writing up (Braun & Clarke, 2021b). In keeping with a reflexive approach to thematic analysis, the researcher adopted an active role in knowledge production whereby codes are understood to represent the researcher's interpretations of meaning across the data set (Braun & Clarke, 2021b; Byrne, 2021). This approach to coding is organic rather than reliant on any particular coding framework, with the generation of themes being the final outcome of data coding and iterative theme development (Braun & Clarke, 2021a). For this reason demonstrating coding reliability is illogical as researcher subjectivity is conceptualised as a resource for knowledge production (Braun & Clarke, 2021b). Rather, rigor in terms of analysis was sought through a collaborative participatory research process, involving the research team and researcher to achieve richer interpretation of meaning rather than consensus of meaning (Byrne, 2021). Moreover purposive sampling was used to include a diverse representation of Shedd's views; multiple sources of data were triangulated to corroborate findings.

### 6.3 Findings

Braun and Clarke recommend that the reflexive approach should capture the 'story' where themes connect in a meaningful manner (Braun & Clarke, 2021b). This section tells a story about the impact of SFL and how themes are related. Three overarching themes captured how Shedd's experienced SFL in practice; *Creating the 'right environment'*; *Normalising meaningful conversations 'a legacy for talking health'*; and *transforming perceptions of how Shedd's 'do health'*. The themes are detailed below with illustrative quotes.



**Creating the ‘right environment’** - This theme discusses the importance of adopting the right approach and creating a supportive environment to enable Shedders to optimally engage with Sheds for Life.

While scoping work identified that Sheds were positively disposed towards participating in SFL, it was clear from the outset that the right approach would be critical to engage a cohort of Shedders that had notable reservations about how ‘*outside*’ influences might impact the Sheds. To Shedders, Sheds were seen as a haven that offered men solace and a sense of community, and they were naturally protective of this space. Patrick captured this when discussing why Shedders feel protective of the Shed;

*The Men’s Sheds protect something very sacred that we don’t have a lot of in our modern world - our sense of community.*

(Patrick, Interview)

There was broad consensus among participants that Sheds are welcoming spaces that create a warm environment, full of ‘*banter and chat*’ for those that may visit them. Whilst many Shedders expressed a need for health endeavours in Sheds, this was seen as being contingent on a level of trust and safety being established in advance with the deliverers of any such health programmes. This was seen as important as, beneath the outward appearance of banter and light-heartedness, was a deeper layer of vulnerability. Establishing trust and safety were essential in order for any health endeavour to engage at this deeper level. Arthur for instance observed how his fellow Shedders tended to use humour to mask vulnerability;

*Well what I noticed is there are lots of jokes in the Shed banter but if you listen beyond that there is lots of pain and suffering and is not easy for us guys to talk about out in the open. So if you look at the number of jokes it’s a clear indication there is an unmet need there.*

(Arthur, Interview)

Indeed, trust and relationship building at all levels (i.e. between the researcher, and coordinator of SFL (IMSA health and wellbeing manager; HWM) and Shedders) was seen as being integral to providing a sense of safety about SFL that built on the safety and familiarity already inherent in Sheds. The time spent in the Sheds during recruitment phases of SFL helped to reassure

Shedders that SFL was a programme *‘for Shedders by Shedders’*. This view of SFL as belonging to Sheds, alongside the relationships that Shedders formed with the researcher and HWM, appeared to appeal to Shedders sense of altruism and perception of themselves as problem-solvers as they associated their participation with *‘pioneering’* the programme for other Shedders, helping the national association to pilot and evaluate the programme as well as participating *‘for the good of the Shed’*. These motivations for participating in SFL were recurring responses for Shedders across Sheds. Whilst the sense of *‘being in it together’* was a crucial buy-in factor, this sense of collective and community effort also provided Shedders with a level of protection in relation to their vulnerability in participating in a health and wellbeing programme which was reflected through accounts of deeper levels of conversation as SFL progressed;

*I wanted to help out and I thought sure ‘I’ll just go through the jigs and the reels of the thing’ but it’s only now looking back well I suppose sure I can say I warmed to it and I got a lot out of it for myself and I’m glad I did it.*

(Billy, FG)

More broadly, gender-specific engagement strategies were important to encourage Shedder buy-in by allowing Shedders to view participation as acceptable and safe under the guise of altruism, problem solving and safety within group participation. The participatory research approach also empowered Shedders to feel like their opinions and views mattered. This, in turn, encouraged more meaningful engagement;

*There was a genuine openness from you to hear ‘well what was your experience?’ and how did it go?’ and we had sort a sort of trust and faith in the programme because it wasn’t just a fob.*

(Michael, Interview)

Sheds for Life was also designed to have optional components that Sheds could select and tailor to suit their Sheds. This level of choice and autonomy helped Shedders to feel like they were *‘consulted about their particular interest beforehand’*. This, alongside the co-design process of SFL, provided Shedders with a sense of autonomy and control over participation while also allowing Shedders to feel like the sense of togetherness and community

environment of the Shed was respected. Joe spoke about this when reflecting on the time spent co-designing SFL;

*I think that what it is here is whatever we are going to do we are going to do it together and I think its sense of togetherness.*

(Joe, FG)

This sense of togetherness, created positivity and excitement about participating in something new. The involvement of the national association strengthened Shedd's feelings of being supported and invested in rather than being 'left out in the leftfield'. There was a clear sense of ownership by Shedd's of SFL as they became invested in the idea of having an active role in shaping a programme that they envisioned could advance 'the Shed movement'. When being asked if there were any negative experiences about SFL in his Shed a Shed chairman stressed how this sense of ownership that members felt towards the programme made them protective of it;

*The men are very protective about the programme they don't want to say anything negative about it because they want it to continue and succeed.*

(Paul, Interview)

In addition other strategies within the design of SFL were observed to facilitate engagement by eliminating barriers that would otherwise deter men. For instance, cost barriers were removed by making SFL free of charge and a free health check acted as a 'hook' to draw Shedd's in to the idea of SFL.

*Well to me it was a bit of a carrot you know. You got a free health check and all these things you might not normally get done.*

(Ivan, FG)

By being delivered directly in the Shed setting, SFL was built on foundations of familiarity, safety and convenience. This gave Shedd's who may have been more reticent about engaging with SFL the opportunity to ease themselves into the idea of participating while observing SFL in action and being supported and motivated by other Shedd's through role modelling, social support and friendly competition.

*It was the right environment for us, it was suitable for men of our age and our vintage. We aren't used to anything like this so it was great to experience it where we can be ourselves.*

(Paddy, FG)

Shedders openly acknowledged the challenges faced by men more generally in accessing conventional healthcare and reflected on the Shed as facilitating an opportunity to overcome this;

*Sheds for Life worked because it came to us. We wouldn't be as forthcoming as to go it. That's men for you.*

(Johnny, Interview)

It was clear from the findings that provider organisations who delivered SFL components provided a sense of credibility to the programme which enhanced its acceptability to Shedders. The capacity building focus within the wider stakeholder engagement process enabled deliverers to recognise the value in building relationships within Sheds, which in turn, was appreciated by Shedders. Participants repeatedly recounted how the informal approaches that underpinned the design and delivery of SFL were in tune with the Shed setting and acted as a catalyst to put Shedders at ease while delivering valuable information;

*I thought the best platform of the whole thing was the cooking. She built up a long relationship with us. She was a fantastic presenter and had great humour. But the things she was doing was she was ticking all the other boxes all the time. She was ticking the diabetes box she was ticking the walking box and she was doing it day by day in the normal course of things and I thought that was a fantastic core item.*

(Niall, FG)

### **Normalising meaningful conversations - a legacy for 'talking health' -**

This theme discusses the impact Sheds for Life had in encouraging meaningful conversations about health and wellbeing amongst Shedders with subthemes of **creating safety and trust** and **strengthening of bonds**.

The subtheme of **creating safety and trust** captured how building on the safety and intimacy of the Shed environment to progress beyond the superficial to deeper interactions, it was evident that SFL offered further opportunities to enrich these interactions. The intimacy and comradery Shedders shared by virtue of Shed membership was an important catalyst for these interactions. However, prior to SFL, some Shedders reflected feeling reticent about engaging in conversations that made them feel vulnerable or

exposed, despite finding great solace in the social support in Sheds, "as a group of men we don't talk about these things". Sheds for Life gave permission to overcome such reticence;

*Before I didn't want to talk about it, something that has happened to me. But I realise today that it could happen to any of us and we need to talk about it. They can ask me about it now and we can talk to each other about it, we correspond.*

(Martin, Focus Group)

Shedders remarked upon the role of the facilitators in terms of altering the tone within Sheds. By virtue of having someone outside of the Shed start conversations about health, this acted as an important icebreaker by removing pressure from Shedders who may have wished to talk but did not want to be the instigators of such conversations. This approach offered them permission to come forward with their experiences by providing a safe environment for more intimate conversations about health and wellbeing. Once these conversations began, momentum could clearly be observed where other Shedders would come forward in the discussion to share their own experiences or offer words of support;

*The facilitators gave us confidence. I didn't see one person who was intimidated not to ask a question. We men normally wouldn't be great for that. In other things you find there may be only two or three that would ask a question but at the end of the session everyone had the confidence to get involved and I can see the improvement in the mental wellbeing of the Shed for that.*

(Philip, FG)

It was clear that once Shedders felt safe, there was an increased readiness to express their experiences and thoughts about health. The informal delivery style of SFL was conducive to this as it facilitated a strengths-based approach where workshops were noted as having a way of 'addressing the wisdom in the room'. Indeed, workshops often became Shedder led during which participants spent time exploring what important topics such as depression, bereavement and retirement meant to them. This seemed to evolve as an organic iterative process by simply facilitating the right environment for conversation to flow between Shedders. On discussing the mental health

workshop, for instance, Anthony commented on how he felt Shedders were doing all the work, likely down to careful facilitation by the facilitator;

*The mental health course was great in one sense because we all opened up about our own experiences and that was important but after I thought to myself 'sure we did all the work'. Like if the men weren't doing the talking we would have never filled the time because there was no structure to it.*

(Anthony, FG)

Shedders also recognised that perhaps the most important legacy of SFL was that it became more normalised to discuss sensitive topics within Sheds, a practice which remained in the aftermath of SFL. Within Sheds, Shedders reflected upon how the experience encouraged them to recognise how the open discussion was both cathartic for them and could offer solace to fellow Shedders;

*The whole purpose of that intervention was that it was cathartic for me because it's something that has been built up in my brain for a long time. But it set the basis for discussion. And indicated that here's a real life situation and these are ways you can deal with that.*

(Jonathan, FG)

*It [SFL] is helping men trust their own experience and their expertise. Helping men to trust themselves to help one another.*

(Peter, FG)

Perhaps the strongest indicator of the trust and safety Shedders began to feel in having these conversations with the support of SFL was when they began to express their desire for SFL to continue to evolve to incorporate more sensitive, but important topics for men that they were rarely afforded the opportunity to address. Shedders felt they could safely discuss these within the Shed and SFL environment including topics related to sexual health, mental health and bereavement. On discussing the need for a sexual health remit within SFL, Brendan commented;

*You're like ships passing in the night and you're losing sexual drive or guys have lost their partner or there is tension in the relationship around sexuality.*

(Brendan, FG)

In a similar vein, Philip reflects on his personal experience of loss and how talking about it with his fellow Shedders helped lighten the load;

*I tell the lads that go through what I went through ...losing a child...as the man you feel like you need to be the strong one. It's such a heavy load. Like a chap who starts on the coal lorry. When you first pick it up your knees buckle from underneath and your entire body aches but the more you go you.....the load....Well it never gets lighter but you do learn to carry it.*

(Philip, Interview)

The subtheme **strengthening of bonds** highlighted the impact SFL had in deepening the sense of connection within Sheds. While Shedders recognised their Sheds as spaces which offered social support, the enrichment of the environment through Shedders sharing personal accounts of their health experiences enhanced the intimacy and depth of connection within the Sheds. This was captured by Vincent when reflecting on how SFL brought Shedders together;

*It brought us close together and interacting together and we became more outgoing about speaking in a group because of our group sessions. And that interaction and that facility to share our thoughts is better and makes life better.*

(Vincent, FG)

Shedders noted how SFL provided an opportunity for members to come together as one group. Participants discussed how, prior to SFL, Shedders tended to be engaged in different projects and interests which meant that they could often become siloed or separated from one another within Sheds. It was also observed that whilst the task-oriented nature of Shed projects and activities delivered certain benefits, SFL was a timely reminder to Shedders of the value of spending time together and re-connecting as a group. Indeed, this recognition led Sheds to allocate dedicated time for this post SFL;

*We shouldn't be thinking about working here all the time. It's good to have other things. Because of this we have been meeting quite a lot and the Shed is meeting five/six days a week now. Sunday is about the only day of rest. It has certainly brought a lot of people together. Now we are saying what date can I see you next week?*

(Arthur, FG)

Moreover, for Sheds that were not heavily engaged in structured projects, SFL offered Shedders an opportunity to come together which was also noted as a

particular benefit for newer Sheds as SFL set a tone for the Shed in terms of openness and trust, while renewing a sense of social cohesiveness for more mature Sheds;

*I think socially to get to know people far better. There are certain groups that come certain nights and play cards; I'm not into cards, whereas here we are altogether. From my point of view it has solidified the bond.*

(Christopher, FG)

*It helped to bring all the Shed members together, because we had a lot of people who didn't know one another, so it was sort of a catalyst for getting the Shed going.*

(Jack, Interview)

As SFL prompted more meaningful conversations in Sheds, this strengthened social cohesiveness. Not only was the social aspect of SFL an important facilitator to engagement, but importantly, it enhanced the Shed environment by creating 'a sense of fellowship'. As Sheddens joined together in the shared space that SFL created, this prompted a reciprocal deepening of bonds and more meaningful conversations within Sheds in that the bonds between Sheddens deepened as conversations became more meaningful and vice versa.

*It became more of a social aspect than we had had and I think bonds were strengthened a bit because of the course and I think it was good for the Shed*

(Billy, FG)

**Gender transformative approaches to how Sheddens 'do health'** -This theme describes Sheddens' experiences of SFL as gender transformative with subthemes of **reaping the benefits of engaging with health** and **reframing attitudes towards health**.

As Sheddens became more invested in meaningful conversations in Sheds, a shift in attitudes could be observed where their perceptions about health topics as well as how Sheddens should engage with health discourse began to evolve. This highlights the utility of SFL to be gender transformative as



participants began to reframe what it meant for themselves as men to be healthy or to engage in conversations about health.

This could firstly be recognised in a subtheme of **reaping the benefits of engaging with health** where Sheddors moved from perceiving SFL as a ‘*box ticking exercise*’ and began to experience and become more aware of the tangible benefits of participation. Sheddors’ reflections on the benefits of SFL highlighted the gains made to their physical health, their increased motivation to maintain good health habits in order to retain these benefits, and the ripple effects this had on health practices and relationships beyond the Shed;

*My mobility has improved an awful lot. We are even talking about the fact that the fitness, it was so good that we would do it every two weeks even if we had to pay for it ourselves. We think it's brilliant. They put us through the ropes but it was excellent.*

(William, FG)

*I've found I'm looking more into things. I'm going shopping for my wife, looking at the labels. The contents. I'm cooking at home. We are enjoying that.*

(Joe, FG)

The targeted delivery of SFL was also recognised by Sheddors as being conducive to positive and more sustainable health behaviour change and important preventative measures that reframed their thinking about health and wellbeing;

*The exercise that we are doing here you know you'd never do it at home. You'd say you would but you don't. But when you could do it with the group you do it.*

(Harry, FG)

*I was found to have elevated blood pressure and referred to my GP....As a result a cardiac stent was inserted which removed a blockage in an artery to the heart and I feel great since.... The check-ups are so important.*

(Tony, Interview)

The social support of the Shed where Sheddors were able to relate to one another about their health experiences demonstrated the utility of SFL in terms

of prevention through direct and indirect benefits that participation had on the physical and mental health of Sheddors;

*I think the bottom line is when people get together like they have in this programme and start supporting each other, we feel better in ourselves, mentally we feel better, and physically we feel better. Then we don't have to go to our GPs and hospitals we can come here so we are saving money there. That's the bottom line the way I look at it.*

(Lance, FG)

A subtheme of **reframing attitudes towards health** captured how Sheddors reflected on how their approach to, and attitudes towards, health evolved because of SFL. This was particularly evident in relation to mental health. Chris reflects on how SFL enabled him to reframe his understanding of mental health as he transitioned from trepidation and fear about even broaching a subject that was based around a deficit model of mental illness to normalising and taking ownership of a more positive model of mental health;

*I thought it was very good in that certainly I had the impressions that mental health meant institutions and beyond. And then it was outlined in the session that it is very close to us and very close even to normal people and guys*

(Chris, FG)

On discussing suicide prevention training, Simon captures how the exposure to the topic began to reframe Sheddors thinking in relation to suicide and gave them an increased level of awareness and confidence to observe, listen and respond appropriately should they be required to do so;

*"...at first, people sort of shied away from it - "suicide well that's a bit depressing" - but it was actually presented in a very good way and there was a bit of...I won't say laughter, but it was light and there was no one came away and felt depressed and it certainly opened our eyes, ears and mouths to a few things"*

(Simon, FG)

The environment created by SFL through creating safety and normalising health discourse as informal topics of conversation, encouraged Sheddors to begin to express themselves in healthier ways. The seamless integration of various SFL components into the routine and familiarity of the Shed prompted

a type of osmosis for many Shedders as they transitioned from skepticism and resistance towards engaging in health to being more open and proactive;

*"It's all of the stuff that you don't normally discuss. It was advertised as men come together to talk about health problems and all that and I said "Jesus I'm not going to go down there and start talking about that". But unknown to yourself you do. And I thought the information, you know, these things are good, it's easy for us to access"*

(Liam, FG)

Shedders progressed from believing that talking about health is simply '*not what men do*' or that not looking after their health was a '*failing*' on them as men. Rather, Shedders began to explore what it meant to be a man and engage with health in a more meaningful way. They discussed the positive experience of talking about health together in the Shed compared to their previous experiences outside of the Shed;

*It's like when you're a kid you know and they say "Get up and don't cry". "Big boys don't cry" but then with this, sure I was blown away by it. It was just lovely. It's great. It's great to talk as the fella says you know?"*

(Larry, FG)

Many participants also remarked on the significance of this change and recognised that the transition to increased openness and increased willingness to acknowledge vulnerability and offer peer support, was indicative of more systemic and transformative cultural change within Sheds;

*Women talk about their health, they talk about their feelings whereas fellas, you're a man. You don't talk about it. Well that's changing for us.*

(Steve, FG)

*Men started talking about depression and the lot. Well at the time we may consider these as small things but in fact they are actually very big things for us.*

(Jonathan, Interview)

Furthermore, throughout their engagement in SFL, Shedders began to normalise and praise the openness of the exchanges in relation to their emotional expression and meaningful discussions about health and wellbeing. Indeed, broaching sensitive topics and acknowledging vulnerability began to

be reframed as the brave and the ‘*manly choice*’, validating their right to have their say about their health and realising that other Shedders had similar experiences;

*As a group of men, we don't even talk about these things....but everyone had their own say. And everyone was touched by it because it affected nearly everyone that was in the room one way or another.*

(Robert, FG)

*At the end of the day we are just men. There is an old saying that goes tuppence hay penny looking down on tuppence. So in other words there is no difference. But what I have to say is the respect from the lads here was second to none. And I am very proud of those who spoke up.*

(Paddy, FG)

Ultimately, SFL encouraged Shedders to challenge stereotypical perceptions that men are less willing to talk about their health and wellbeing, rather it is the environment and the approach that is important in facilitating meaningful discussion;

*“The key learning I gained from Sheds for life is people. About people. How they interact together.....the perception out there is that men don't talk. They do. Men will talk. In the right environment.”*

(Steve, FG)

## **6.4 Discussion**

The aim of this study was to qualitatively capture the impact and experiences Shedders had through participating in a health and wellbeing initiative ‘Sheds for Life’ in Men’s Sheds across Ireland. This was with the view to capture how Shedders experienced the participatory research and-co design approaches employed by SFL and to delve more deeply into Shedders’ experiences of this process of engagement. A further focus was placed on understanding the utility of SFL to be gender transformative and to capture potential changes in values and attitudes that Shedders had in relation to their health. Results capture the utility of Sheds as being health promoting in their own right which has been reflected across national and international research on Sheds (Kelly et al., 2019b; Lefkowich & Richardson, 2016; Wilson & Cordier, 2013). It builds

upon previous work which called for careful consideration of how SFL ought to be implemented in Sheds (Bergin & Richardson, 2020) and has further demonstrated the importance of applying gender-specific approaches to health promotion in Sheds. Moreover, to our knowledge this is the first qualitative study which captures the impact of a structured health promotion programme within the Shed setting.

Findings highlight the importance of gender-specific and strengths based approaches to engagement strategies when implementing health promotion in Sheds. Indeed careful consideration should be paid to respecting the environment of the Shed as this is critical to the acceptability and appropriateness of health promotion in Sheds (Bergin & Richardson, 2020; McGrath et al., 2021). When carefully applied, findings suggest that SFL and more broadly health promotion in Sheds, has the potential to be gender transformative by normalising meaningful conversation for men in Sheds. This is a positive finding, however it should be recognised that the approach is critical and Sheddors should remain key decision makers in the evolution of SFL or in any wider attempts to implement health promotion in Sheds as when done incorrectly, these approaches can threaten to undermine masculinity and reinforce harmful gender stereotypes (Baker, 2018; Bergin & Richardson, 2020). The potential of SFL to be gender transformative however is an important finding as gender transformative approaches have demonstrated the wider positive benefits that can be yielded when men feel it is acceptable to seek help and express themselves in healthier ways (WHO, 2018b). This work suggests that potential of SFL to be gender transformative is facilitated by the co-design process where Sheddors are partners in its design and delivery. It is further reinforced by the creation of safety and trust within the spirit of SFL where the ethos and autonomy of Sheds are respected. In addition the informal delivery approach facilitated, and normalised, meaningful conversations that encouraged Sheddors' reflexive engagement with their health and wellbeing. This led to openness about vulnerability, the broaching of typically taboo health topics and Sheddors taking ownership of their health facilitated by the support of their peers. This ultimately had a positive ripple effect that encouraged a positive cultural shift within Sheds where open

conversations about health become a more natural process. It is important in continued evaluation of SFL that the limitations of a 10-week initiative are considered and that there is impetus placed on strategies to encourage Sheddors to maintain and enhance their level of meaningful expression. Moreover, SFL has demonstrated its capability of accessing a HTR cohort of men (McGrath et al., 2022b), and the suggestion that SFL can be gender transformative through its design and delivery, suggests that SFL could potentially change a landscape for a cohort of men most at risk of poorer health outcomes due to complex social determinants (Health Service Executive, 2017).

Quantitative findings detailed elsewhere (McGrath et al., 2022c) also complement these findings by highlighting that this cohort of Sheddors who participated in SFL experienced significant, clinically meaningful and sustained change in their mental wellbeing despite the COVID-19 pandemic (McGrath et al., 2022b; McGrath et al., 2020) as well as significant positive changes in; propensity to seek health information, feelings of close support, trust and belonging as well as significant changes in their mental health self-efficacy specifically their level of comfort discussing mental health and understanding of their mental health (McGrath et al., 2022c). Sheddors also experienced significant changes in self-efficacy related to their diet as well as increases in physical activity levels (McGrath et al., 2022c). Moreover, this research highlights that Sheddors with lower levels of mental health at baseline were more likely to experience greater changes in their mental health and subjective wellbeing following SFL. The findings in this research therefore add richer insights into Sheddors' experiences of SFL that are supported by quantitative, longitudinal findings.

This work also aligns with the literature on settings-based approaches within health promotion whereby Sheddors engage in daily activities within the Shed environment where multiple factors at the environmental, organisational and personal level can interact to affect health and wellbeing (Bloch et al., 2014; Dooris, 2009). In this regard, the engagement and active participation of Sheddors throughout the SFL process helps to ensure relevance, commitment and sustainability of SFL in Sheds and empowerment of Sheddors through the

normalising of health promoting behaviours. These findings also support research which demonstrates that participating in male-specific environments allows Men's Shed members permission to become more open with each other in discussions (Milligan et al., 2016). Indeed, research has suggested that through Sheds engaging men in traditionally 'manly' activities such as project-based and task-oriented work, there is encouragement of companionship and openness which suggests complex masculine practices where members foster positive masculinity and feel empowered to express themselves within the safe environment of the Shed (Golding, 2015; Mackenzie et al., 2017). This work supports previous findings which explored counter hegemonic narratives within the Sheds context (Mackenzie et al., 2017) and offers further context on how Sheddars engage with masculinity practices. This research has also demonstrated the further benefit a credible facilitator and the discussion of explicit health messages can add to extend permission to Sheddars to engage in this practice and build momentum to normalise meaningful conversations in Sheds.

A key principle for this study was to reflect Sheddars' own account of their attitudes, opinions and experiences of SFL as truthfully and transparently as possible while also acknowledging the reflexive influence of the researcher's own interpretation and experience of SFL having been immersed with the Shed setting for extended periods of time. For this reason reflexive thematic analysis in the context of both Shedder and researcher experiences and underlying assumptions informed analysis of this rich data in a way that captured and respected the subjectivity and the reflexivity and agency of Sheddars also in terms of their thoughts and experience, alongside research interpretations (Byrne, 2021). In terms of limitations of this work, the gender of the researcher as female should be considered. While the researcher spent considerable time with Sheddars and their openness as highlighted in this work suggests that Sheddars were comfortable with the researcher, ultimately Sheddars may have been guarded in their responses. Furthermore, the sense of ownership Sheddars had over SFL may have influenced their desire to say anything negative which was a noted finding. Moreover while this research sought to capture a diverse representation of Sheddars, it is limited to

Shedders who volunteered to participate and engaged with the intervention, meaning it cannot purport to represent the views of all Shedders.

## **6.5 Conclusion**

This is the first study to qualitatively capture Shedder insights into a structured health promotion programme in Sheds. The findings offer rich insights into Shedders' experiences of SFL in practice. More broadly, it highlights the benefits of health promotion in the Shed setting and its utility to be gender transformative. When implemented with an approach that respects the Shed environment and recognises the agency and reflexivity of Shedders as key decision makers in their own health and wellbeing, there is great potential for health promotion endeavours in Sheds in terms of effectively engaging men, particularly those who are HTR and transforming perceptions of men having meaningful conversations about health and wellbeing as a manly choice.



## **Chapter 7: Economic Evaluation of Sheds for Life**

This chapter has been published as: McGrath, A., Murphy, N., Egan, T., Ormond, G., & Richardson, N. (2022). An Economic Evaluation of 'Sheds for Life': A Community-Based Men's Health Initiative for Men's Sheds in Ireland. *International Journal of Environmental Research and Public Health*, 19(4), 2204. <https://doi.org/10.3390/ijerph19042204>

It describes the economic evaluation of Sheds for Life with the aim of demonstrating cost effectiveness of the intervention which makes a valuable contribution to understanding implementation effectiveness of SFL as well as men's health research more broadly.

Note: The supplementary file (S1) for this chapter as per publication can be found in the appendices: Appendix F

**Abstract:** Men's Sheds ('Sheds') attract a diverse cohort of men and, as such, have been identified as spaces with the potential to engage marginalised subpopulations with more structured health promotion. 'Sheds for Life' is a 10-week men's health initiative for Sheds in Ireland and the first structured health promotion initiative formally evaluated in Sheds. Cost is an important implementation outcome in the evaluation of Sheds for Life when operating in an environment where budgets are limited. Therefore, an economic evaluation is critical to highlight cost-effectiveness for decision makers who determine sustainability. This is the first study to evaluate the cost-effectiveness of health endeavours in Sheds. All costs from pre-implementation to maintenance phases were gathered and questionnaires incorporating the SF-6D were administered to participants (n=421) at baseline, 3, 6 & 12 months. Utility scores were then generated to determine quality adjusted life years (QALYS). Results demonstrate that the intervention group experienced an average 3.3% gain in QALYS from baseline to 3 months and a further 2% gain from 3 months to 6 months at an estimated cost per QALY of €15,724. These findings highlight that Sheds for Life is a cost-effective initiative that effectively engages and enhances the wellbeing of Shed members

**Keywords:** men's health; economic evaluation; cost-effectiveness; community; men's sheds

## 7.1 Introduction

Traditionally men have been regarded as more difficult to engage with conventional health services compared to women and an understanding of how gender shapes men's health practice is a critical first step in developing effective health promotion strategies that might appeal to men (WHO, 2018b). Indeed, the importance and success of gendered approaches in the design and delivery of health interventions for men has been highlighted in a host of community-based men's health programs (Caperchione et al., 2017; Kelly et al., 2019a; Oliffe et al., 2020; Pringle et al., 2014; Zwolinsky et al., 2012). These approaches also demonstrate a need for a more targeted approach to recruit more marginalised groups of men (Kelly et al., 2019a). Research spanning Australia, Ireland and the UK has cemented the reputation of Men's Sheds ('Sheds') as settings which are inherently health promoting for men, with Sheds increasingly being seen by health and social policy makers as an exemplar for the promotion of men's health and well-being (Bergin & Richardson, 2020; Golding, 2015; Kelly et al., 2019b; Wilson & Cordier, 2013). The Men's Shed movement was first founded in Australia in the 1980s and has since expanded to other countries, first arriving in Ireland in 2011 and growing exponentially with over 450 Sheds now on the island and up to 10000 members. Sheds are community-based independent and self-autonomous where men come together of their own volition to socialise in the company of other men. The exponential and organic growth of Sheds has been highlighted as a testament to a need for men to identify with an environment that offers a sense of safety and purpose (Wilson & Cordier, 2013). Sheds engage in a range of activities, such as woodwork, music and community outreach that foster opportunities to participate in meaningful activities which encourage skill sharing, informal learning, camaraderie and belonging facilitated within a socially acceptable and masculine environment (Bergin & Richardson, 2020; Kelly et al., 2019b; Wilson & Cordier, 2013). Sheds operate on minimal funding and are self-sustained. The Irish Men's Sheds Association (IMSA) supports the development of the network of Sheds in Ireland. The inherent health promotion qualities of Sheds such as the sense of purpose, meaning and social support offered within them, make the Sheds highly conducive to health

promotion endeavours (McGrath et al., 2020; McGrath et al., 2021; Misan et al., 2017). Moreover, because they are community-based and non-clinical environments, research has found that Sheds typically attract more vulnerable subpopulations of 'hard-to-reach' (HTR) groups of men - older, more marginalised male subpopulations, who typically might not otherwise engage with health services or programmes (Bergin & Richardson, 2020; Lefkowich & Richardson, 2016; Misan et al., 2017). Thus, policy makers and researchers have called for structured health promotion endeavours in Sheds, querying what this might look like and how it might be effectively delivered without compromising the integrity of Sheds (Bergin & Richardson, 2020; Kelly et al., 2021a; McGrath et al., 2021; Wilson & Cordier, 2013). However, to date there remains limited high-quality or empirical research evidencing the links between Sheds and health and wellbeing which has been a noted limitation in assessing the Shed-health relationship (Bergin & Richardson, 2020; Kelly et al., 2021b; Wilson & Cordier, 2013). To our knowledge, there has been no other structured health promotion initiatives evaluated in Sheds nor has there been any economic evaluation of health promotion in Sheds.

### 7.1.1 Nature of Sheds for Life

The concept for Sheds for Life (SFL) was first developed in 2016 in response to a commitment from the Sheds representative body in Ireland (Irish Men's Sheds Association; IMSA) to prioritise health initiatives for its membership. Since then an alliance of stakeholders including the IMSA, academics, funders, policy makers, provider organisations and importantly Shed members ('Shedders') themselves, have guided the evolution of SFL into a ten-week initiative that delivers targeted and tailored health promotion directly in the Sheds setting. A detailed description of the SFL intervention and evaluation approach are available in a protocol paper which outlines its design, implementation and evaluation methods (McGrath et al., 2021). In short, SFL begins with a health check in the Sheds, and then focuses on priority areas of healthy eating, physical activity and mental health with additional optional components that allow Sheds to tailor the initiative to respond more accordingly to their needs such as; health awareness sessions on diabetes, cancer, dementia and oral health, CPR, digital literacy and suicide prevention training. Sheds for Life builds upon the informal, safe and familiar environment of Sheds and employs gender-specific approaches to further enhance adoption and reach of the initiative in Sheds (WHO, 2018b). While the informality of Sheds is an advantage in engaging men and needs to be respected in order to uphold the integrity of the Sheds (Bergin & Richardson, 2020), it presents challenges in terms of structured programme delivery and evaluation. The Sheds by nature are highly variable, autonomous, non-structured spaces where attendance can be sporadic and where members are not compelled to undertake any activity. The challenge therefore is to develop a pragmatic delivery design that can operate within the organic, non-structured space of Sheds where contextual factors vary within and beyond Sheds in terms of the wider systems. For this reason, the broader evaluation of SFL utilises a hybrid effectiveness-implementation design, guided by implementation frameworks (Damschroder et al., 2009; Koorts et al., 2018; Proctor et al., 2011). Central to this approach is the use of community-based participatory research methods where Shedders are key-decision makers in

the design and delivery of SFL in partnership with other key stakeholders. Indeed, a critical success factor for SFL is this partnership approach, where partner organisations understand the ethos of Sheds and recognise the value in engaging men with health. Moreover, SFL adopts a sustainable delivery model in that it is delivered under real-world conditions, where service provider organisations undertake SFL delivery as part of their routine work plans - as opposed to short-term (and often unsustainable) grant funding. That said, finite resources both in terms of a limited implementation workforce and competing priorities among provider organisations, demand that a prudent approach is taken to matching Sheds' needs with programme offerings. This also highlights the importance of economic evaluation to determine cost-effectiveness of SFL and inform the allocation of said finite resources. A detailed outline of this approach can be accessed in the SFL protocol (McGrath et al., 2021) .

#### 7.1.2 Assessing costs of health programmes

The true cost impact of a particular intervention depends upon the implementation strategy used and the location of delivery (Proctor et al., 2011). Proctor et al. (2011) outline that measurement of implementation costs designed to demonstrate cost-effectiveness are essential for studies in real-world settings and appeal to both policy makers and funders. This is particularly relevant in the case where costs of the intervention may be compared with other alternative treatments or implementation strategies. Implementation costs associated with an intervention are also likely to impact the rating of acceptability of the intervention and costs are therefore important to measure in the remit of an implementation study where acceptability is sought to be understood (Proctor et al., 2011). For policy makers and funders it will be important to demonstrate the cost-effectiveness of SFL when potentially allocating finite public funds, particularly as there is a lack of evidence pertaining to the impact of men's health promotion in Sheds with no available research to date on the economic evaluation of health promotion in Sheds (Bergin & Richardson, 2020; Kelly et al., 2021a; Vaughan et al., 2015). Studies investigating the economic impact of male health programmes have been limited to date; however, strategies which seek to improve men's health have

been found to have cost saving benefits (Baker, 2018). For example, an economic assessment outlining the costs of men's health disparities demonstrated that the premature morbidity and mortality of men sharply increased government and private sector expenditures (Brott et al., 2011). This research demonstrated that men's premature mortality and morbidity has been estimated to cost the United States economy approximately USD 479 billion annually. Krueger et al. (2016) also assessed the economic impact of modest health behaviour change in middle-aged men who smoke tobacco, consume excess alcohol, are physically inactive and have excess weight - modifiable risk factors which cost upwards of 730.4 billion dollars in the US annually (Bolnick et al., 2020). The research found that modelling a 1% annual relative reduction each year through to 2036 would result in a cumulative cost avoidance between the years 2013 to 2036 of 50.7 billion CAD. The research also determined that health interventions that can encourage a modest annual reduction in risk factors can have an important public health and cost saving impact. For example, an economic evaluation of Men on the Move (a community-based physical activity programme for middle-aged men) demonstrated the programme to be cost-effective in support of an at-risk cohort of men with an estimated QALYs ratio cost of €3,723, significantly less than the existing benchmark of €20,000 to €45,000 (Kelly et al., 2021c). Notwithstanding the utility of Sheds in engaging more marginalised subpopulations of men, programmes for Shed members also have the potential to be cost saving. It is important therefore that the cost-effectiveness of SFL is assessed as a critical component in highlighting the case for health promotion in Sheds. Moreover, Brott et al. (2011) argue that "the social justice" argument (that saving men's lives is simply the right thing to do) is not always enough to incite action; rather that research should focus on demonstrating the return on investment gained from engaging men with health services and programmes at prevention stage, and making a 'business case' for men's health promotion that appeals to decision makers. Moreover, in an environment where budgets are limited with many programmes all vying for funds, economic evaluations are not only beneficial but also a necessary tool to the decision-making process.

Quality Adjusted Life Years are universally applicable as they amalgamate the impacts of interventions on both quality and quantity of life in a single, common metric thus facilitating comparisons between different health programmes (HIQA, 2020). The Health Information Quality Authority (HIQA) highlight the usefulness of this approach to decision makers with limited resources (HIQA, 2020). Indeed, QALYs are considered a cornerstone of economic analysis and aid decision making in healthcare, particularly regarding the prioritisation of limited resources (Whitehead & Ali, 2010). The incremental cost effectiveness ratio enables the cost of a programme to be compared to known benchmarks to assess its effectiveness. Making use of cost-effectiveness ratios in relation to public health policies are very helpful in assessing such trade-offs (van der Vliet et al., 2020). This research sought determine whether the SFL initiative was an effective model in terms of health improvements and cost outcomes. The purpose of this study therefore was to conduct an economic evaluation of the SFL programme to; (i) investigate if the SFL intervention was a cost-effective approach capable of improving health outcomes of participants (ii) demonstrate the cost-effectiveness of SFL with a view to enhancing its acceptability among key stakeholders and decision makers; and (iii) highlight the benefit of economic evaluation for others engaged in men's health and community-based health promotion. Quality Adjusted Life Years along with the Incremental Cost Effectiveness Ratio will be calculated to enable the cost-effectiveness of the SFL initiative to inform scalability.

## **7.2 Materials and methods**

### **7.2.1 Study participants**

Following assessment of the implementation environment, namely the capacity and resource constraints of provider organisations to deliver SFL along with the nuances, ethos and autonomy of the inner (Sheds) setting, the SFL 10-week intervention was implemented on a phased basis across two cohorts, each consisting of two counties in Ireland. The first programme was delivered in Counties Kildare and Waterford between March and May 2019. The population of those counties is ca. 222,504 and 116,176 respectively (Central Statistics Office, 2017). The second programme was delivered in



Counties Limerick and Louth from September to November 2019, each with a population of ca. 194,899 and 128,884 respectively (Central Statistics Office, 2017). Whilst delivery occurred in the first cohort (n = 12 clusters; n = 212 Shedders), a wait list control cohort served as a comparator (n = 3 clusters; n = 87 Shedders) and these were a subset of the second cohort (n = 9 clusters, n = 209 Shedders). Purposive sampling was used to recruit Shedders to the SFL programme and was carried out through an expression of interest process targeting each Shed and a series of Shed visits conducted by the research team and members of the IMSA. This recruitment strategy was used in line with the gendered approach of SFL as a key enabler to engagement. In total, n=31 Sheds out of a potential n=44 (70%) across the selected counties opted into SFL. Data were collected at recruitment phase to identify the number of Shedders who regularly attended the participating Sheds to establish the reach of SFL. It was estimated that n=565 were active members of the participating Sheds at the time of recruitment, with the majority (n=421; 75%) opting to participate in SFL and the supporting evaluation, suggesting that the recruitment strategy was effective in engaging the target group. Inclusion criteria comprised all adult males who were active Shed members, who had a good proficiency in the English language and could give informed consent.

#### 7.2.2 Data collection

Programme outcomes were reported through questionnaires that were administered and completed by each of the participants on a one-to-one basis with a member of the research team to account for potential literacy issues. The questionnaires assessed a range of measures of various lifestyle variables along with wellbeing and self-rated health, for each participant, and information on the participants was gathered at baseline, 3 months (following completion of the 10 week intervention), 6 months and 12 months (See McGrath et al. (2021) for further information on instruments used).

Costs of implementation and maintenance of the programme were gathered by the research team and SFL delivery agencies across the two cohorts for up to 12 months. Both direct and indirect costs incurred in the implementation of the programme were recorded in the period up to 3 months. Further

maintenance costs of the programme were recorded from 3 months to 12 months which included costs borne by provider organisations to deliver different elements of SFL (health check, mental health workshop, cancer awareness etc.); costs incurred by the IMSA to coordinate its delivery (administration, salaries, travel and subsistence), alongside other miscellaneous costs (e.g. awards event for participants who completed SFL). For the purpose of this economic evaluation, costs were restricted to those incurred in the intervention element of the programme and the research costs that were incurred in the planning of the programme were not included, as these costs would not be incurred during any subsequent delivery of SFL (Shaw et al., 2011).

### 7.2.3 Methodological approach

The SF-36 health survey is one of the most widely used measures of health-related quality of life (Brazier et al., 2002). The short form 6D (SF-6D) is a reduced form of the general health measure SF-36 and is widely recommended as a generic preference based method to measure utility (HIQA, 2020). It measures 6 dimensions of health; physical functioning, role limitations, social functioning, pain, mental health and vitality, with each dimension having between two and six levels allowing for a potential 18,000 varying health states to be defined. Responses to the questionnaire are coded, with the codes then summed to produce a total score. The scores enable health differences between individuals or groups to be displayed and changes to health as a result of an intervention to be detected. Participants in SFL, completed the SF-6D questionnaire at baseline, 3, 6 and 12 months which allowed a six-digit health state code to be created for each individual, at each of the different time points. These were then converted into utility weights using the SF-6D algorithm. In the absence of Irish public preference data, preference weights used in the SF-6D are obtained from a sample of the general population in the UK using the recognised valuation technique of standard gamble. A repeated measures ANOVA and paired-samples t-tests were also performed to determine significant differences in utility scores across time

points in the Intervention Group (IG) and Control Group (CG) groups respectively.

The utility values generated from the SF-6D questionnaires in SFL allowed QALYs to be calculated. A QALY rate of 1.0 represents full health and 0.0 represents death (van der Vliet et al., 2020). The incremental cost-effectiveness ratio (ICER) is a means to assess the cost of a programme relative to its effectiveness. In the context of this study, the ICER was derived to show the additional cost for one additional QALY gained by the Intervention Group IG compared to the CG. This enabled the SFL project to be assessed on the basis of its net benefit to the participants. Thresholds used in Ireland for cost effectiveness purposes can vary. For pharmaceutical interventions, a threshold of €45,000 per QALY is used, however for non-drug interventions, HIQA state that the threshold used has tended to be between €20,000 and €45,000 (HIQA, 2020; O'Mahony & Coughlan, 2016). This is broadly similar to the UK threshold where the National Institute of Health and Care Excellence sets the threshold at £20,000 (Guillon, Rochaix, & Dupont, 2018). On this basis, if the ICER for the SFL was to fall below €20,000 per QALY gained, this would be viewed as a strong endorsement for the project.

### **7.3 Results**

The cost utility analysis conducted on SFL involved assessing the incremental costs and benefits of the programme. Table 11 sets out the costs associated with the programme, the majority of which relate to implementation costs in the initial three months. Costs corresponding to later time periods relate to maintenance of the programme. The pre-implementation planning costs which relate to staffing for those involved in SFL delivery and some travel costs are included in the baseline to 3-month costs.

**Table 11: 7.1: Costs of the Sheds for Life programme**

Item	Costs €**			Overall
	*Baseline to 3 Months	**3 months to 6 months	6 months to 12 months	
Costs of delivering physical activity	13,200	N/A	N/A	
Full Health Check	25,260	N/A	N/A	
Mental Health workshop	9,600	N/A	N/A	
Healthy Food made easy	19,800	N/A	N/A	
Programme Costs; supplementary components e.g. digital literacy, cancer awareness, oral health	17,200	N/A	N/A	
Miscellaneous Costs e.g. admin costs	212	N/A	N/A	
SFL awards event	0	4,546	N/A	
Salary Costs including health and wellbeing manager, health administrator	31,863	2,278	2,278	
Travel and subsistence	2,289	809	809	
<b>Total Costs</b>	<b>119,424</b>	<b>7,633</b>	<b>3,087</b>	<b>130,144</b>
Costs per participant (n=421)				309.13
*Includes costs involved in pre-implementation and implementation phases				
**3-12 months includes costs involved during maintenance phases				
***Costs shown in Euro: 1 USD is equivalent to 0.89 Euro				

For the SFL programme, the vast majority of the costs related to the initial three month period and while some of these costs were significant such as salary costs and the costs of full health checks, this must be considered against the success of this programme in attracting 421 participants from what is considered a 'hard-to-reach' population. This leads to a cost-effectiveness ratio (CER) of €309.3 per QALY which can be considered in comparison to a "do nothing" scenario. In the case of Sheds a 'do nothing' scenario would mean choosing not to deliver structured health promotion in Sheds as no other alternative has yet been explored for Sheds.

The incremental benefits of the programme involved generating utility levels for each participant as per Brazier et al. (2002). Initially, results for the six components of SF-6D were generated to see how the various elements were rated by the participants over this period – these are shown in Table 12 below:

Table 12: 7.2 Average Value for Components of SF-6D over Time Period by Group.

	Baseline			3M			6M		12M	
	IG	CG	**Baseline Mean P value	IG	CG	**3M Mean P value	IG	CG	IG	CG
<b>N</b>	379	87		237	75		214	0	266	0
<b>Physical Functioning</b>	2.17	2.28	0.45	1.70	2.23	0.00	1.59	*	1.74	*
<b>Role Limitations</b>	1.49	1.63	0.11	1.32	1.61	0.01	1.24	*	1.24	*
<b>Social Functioning</b>	1.41	1.60	0.06	1.30	1.53	0.02	1.18	*	1.28	*
<b>Pain</b>	2.07	2.13	0.69	1.95	2.12	0.31	1.82	*	1.75	*
<b>Mental Health</b>	2.15	2.22	0.52	1.86	2.27	0.00	1.88	*	1.99	*
<b>Vitality</b>	3.45	3.26	0.10	3.77	3.24	0.00	3.72	*	3.70	*
<b>Key: N = number; M = month; IG = Intervention Group; CG = Comparison-in-waiting Group</b> <b>** difference between IG and CG is significant at <math>p \leq 0.05</math></b>										

Table 12 demonstrates that a sample size of over 200 participants was generated at all time periods of this study, and this was after extensive efforts given the challenges of completing the study during parts of the Covid-19 pandemic (McGrath et al.,2020). In interpreting this table, note that for the first five dimensions (physical functioning to mental health), the scale used (from 1 to 5) scored healthier people with lower values while for the last dimension (vitality), healthier people were represented by higher scores. With this in mind, it can be seen that the mean values for the IG showed improvement across all dimensions from baseline to 3M (the highest improvement is in the physical functioning dimension), while most dimensions improved further from 3M to 6M before largely levelling off from 6M to 12M. This contrasts with the CG for which the data shows only very modest changes in all six dimensions from baseline to 3M after which no further data was available. As per Brazier et al. (2002), the six components were then amalgamated to generate QALYs for IG and the CG as shown in Table 13 below.

**Table 13: 7.3: Utility Analysis of the Sheds for Life Programme**

Group	Baseline	3M	6M	12M
IG - N	374	233	210	260
IG - Average Utility	0.795	0.827*	0.847**	0.838**
Utility Change		0.033	0.020	-0.009
QALYs Gained		7.595	4.222	-2.480
CG - N	85	72	0	0
CG - Average Utility	0.777	0.787		
Utility Change		0.010		
QALYs Gained		0.072		
Programme Costs		119,424	7,633	
Cost per QALY		15,724	1,808	

Key: N = number; M = month; IG = Intervention Group; CG = Comparison-in-waiting Group; QALYs = Quality Adjusted Life Years; QALYs gained = N x Utility Change.  
 \* difference from baseline is significant at  $p \leq 0.01$  \*\* difference from baseline is significant at  $p \leq 0.001$

In terms of utility changes, the IG achieved a 3.3% gain in the first three months compared to just a 1% gain for the CG and achieved a further 2% gain in the following three months. This leads to a QALY gain of almost 12 (7.595 + 4.222) for the IG in the first six months with a slight reduction at 12 months when the benefits of SFL may have reduced. The COVID-19 pandemic is a potential confounder here that may in part explain the diminishing utility and the impact of COVID-19 on SFL participants has been discussed elsewhere (McGrath et al., 2020). As SFL was delivered on a phased basis, Cohort 1 were followed up to 12 months prior to COVID-19 restrictions. However, Cohort 2 were actively experiencing COVID-19 restrictions at 6 and 12 month follow up. A comparison of both Cohorts using independent samples t-tests determined that there were no significant differences between these groups utility scores at all follow-up time points ( $p > .05$ ). This suggests a limited correlation between COVID-19 and the trajectory of participant utility scores.

A repeated measures ANOVA with a Bonferroni adjustment was performed to ascertain significance between changes in utility scores across time points (see Table 13). Results determined there was a significant improvement in

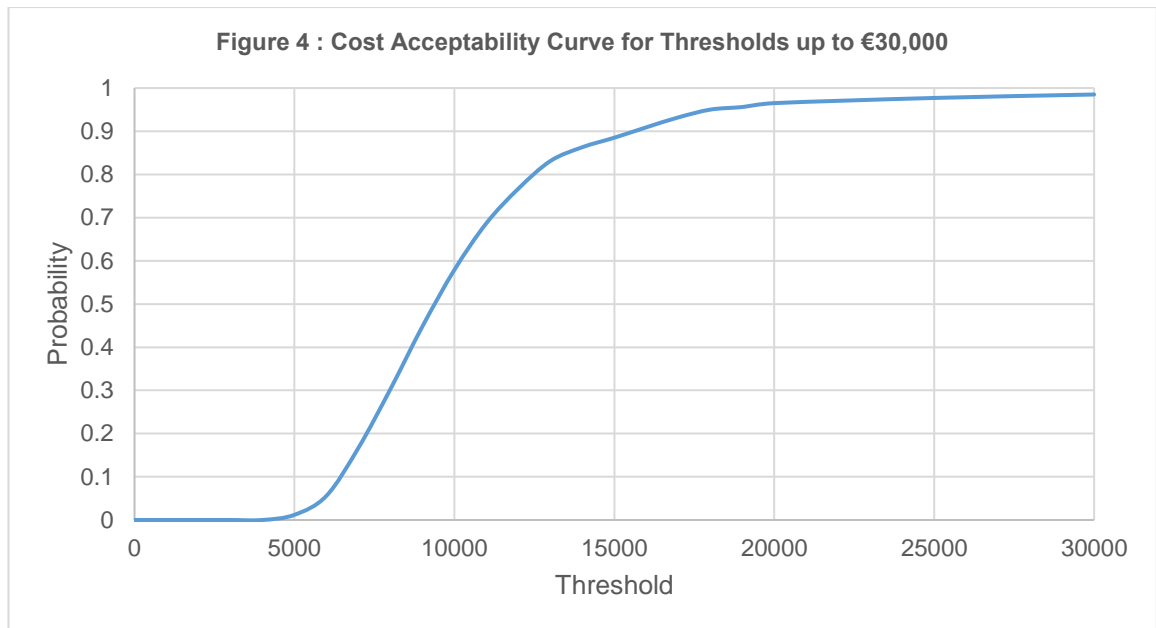


utility scores from baseline to all other time points (3, 6 & 12 months;  $f=9.96$ ,  $p=0.000$ ).

While constraints with the study design meant that there were no data available for the CG beyond 3M (see data collection and limitations sections), a paired samples t-test determined that there was no significant difference ( $p>0.05$ ) in this group from baseline to 3 months, compared to the IG who received the SFL intervention. It is also notable that Sheddars rated their baseline utility scores as relatively high in both the intervention (0.795) and control groups (0.777) which leaves less room to achieve further utility gains. This analysis culminates in a cost per QALY ratio of €15,724 which is highly cost effective when compared to generally accepted thresholds of at least €20,000 in Ireland and the UK (Guillon et al., 2018; O'Mahony & Coughlan, 2016)

#### 7.3.1 Sensitivity analysis

While the above analysis suggests that the SFL programme is cost effective, this finding relates to a single study. It is useful therefore to ascertain a level of certainty about these values for implementation of similar programmes. Capturing uncertainty for multiple variables involves assessing standard deviation and confidence intervals, however this is complicated when dealing with a ratio (incremental cost effectiveness ratio - ICER). A common approach to capturing uncertainty for ratio variables is a probability sensitivity analysis using Monte Carlo simulation, as this can lead to a cost effectiveness acceptability curve (CEAC; Epstein, 2019). In this study, 1,000 different values for all cost and QALY values are generated and this leads to a CEAC curve which plots the probability of cost effectiveness against different threshold values as shown in Figure 4 below.



**Figure 4: 7.1: Cost Acceptability Curve for Thresholds up to €30,000.**

The probability sensitivity analysis is based on modeling the average cost and average QALY using a normal distribution. Based on the curve highlighted in Figure 4, if one is willing to pay at least €15,000 per QALY (a figure close to the estimated cost per QALY in this programme), there is an 89% chance that this programme is more effective compared to other programmes. This data captures the potential uncertainty surrounding a resource allocation decision, and SFL is shown to have a high probabilities of being successful if one is willing to pay over €10,000 per QALY which is below costs effectiveness thresholds in the UK and Ireland (Gandjour, 2020; O'Mahony & Coughlan, 2016). For distribution of each SF-6D dimension see Supplementary File S1 (Appendix F) which depicts histograms of the six SF-6D dimensions at baseline.

## 7.4 Discussion

This paper sought to conduct an economic evaluation of SFL, which is the first structured men's health promotion programme in the Shed setting (McGrath et al., 2021). Given the lack of formal evaluation of health promotion in Sheds, not surprisingly, there has been no formal economic evaluation of such endeavours, with research further highlighting a distinct lack of economic evaluation for men's health initiatives and public health interventions more

broadly (Baker & Shand, 2017; Bergin & Richardson, 2020; Kelly et al., 2021a; Reeves et al., 2019). Therefore, the findings fill an important gap in the literature by assessing the cost effectiveness of a tailored and gender-specific health promotion initiative (SFL) targeted at a HTR cohort of men in the Shed setting. Findings also build upon the recommendations of a previous community-based physical activity programme designed for middle-aged men, Men on the Move, which highlights the efficacy of gender-specific, community-based men's health initiatives that can effectively engage men and are also cost saving (Kelly et al., 2021c). Moreover, advocates of implementation science have called upon public health practitioners and researchers to assess implementation outcomes and incorporate cost analysis into evaluation in order to encourage the translation of research into practice (Rapport et al., 2018). Researchers in this field have highlighted the importance of identifying and addressing potential barriers to implementation and scale-up and to further understand factors that facilitate adoption at the provider and funder level to improve the acceptability of evidence-based practice and the likelihood of intervention scale-up (Olliffe et al., 2020). Identifying the potential cost-saving benefits of SFL will be an important facilitator toward its scalability. Furthermore, by establishing SFL as a cost-effective health promotion intervention model, this adds further weight to the importance of the partnership approach that underpins SFL and which has been highlighted as a key pillar of its sustainability (McGrath et al., 2021).

Results highlight that this cohort of Sheddors rate their dimensions of health relatively positively, resulting in high average utility scores at baseline of 0.795 for the IG and 0.777 for the CG. Research has determined that there is often a discrepancy between men's objective health measures and how they rate their health subjectively (Henchoz et al., 2008). Moreover, previous studies involving participants both from Sheds and the general population have posited that older people re-calibrate their self-rating of health relative to what they think is reasonable for their age (Henchoz et al., 2008; Misan et al., 2017). However, when comparing these findings to a comparable study, Men on the Move participants had baseline utility scores of 0.630 in the IG and 0.664 in CG, which are significantly lower than those of Sheddors in this study (Kelly et

al., 2021c). The difference between Shedd's baseline utility scores compared to men in the general community setting may be due to the inherent health-enhancing benefits of the Sheds, which have long been cited in research (Bergin & Richardson, 2020; Kelly et al., 2021a; Kelly et al., 2021b; Misan et al., 2017; Wilson & Cordier, 2013). While the high baseline utility scores arguably make it more difficult for further improvements to be made in terms of benefits derived from SFL, despite this, at 3 months, there was a clear and significant difference for the IG (3.3% improvement) with a further 2% gain at 6 months. This contrasts with an insignificant 1% improvement for the CG over the first 3 months. These improvements in the IG were evident across all of the six dimensions of utility from baseline to 6 months. Although some dimensions did decline from 6 to 12 months, leading to a small decline in utility over this period, utility scores remained significantly higher than baseline at all time-points and notably one year later. Moreover, almost all of the gains achieved from baseline to 6 months were still evident one year later after SFL finished. While there is evidence of sustained improvement overall, this drop-off (which may have been somewhat influenced by COVID-19 restrictions, although not significantly) does highlight the importance of further follow-up with participants in the design and future implementation of SFL to encourage the maintenance of positive behaviour change. This is an important consideration and may be indicative of the need for a longer-term evaluation.

From a cost perspective, the total costs of delivering SFL was €130,144 (€309 for each of the 421 participants in the IG), and while it is difficult to compare this on a like-for-like basis to similar studies, this cost per person is shown to be modest and comparable to community-based physical activity interventions for men (Football Fans in training study (Wyke et al., 2015) €239 per participant; Euro FIT (van Nassau et al., 2016; Wyke et al., 2019) €221.25 to €312 depending on the country; and Men on the Move (Kelly et al., 2021c) €125.82 per participant). Moreover, SFL has a more diverse range of programme offerings including but not limited to physical activity, health screenings, healthy eating, mental health, digital literacy, health awareness (cancer, diabetes, dementia, and oral health) and suicide prevention training, which offers an increased level of intervention. When the estimated benefits in

the form of improved QALYs are considered, the SFL initiative is shown to generate a cost per QALY that is far below that of established guidelines of €20,000 per QALY (O'Mahony & Coughlan, 2016). While it should not be assumed that every intervention below the threshold is worth funding if there are cheaper alternatives available, the SFL evaluation is the first economic evaluation of health promotion in Sheds and therefore highlights the benefits of this approach. This gain is reaffirmed through the Sensitivity Analysis, where the probability of success with the intervention is extremely high, even when the costs per QALY exceed its current cost of €15,000.

There are some limitations to this study that should be noted. Firstly, the Sheds operate within a capricious informal environment, which makes a randomised study design unfeasible within this complex real-world system that has many evolving variables. Due to capacity constraints at the time of data collection in Sheds—namely, the availability of two/three data collectors to cover all Sheds and counties as well as the requirement of having to align data collection with Shedder availability and limited Shed opening hours—there were some limitations in terms of the control group and follow-up rates where rescheduling of data collection was not possible. In keeping with the gender-specific approach of SFL, the researchers endeavoured to complete all follow-ups in the Shed setting to promote a sense of safety for participants. However, this can present challenges for follow-up rates considering the informality and sporadic attendance in Sheds. Future research may benefit from identifying strategies that would mitigate against this problem, perhaps through hosting an enticing event or the use of other incentives. The control group for this study was a wait list control. Questionnaires were completed in a comparator cohort of Sheds ( $n = 4$ ) due to receive SFL 3 months prior to SFL delivery. This means that a small cohort ( $n = 87$ ) of participants acted as the control and were followed for 3 months only—as these participants transitioned from being the CG to the IG after this period. Moreover, the recruitment of participants into SFL was a sensitive process facilitated by gender-specific approaches where buy-in and trust building is critical to engagement. Therefore, respecting the autonomy of Sheddors to opt in/out of the programme on their terms took precedence over any attempts to generate a larger size control group.

However, research has demonstrated that there is value in having a small control with a larger intervention group in community-based programmes where there are often capacity constraints (Hutchins et al., 2015). Indeed, this research calls on researchers to consider an unbalanced design using a relatively small sample size for a control group as it would still improve the amount and quality of available evidence for public health practice and practice-based evidence (Hutchins et al., 2015). The advent of COVID-19 at the time of data collection compounded this difficulty and led to reduced resources, which concentrated on the IG for the remaining time period of the study. The subjective nature of the data and the inherent bias in the self-report format should also be noted, particularly considering the study design where participants are aware they have received an intervention. It is also possible that participants' self-ratings of health outcomes may have led to some inaccuracies in terms of the benefits that were computed; however, the estimations presented are shown to be still within cost effectiveness thresholds when sensitivity analysis is conducted on the key variables. While the evidence suggests that the recruitment strategy was effective in engaging the target group of Sheddars, this approach may lead to a potential selection bias when applied to HTR groups outside of Sheds. Finally, while comparisons can be made between Sheddars and the general population of older males in Ireland, SFL is an initiative tailored to the Sheds setting, and therefore, generalizability is limited to the Shedder population.

## **7.5 Conclusions**

This research is the first study that has considered an economic evaluation of men's health promotion in Sheds. It has highlighted the value in utilizing Sheds as a setting in which to engage men with a targeted health promotion initiative (SFL) that not only has the potential to improve health and well-being outcomes but is also cost effective. The research demonstrates that the partnership design of SFL is an effective way of delivering community-based health initiatives and dispels myths that these approaches are costly. Moreover, findings also further corroborate the value of Sheds as being inherently health enhancing for Sheddars. Overall, findings make a valuable contribution to existing research by highlighting the value of community-based

men's health initiatives more broadly in terms of their potential to be cost-effective and health enhancing for men. The results provide a solid evidence base for the future scale-up of SFL and highlight the importance of further research to guide its implementation. Moreover, these findings will be invaluable in advocating for the prioritisation of SFL and in the design and delivery of further health promotion initiatives in Shed settings for stakeholders involved in SFL implementation.

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### **Supplementary Materials**

The following are available online at

<https://www.mdpi.com/article/10.3390/ijerph19042204/s1>,

File S1: Histograms of Six dimensions of the SF-6D at baseline

### **Author Contributions**

Conceptualisation, A.M., N.M. and N.R.; Methodology, A.M., N.M. and N.R.; Funding acquisition, A.M., N.M. and N.R.; Investigation, A.M.; Project administration, A.M., N.M. and N.R.; Formal analysis, T.E., G.O. and A.M.; Supervision, N.M. and N.R.; Validation and Visualisation, A.M., T.E., G.O., N.M. and N.R.; Writing—original draft, A.M.; Writing—review and editing, A.M., T.E., G.O., N.M. and N.R. All authors have read and agreed to the published version of the manuscript.

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**Institutional Review Board Statement**

The study received ethical approval from Waterford Institute of Technology Research Ethics Committee (REF: WIT2018REC0010). This study has also been registered with the 'International Standard Randomized Controlled Trial Number' registry (ISRCTN79921361).

**Informed Consent Statement**

During Shed visits, all participants had the details of the research clearly explained to them through verbal and written instruction with adequate time to digest the information. Informed written consent was obtained by a member of the research team prior to participation.

**Data Availability Statement**

The data presented in this study are available on request from the corresponding author.

**Conflicts of Interest**

The authors declare no conflict of interest.



## Chapter 8: The Implementation of Sheds for Life

This chapter outlines the process of implementation and the identification of implementation determinants and strategies to inform implementation outcomes. This chapter has been submitted for publication and is under review as: McGrath, A., Richardson, N. & Murphy, N. (2022). Strategies for effective implementation and scale-up of a multi-level co-designed men's health initiative 'Sheds for Life' in Irish Men's Sheds. *Frontiers in Health Services: Implementation Science*: 940034 <https://doi.org/10.3389/frhs.2022.940034>

The supplementary file for this chapter can be found in the appendices: Appendix G

## **Abstract**

Sheds for Life is a gender-specific tailored men's health initiative engaging 'hard-to-reach' men in the Men's Shed setting in Ireland. It is implemented by multiple stakeholders at individual, provider, organisation and systems level and thus multiple contextual factors influence its scalability. This research used established implementation science frameworks to guide participatory research approaches that captured the process and identified facilitators of and barriers to implementation and scale-up. Active recruitment, co-design processes, leadership and stakeholder engagement emerged as key facilitators of implementation. Prominent barriers were institutional capacity and funding. Acceptability, adoption and appropriateness of the initiative were high among stakeholders with sustainability largely contingent on funding and staff resources. Findings make a valuable contribution to knowledge by capturing the process involved in the implementation of a complex multi-level men's health intervention. It provides a 'how to' guide of strategies to engage hard-to-reach men with health promotion, the operationalisation and application of implementation frameworks in community-based health promotion, and the implementation of health promotion in Men's Sheds. Documented barriers and facilitators that impact implementation of a community-based men's health programme are rare and provide a valuable blueprint for practitioners, researchers and policy makers in the field.

**Key words:** implementation science, men's health, translational research, embedded research, community-based health promotion, men's sheds, participatory research, co-design

## 1 Introduction

The burden of ill health in men is caused by multiple complex factors that are particularly exacerbated for vulnerable groups of socially disadvantaged men (Layte & Banks, 2016; Robertson & Baker, 2016). While it may be perceived that traditional masculine ideals which impede positive men's health behaviours are typical of mainly older men, evidence suggests these barriers remain a systemic issue that continue to pervade through generations (McGraw et al., 2021). Understanding the complexities of masculinities within health systems and how men engage with, and are impacted by them has highlighted a need for tailored men's health programmes underpinned by gender-specific approaches (Baker, 2020; Lefkowich et al., 2015). This fact is further compounded by the disparity in mortality for men during COVID-19 which was likely a consequence of failure to invest in men's health (Baker et al., 2020; Tharakan et al., 2022). This need is particularly pertinent for men who are at risk of being more isolated from, or reticent about, accessing formal health services or social supports due to geography, experiences of mental health issues, social disadvantage, unemployment, low educational attainment or significant changes in life course (e.g. retirement) – groups that are considered 'hard-to-reach' (HTR) in health endeavours (WHO, 2018b). Moreover, designing models of care that are accessible to men and that address changing masculinities across the life course, can be instrumental in reaching out to HTR men while simultaneously acknowledging their diversity (Pan American Health Organisation, 2019).

The Men's Sheds ('Sheds') are autonomous, grassroots organisations that originated in Australia in the 1980s and grew exponentially in Ireland from 2011 following the economic recession. Founded and sustained by Shed members ('Shedders'), membership within Sheds attracts diverse representations of men from different socioeconomic backgrounds, and importantly, are effective in attracting cohorts of HTR men (Bergin & Richardson, 2020; McGrath, Murphy, et al., 2022b; Misan et al., 2017). The proliferation of Sheds across Ireland was testament to a growing need for men to identify with a space that facilitated meaning, social support, safety and belonging (Bergin & Richardson, 2020; Wilson & Cordier, 2013). By virtue of

their grassroots, member focused approach, Sheds are variable spaces that differ in size, range of activities (e.g. woodwork, music, gardening, art, and mechanics) and resources but have commonality in offering men a safe and familiar environment that fosters a sense of social support and belonging, through developing new skills, shared projects, team work and camaraderie (Golding, 2021; Lefkowich & Richardson, 2016). Not surprisingly therefore, Sheds have been identified as inherently health promoting spaces for men (Kelly et al., 2019b; Wilson & Cordier, 2013). Based upon their inherent health promoting qualities and ready access to men who may be reticent to engage with traditional health services, Sheds represent an attractive setting in which to build structured health initiatives. In light of this, Sheds have emerged as an exemplar for the promotion of men's health and wellbeing by health and social policy makers, earmarked as spaces that are capable of engaging HTR men in health endeavours (Bergin & Richardson, 2020; Kelly et al., 2021a). Notwithstanding the fact that Sheds potentially offer a strong foundation upon which to build structured health promotion, tension may arise from imposing formal healthcare upon the informal setting of the Sheds, where its informality is an integral element to its inherent health promotion and where formality may be the very convention men seek to resist (Bergin & Richardson, 2020; Kelly et al., 2021b). Nevertheless, Shed members (Shedders) have demonstrated an appetite for health promotion in Sheds (Bergin & Richardson, 2020), suggesting it is timely to capitalise on this opportunity. The critical consideration in the design, implementation and evaluation of health promotion programmes in Sheds is that Shedders are at the center of all decision making and that the ethos of the Shed environment is preserved (Bergin & Richardson, 2020; Kelly et al., 2021b).

Recognising the utility of Sheds as a means to engage HTR men with health while also understanding the need to prioritise wellbeing for its membership in a tailored and respectful way, the Irish Men's Sheds Association (IMSA) first developed the concept of Sheds for Life (SFL) in 2016 (McGrath et al., 2021). Sheds for Life is a men's health initiative tailored to the Shed setting in Ireland. Through ongoing consultation with stakeholders, Sheds for Life was developed and refined into a ten-week programme consisting of four core

pillars of a health check, healthy eating, physical activity and mental health along with several option components focusing on life skills and disease prevention (McGrath et al., 2021). A detailed protocol is available which outlines the various components of SFL (McGrath et al., 2021) and the development of this approach will also be further discussed in the context of this research (see results). Prior to the implementation of a structured SFL programme, the IMSA embarked on scoping work at various regional Shed meetings to engage Sheddors to identify their health needs and preferences. The IMSA also began to develop partnerships with provider organisations who were actively seeking to engage HTR groups of men in their health promoting initiatives. This resulted in the piloting of discrete wellbeing workshops in Sheds (McGrath et al., 2021). Initial scoping work which sought to investigate how SFL piloting was experienced in practice determined that respecting the Shed environment was critical to the acceptability of SFL and strategic evaluation of the development of SFL would be required to facilitate effective implementation (Bergin & Richardson, 2020). In June 2018 the current authors commenced the formal evaluation of SFL with a dual focus on both efficacy and implementation.

Findings from research show that in order to engage men, particularly those who are HTR, health promotion must include men in decision making and encourage a collaborative process involving all key stakeholders; researchers, practitioners, participants and policy makers (Bergin & Richardson, 2020; Thorpe & Halkitis, 2016). Community-based participatory research approaches also emphasise the importance of creating partnerships with the people for whom the research is ultimately meant to benefit (Jull et al., 2017). Moreover, SFL scoping work highlighted the importance of strengthening ties with local providers and community organisations, an established strategy when seeking to scale-up programmes nationally, especially under real world conditions (Bauman & Nutbeam, 2014; Bergin & Richardson, 2020). This led to a pragmatic study design using community-based participatory research approaches (CBPR) that were geared towards upholding autonomy and increasing the agency of participants (Bergin & Richardson, 2020). Questions emerged as to the 'what' and the 'how' of SFL that ought to be evaluated,

particularly with regard to reconciling gold standard evaluation methods with the high variability, autonomy and ethos of the Sheds as implementation settings. Moreover, beyond the environment of the Sheds there is also a need to understand the complex intervening variables that act as a backdrop to implementation of SFL (e.g. those at provider, organisational and systems levels; Koorts et al., 2018; Nilsen, 2015). The use of implementation science can be valuable in identifying barriers and facilitators to effectively implementing programmes as well as promoting systematic uptake in real world settings from the outset (Rapport et al., 2018). Indeed, implementation science encompasses many of the principles of CBPR, with both approaches linked to improved knowledge translation. These include the engagement of key stakeholders to understand contextual factors, a focus on capacity building, partnership in the research process, and systems development through a cyclical and iterative process with a view to long-term sustainability, (Israel et al., 2005; Jull et al., 2017; Koorts et al., 2018).

Sheds for Life operates within a complex system of shifting elements such as the diverse and variable contexts of the Sheds and the wider implementation environment, including the competing priorities of provider organisations and systems level funding and policies. As a result, there is a need to continually engage current and emerging stakeholders as well as inform key adaptations and processes that are necessary to implement SFL in multiple locations while executing appropriate implementation strategies to embed SFL in the routine environment of the Shed. Indeed, these dimensions continually evolve over time and require on-going monitoring. Thus, this research was guided by a combination of implementation and evaluation frameworks. While implementation science was used to address implementation issues, there is still a delay when following the traditional route of efficacy-effectiveness-implementation. The speed of moving research findings into routine adoption can be improved by considering hybrid designs that combine elements of effectiveness and implementation research (Curran et al., 2012; Landes et al., 2019). Hybrid designs focus on the dual testing of both effectiveness of the clinical intervention and its implementation. This type of trial design is not dictated by the type of hybrid, meaning that many types of randomised and

non-randomised studies can utilise this approach (Landes et al., 2019). Hybrid type 2 designs are ideal when there is momentum for implementation in terms of system or policy demands (Landes et al., 2019) - particularly relevant in the case of SFL where there have been calls to implement targeted health promotion in the Sheds supported by a rich landscape of men's health research and policy in Ireland (Bergin & Richardson, 2020).

Alongside the need to identify suitable programmes to engage men with health, there is a lack of practical guidance on how to effectively implement and scale-up health interventions (Koorts et al., 2018). In the context of SFL, scale-up is the deliberate effort to increase impact of SFL so as to benefit more Sheddors while fostering more sustainable programme development that may influence policy (Milat et al., 2016). This involves assessing scalability through measuring feasibility, acceptability, costs, sustainability and adaptability (Milat et al., 2020) . The effectiveness-implementation design of this research aimed to engage all key stakeholders in the development, testing, implementation and scale-up of SFL. It aimed to investigate both the process and effectiveness of the SFL intervention with a focus on the key strategies involved in implementation and future scale-up to maximize reach to HTR men within the non-conventional settings of Sheds and the wider implementation environment. A detailed protocol which outlines the effectiveness-implementation design is available (McGrath et al., 2021) as well as work which describes effectiveness outcomes (McGrath et al., 2022c). This study discusses the implementation research of SFL in terms of the process of implementation, identification of barriers, facilitators and strategies that impact on implementation outcomes, guided by established implementation frameworks (Damschroder et al., 2009; Koorts et al., 2018; Proctor et al., 2011). This paper addresses an important gap in the literature by applying an implementation lens to the evaluation of a community-based men's health promotion programme using gender-specific approaches. Findings from this research can play a significant role in determining the implementation effectiveness, sustainability, and potential scale-up of the SFL initiative and, more broadly, in terms of the wider rollout of community-based men's health programmes.

## **2 Methods**

### **2.1 Research Design**

A mixed methods process evaluation was used to guide the implementation of SFL guided by a combination of applicable implementation frameworks (Damschroder et al., 2009; Koorts et al., 2018; Proctor et al., 2011). This consisted of a combination of focus groups, interviews, observations, questionnaires and administrative data (e.g. attendance records). In order to explain or understand implementation outcomes, the perspectives and experiences of a broad representation of stakeholders at the participant, provider, organisation and wider systems level were sought. Purposive sampling was used to identify key stakeholders for interview who could inform implementation outcomes across the multi-level implementation environment. Mixed methods were used to inform implementation outcomes. The PRACTIS (PRACTical planning for Implementation and Scale-up; Koorts, 2018) guide was used as part of an iterative process to characterise parameters of the implementation setting, engage key stakeholders, identify implementation barriers and facilitators, and address potential barriers to implementation within the evolving implementation climate (Koorts et al., 2018). Ongoing consultation with stakeholders was deemed appropriate to the implementation approach as contextual shifts can be unpredictable and assessment of the broader implementation environment required flexibility and iteration (Hamilton et al., 2017). The first author was positioned within the organisation (IMSA) for the duration of the research which informed ongoing monitoring of the implementation approach. Alongside this, semi-structured interviews (n = 19) were conducted at provider, organisational and systems level using interview schedules which were designed based on the Consolidated Framework for Implementation Research (CFIR) constructs (Damschroder et al., 2009) and used to inform a taxonomy of implementation outcomes (Proctor et al., 2011). Implementation monitoring consisted of ongoing engagement with service provider organisations through quarterly stakeholder meetings (n=12). Meetings took place at least twice weekly between the health and wellbeing team responsible for coordinating SFL and the principal researcher from the



period of January 2018 to January 2022. Approximately 50 meetings occurred with individual provider organisations and monthly report meetings took place with funding bodies, alongside quarterly financial reports.

The effectiveness evaluation involved following a cohort of SFL participants (n=421) across n=22 Shed settings for up to 12 months to assess impact of SFL on health and wellbeing outcomes. In terms of the assessment of implementation data, this data collection approach was also used to assess outcomes such as cost (McGrath et al., 2022a) while administrative data was gathered (Shed numbers and attendance rates) to inform penetration. Throughout this time the first author spent approximately 500 hours among participants within the Sheds setting which facilitated direct observation of SFL in practice as well as observation of Sheddors' experiences of SFL. Purposive sampling was also used to conduct focus groups (n = 8) with participating Sheds. This approach sought to gather a diverse representation of Sheddors' experiences of SFL implementation. Informal short interviews (n = 16) were also conducted ad-hoc during Shed visits to further inform Sheddors' experiences of implementation of SFL. This process was guided by CFIR constructs with a view to also informing the effectiveness of implementation strategies.

## 2.2 Selection of implementation frameworks

The implementation and sustainment of an effective, evidence-based program in the real-world setting is complex and therefore multiple frameworks are increasingly being used and recommended in studies to address multiple facets of implementation (Damschroder, 2020; Moullin et al., 2020; Nilsen, 2020). The use of theories, frameworks and models, which are often used interchangeably in implementation science can also cause further complexities for researchers (Damschroder, 2020; Nilsen, 2015). Nilsen (2015) recommends selecting implementation frameworks based on three overarching aims: 1) describing or guiding the process of translating research into practice 2) understanding the determinants that influence implementation outcomes and 3) evaluating the implementation (Nilsen, 2015). As the SFL research aimed to evaluate the implementation of the SFL initiative as well

understand the process and determinants of implementation, frameworks that suitably guided the process and evaluation of the research were selected. These frameworks consisted of a determinant framework to specify constructs that may influence the SFL process and predict implementation outcomes, a process framework to specify steps to execute for implementation phases and an evaluation framework to specify multiple levels of outcomes to assess (McGrath et al., 2021).

The process framework applied to SFL implementation was the PRACTical planning for Implementation and Scale-up guide (PRACTIS) (Koorts et al., 2018). The PRACTIS was used in an iterative process to practically guide the implementation process and evaluation in collaboration with key stakeholders. This framework was selected as it incorporated the use of CBPR and is operational in real world contexts, considering the influence of the wider implementation climate (Koorts et al., 2018). In this study, it was used to promote successful implementation and scale-up of SFL. Sheds for Life implementation was guided by four key steps, and will provide structure to the presentation of research findings, namely; characterising the parameters of the implementation setting; identifying and engaging key stakeholders; identifying implementation barriers and facilitators; and addressing potential barriers to implementation across individual, provider, organisational and systems levels.

The determinant framework used was The Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009). This framework was selected to characterise and understand constructs across five domains (intervention characteristics, outer setting, inner setting, characteristics of the individuals involved, and the process of implementation) which interact in complex ways to influence implementation outcomes. The CFIR was used as a practical guide to systematically assess potential barriers and facilitators during SFL implementation as well as guide methods for data collection.

The evaluation framework applied to SFL was the taxonomy for implementation outcomes (Proctor et al., 2011). This framework was chosen to inform outcomes pertaining to implementation i.e. acceptability, adoption,

appropriateness, feasibility, fidelity, implementations costs, penetration and sustainability. These were assessed in the SFL evaluation using mixed methods to measure implementation effect (See Figure 5). This evaluation framework was selected as the constructs by Proctor et al. (2011) have potential to capture participant and provider attitudes (acceptability), behaviours (penetration, adoption) as well as contextual factors (appropriateness, sustainability and implementation cost) (Proctor et al., 2011). Figure 5 depicts the process of SFL implementation and the application of stages of the PRACTIS with use of the CFIR and taxonomy for implementation outcomes.

Data pertaining to SFL participation (attendance records, self-reported attendance, numbers who participated versus numbers eligible) were triangulated to assess penetration. Cost-effectiveness was determined by comparing the costs (direct and indirect) of SFL to its benefits which were captured as the impact on quality-adjusted life-years (QALYs) derived from the short form-6D algorithm (McGrath et al., 2022a). Qualitative data were triangulated and analysed using a framework-driven approach throughout implementation testing of SFL and refined using a constant comparison process applying the CFIR to identify barriers and facilitators. Focus groups and interviews were transcribed and, as per recommendations by the National Cancer Institute's White Paper on qualitative research in implementation science, a hybrid approach of thematic deductive and inductive analysis was used to identify barriers and facilitators and inform implementation strategies to address barriers and subsequent outcomes (Hamilton & Finley, 2019; Moullin et al., 2020). Initial codes were identified and data were then discussed with stakeholders throughout implementation of SFL in line with CBPR approaches, in order to ensure accuracy and identify strategies to address barriers to effective implementation. Figure 6 captures a stakeholder map of those involved in SFL delivery.

### 2.3 Implementation testing of Sheds for Life

A detailed description of the implementation plan is outlined in the SFL protocol (McGrath et al., 2021). In brief, the first implementation of the

structured 10-week SFL implementation involved n=22 Sheds and n=421 Shedders across four counties in Ireland (two counties in March to May 2019 and two counties in September to December 2019) facilitated by n=12 provider organisations and their subsequent regional deliverers (Figure 6 shows a conceptual map of SFL stakeholders). Participants (n=421) were followed at baseline, 3, 6 and 12 months. These results are described in detail elsewhere and highlight both the efficacy of the SFL initiative in encouraging positive and sustained changes in health and wellbeing outcomes for Shedders (McGrath, Murphy, Egan, & Richardson, 2022), as well as supporting the case for scale-up (Milat et al., 2016). Baseline characteristics of participants also highlight that SFL was effective in engaging a cohort of HTR men (McGrath, Murphy, et al., 2022b). Implementation of SFL proceeded in the four counties outlined but due to the onset of COVID-19 Sheds remained closed for an extended period. Barriers and facilitators to further implementation within the changing implementation landscape were also monitored during this time. This process is described in detail below.

#### 2.4 Scalability assessment of Sheds for Life

Insights into the determinants of implementation detailed below were then used to inform scalability assessment of SFL using the Intervention Scalability Assessment Tool (ISAT; Milat et al., 2020). The ISAT is designed to assist policy makers, practitioners and researchers to determine the scalability of discrete health interventions. The ISAT is scored by a series of readiness questions to assist in identifying strengths and weaknesses across the domains. Domains in part A provide background information on the public health problem, the context within which it is proposed that the intervention will be scaled up, and a description of the intervention. Domains in part B consider implementation and feasibility factors relating to all aspects, including fidelity and adaptations, reach and acceptability, delivery settings and agents, as well as implementation infrastructure and training. Each question is scored from 0–3, where the minimum score for each domain is 0 and the maximum score is 3. In order to derive a final score for the domain, the average score across the questions is taken (if there is more than one question).

### 3 Results

Results presented describe the process of implementation, the identification of implementation determinants (barriers and facilitators) as guided by the CFIR, identification of subsequent strategies to address barriers and how these steps informed implementation outcomes. Qualitative data will be used to support findings. The CFIR refers to barriers and facilitators as implementation determinants, as these determinants often have dual capacity to act as either a barrier or facilitator (Damschroder et al., 2009). Therefore, determinants in the context of this work mean contextual factors with potential to be either barrier or facilitator. The PRACTIS guide is used to structure presentation of results as per the four staged process of implementation (Koorts et al., 2018); Step 1 summarises the process of characterising the implementation setting of SFL; Step 2 summarises the process of identifying and engaging key stakeholders; Step 3; summarises the process of identifying implementation barriers and facilitators which include a detailed summary of those identified and; Step 4; summarises the process of addressing (where possible), barriers to implementation with a detailed description of implementation strategies used to address same. Figure 5 provides a flowchart of the evaluation process which is described in detail below.

#### 3.1: Step 1: Characterisation of the Sheds for Life implementation setting

Early familiarisation with characteristics of the real-world implementation context aids planning and accountability that may enhance implementation efforts (Koorts et al., 2018). Prior to the formal evaluation of SFL, members of the IMSA team consulted with Sheddors at regional Shed ‘Cluster’ meetings in 2017, which determined both an appetite for health and wellbeing in Sheds and signposted towards potential program content:

*‘We started to take the input from what the men told us in terms of different areas, and the different areas that came up were the likes of the health checks, the physical activity, the walking, prostate cancer, mental health, various different topics like that which is what we currently have in SFL..’*

(Organisation stakeholder)

The IMSA then began to identify potential partners that they deemed suitable to deliver various aspects of health and wellbeing in Sheds, some of which

had previously expressed interest in working with Sheds under their individual remits. This allowed ad-hoc piloting of what would later become components of SFL.

*‘That gave us an insight as to what Sheddors actually thought of having someone physically come out to the Shed consistently over a six week basis’*

(Organisation stakeholder)

Previously described scoping work (Bergin & Richardson, 2020) highlighted that a key requirement for service provider organisations to work with Sheds was that they understood the ethos and Shed environment. This led to the development of a ‘Guidance for Effective Engagement with Men’s Sheds’ (GEEMS) manual and workshop, which were designed to promote understanding of the Shed environment and ethos for provider organisations and which remain a key implementation strategy of SFL. This was augmented by ENGAGE training – national men’s health training for service providers seeking to work more effectively with men (Osborne et al., 2016) – which was delivered to service provider organisations seeking to participate in SFL delivery.

*‘There were a lot of organisations out there wanting to work with Sheds but they needed to understand what was the best way to engage with the men’*

(Organisation stakeholder)

Following pilot testing of various SFL components, the IMSA expressed a desire to structure SFL into a suite of programme offerings and the current research team then commenced the formal evaluation of SFL in collaboration with SFL stakeholders which began with characterising the parameters of the implementation setting (Koorts et al., 2018). This commenced with an iterative consultation process with the IMSA and research team exploring intervention design, adoption, delivery, sustainability and potential scalability as well as important multi-level contextual characteristics (Koorts et al., 2018). Consideration was also given to evaluation design in terms of both effectiveness and implementation. This consultation process contributed to describing the Five P’s for effective implementation as outlined by the PRACTIS guide (Koorts et al., 2018). Table 14 outlines the output from characterisation of the implementation setting.

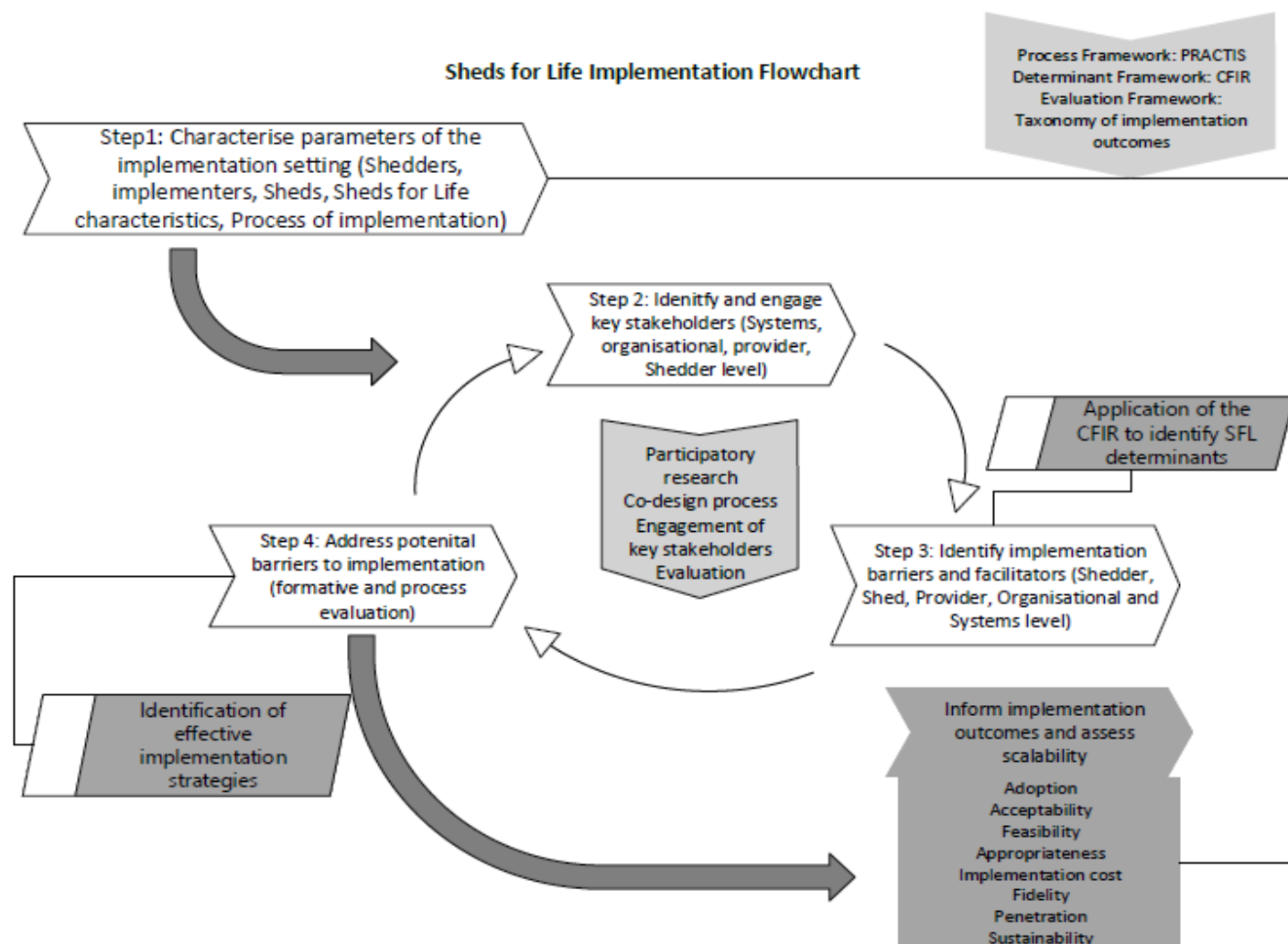
In summary, SFL was designed to build upon the inherent health promoting qualities of Sheds (delivery setting) while using participatory research methods to identify gender-specific strategies that would further enhance the reach of the programme to HTR men (intervention population). The aim of the SFL design was to enhance health and wellbeing outcomes for Shedders while normalising conversations about health for HTR men in Sheds through informal delivery and strength-based approaches (intervention characteristics). There was a strong emphasis in the recruitment phase on increasing the acceptability of SFL through trust and rapport building at Shedder level (intervention context). Evaluation methods were refined during this time to identify ways to monitor implementation for what was a complex multi-level intervention. This involved the previously outlined hybrid type 2 effectiveness-implementation design which also incorporated analysis of cost effectiveness. The implementation process also involved a partnership approach with all key stakeholders (Shedders, providers, IMSA, funders).

**Table 14: 8.1: The five P's for effective implementation of SFL (Koorts et al., 2018)**

The Five P's	Definition	Description
People	The type and number of people that the intervention will reach, and the individuals that will be involved/required for implementation and scale-up	<p>Considering capacity of the IMSA, research team and prospective provider organisations, consultation determined that a feasible approach would be to deliver SFL across four counties on a phased basis (two counties per phase) with the aim of engaging upwards of n=350 Sheddors via a clustered approach of circa n=15 Sheds. The selection of counties was based on seeking a diverse representation of Sheddors and Sheds in terms of size and geographical location (urban/rural). There was an overarching focus on engaging HTR men through a whole Shed approach. Shed support volunteers acted as a conduit on the ground to relay important information about SFL to Sheddors during programme delivery in conjunction with IMSA staff and the principal researcher.</p> <p>Sheds for Life was delivered by allied provider organisations whose ethos and goals aligned with the goals of the IMSA and who were deemed to be able to effectively respond to the needs of Sheddors. This involved organisations who had participated in the GEEMS training and understood and respected the ethos and environment of the Sheds. This process was overseen by the IMSA in collaboration with academic partners.</p>
Place	The setting/organisations that will be involved/required for implementation and scale-up	Sheds for Life consisted of a targeted intervention with the aim of delivery directly in the Shed settings. As Sheds are highly variable in terms of size and resources, alternative venues such as local community centres were sourced for those elements of SFL that could not be delivered in the Shed.
Process	The intervention or implementation process that will occur in practice	<p>Sheds for Life sought to use gender-specific approaches to engage HTR Sheddors with SFL. Recruitment involved an expression of interest process whereby Sheddors retained a degree of autonomy and control by self-selecting into SFL. The principal researcher and health and wellbeing manager of the IMSA visited prospective participating Sheds to discuss the process of the SFL programme and evaluation.</p> <p>Sheds for Life consisted of a ten-week, gender-specific intervention that commenced with a health check, weekly physical activity, healthy eating and mental health workshops, as well as optional components (e.g. suicide prevention, digital literacy, CPR, cancer, oral health and diabetes awareness) that allowed Sheds to tailor SFL to suit their individual needs.</p>
Provisions	The resources that will be necessary to achieve intervention implementation and scale-up	<ul style="list-style-type: none"> <li>• IMSA staff supported SFL recruitment and oversaw implementation (administration etc.).</li> <li>• Service provider organisation staff delivered components of SFL in participating Sheds.</li> <li>• Recruitment materials were used to provide clarity (SFL expression of interest forms for Sheds).</li> <li>• Training workshop and GEEMS manuals were provided for providers of SFL.</li> <li>• SFL Handbook and component resources (leaflets, booklets, signposting etc.) were provided for participants.</li> <li>• Attendance records were given to providers to track attendance and attendance certificates were provided to participants.</li> <li>• Text-based reminder services were used and programme calendars were supplied to participating Sheds.</li> <li>• Researcher gathered data one-to-one with Sheddors and standardised protocols were used to measure outcomes at baseline, 3, 6 and 12 months.</li> <li>• Standardised protocols were also used to gather costs of implementation for economic evaluation.</li> <li>• Funding was provided by the Health Service Executive section 39 funding. Funding was also provided through individual grants and budgets of provider organisations with a view to securing alternative funding streams. The Irish Research Council's employment-based postgraduate scholarship funded the principal researcher's employment within the IMSA.</li> </ul>



Principles	<p>The underlying principles of the intervention (e.g. individual behaviour change) and implementation process (e.g. building capacity for implementation) that will be used to scale-up in practice</p> <p><b>Intervention:</b> Capitalising on the safe, familiar environment and social support within Sheds, gender-specific implementation strategies were used to engage 'HTR' men with health and wellbeing. Using a co-design process, self-efficacy was enhanced through normalising conversations about health and wellbeing in the Shed environment. Targeted outcomes included subjective wellbeing, diet, physical activity, mental health, social capital and help seeking.</p> <p><b>Implementation:</b> Building on existing structures within Sheds, strengths-based approaches were used to maximise Sheddors' involvement in the design and subsequent adaptations of SFL as it evolves. There was also an explicit focus on strengthening existing partnerships and identifying new partners who could potentially respond to evolving needs of Sheddors. Identifying new funding opportunities to support SFL implementation was also a key target.</p>
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**Figure 5: 2.1 Sheds for Life implementation flowchart**

*CFIR*= Consolidated Framework for Implementation Research *SFL*= Sheds for Life *PRACTIS*= Practical planning for Implementation and Scale-up guide *Sheds*= Men's Sheds *Shedders*= Men's Shed members

### 3.2 Step 2: Identification and engagement of Sheds for Life key Stakeholders

The PRACTIS guide highlights the importance of participatory research to facilitate implementation and sustainability of complex community-based interventions (Koorts et al., 2018). From the outset of the formal evaluation of SFL there was strong emphasis placed on identifying those aspects of the partnership between the multiple stakeholders that impacted most on SFL implementation and that would facilitate scale-up of the programme. The IMSA also recognised the need for this stakeholder engagement as it was a critical success factor to ensure effective implementation of SFL:

*‘Any partnership has three main columns...it starts with the men primarily, then its IMSA, then it’s the partner organisation and the three have to work in tandem otherwise it doesn’t flow’*

(Organisation stakeholder)

The structured format of SFL was designed to engage key stakeholders from the outset. At a top-down systems and national men’s health policy level (Department of Health and Children, 2008; Health Service Executive, 2017), the need for community-based men’s health programmes such as SFL was clearly mandated. These priorities also aligned with the National Health Service Executive’s (HSE) priority programmes. Thus, core components of SFL aligned with the key pillars of the Healthy Ireland Framework including healthy eating, physical activity and mental health (Health Service Executive, 2017). This was a key facilitator of stakeholder engagement at systems (HSE) level and helped leverage funding to support core staff at the IMSA to oversee delivery of SFL:

*‘Over the last couple of years we have funded the health and wellbeing initiatives in Sheds and Sheds for Life is a realisation of that, the realisation of an actual programme of work. Not just giving information but engaging with men’*

(HSE stakeholder)

The SFL advisory group was consulted quarterly and brought considerable experience in men’s health policy, practice and community development work to help guide and shape the evaluation and implementation of SFL. This

further guided the actions of what would be structured as the SFL stakeholder group.

At the organisational level the first author was positioned within the IMSA for the duration of the research and worked closely with the health and wellbeing manager to promote effective implementation and co-production of SFL in line with evidence on men's health practice, while also ensuring that the implementation strategy aligned with existing practices and infrastructure.

Acknowledging how critical provider organisations (POs) were to the delivery of SFL, the IMSA spent time building relationships with multiple POs prior to the formal evaluation (see Figure 6). The implementation process focused on strengthening these partnerships through the formation of a structured stakeholder group. Provider organisations were consulted throughout the implementation process about implementation strategies, assessment of the implementation environment and they participated in the evaluation process to promote pragmatic and context-driven research. New providers were invited to join the SFL team in response to identified Shedder needs prior to implementation of SFL. In the absence of large-scale funding for SFL, priority was placed on identifying partners that understood the need for SFL. These providers were sought with a view to adopting a sustainable delivery model under real-world conditions where providers could undertake delivery as part of their routine work plans - as opposed to seeking short-term (and often unsustainable) grant funding to get SFL established. This meant that a prudent approach was needed in matching Sheds' needs with SFL offerings. The participatory approach with providers was therefore critical to sustained engagement:

*'I suppose one of the strengths of SFL is the fact that the partner organisations invested their time and their resources in SFL without actually getting any financial return on it'*

(Organisation Stakeholder)

While there were no financial incentives, stakeholders had an active role in the development of evaluation tools (questionnaires) to encourage adoption where evaluation of each POs component of SFL was a key engagement strategy:

*'The evaluation, I think it's an important one and I think that's going to be important for us, I think from a research perspective as well to be involved in that'*

(SFL Provider)

Moreover the priorities of POs aligned with those of the IMSA and SFL in reaching HTR men which is a noted challenge in community-based work, and thus SFL provided opportunities to connect and foster long-term buy-in and support:

*'I got involved with the Men's Sheds because over 80% of our participants are women. So, we weren't reaching men, we weren't reaching that cohort, so we identified a male group within the Sheds Association to do that.'*

(SFL provider)

Shedders were viewed as key stakeholders throughout the evaluation process of SFL as both hosts of SFL in the Sheds setting and intervention users. While SFL had a top-down policy directive, it mostly evolved as a bottom-up initiative to address a particular need within Sheds. Considerable time was spent in the Sheds as outlined in the methods to capture Shedders' experiences of SFL in practice as well as to co-design the structure and delivery of SFL. Sheds for Life was promoted as a programme *'For Shedders by Shedders'* with Shedders having a crucial role in the identification of barriers and facilitators at Shed level. This engagement and co-design process were critical to acceptability and appropriateness of SFL implementation (these strategies will be further described in subsequent sections; See Table 16) :

*"There was a genuine openness from you to hear 'well what was your experience?' and 'how did it go?'"*

(SFL participant)

Table 13 provides details on the structure of SFL with a further detailed breakdown available in the SFL protocol (McGrath et al., 2021). Findings from scoping work (Bergin & Richardson, 2020) in consultation with key stakeholders guided the decision to structure SFL as 10-week programme. This format was viewed acceptable by POs and the IMSA as it was long enough in duration in terms of the practicalities of delivery and encouraging positive and sustained behaviour change. Crucially, from Shedders' perspective, it also respected the fluid nature of Sheds in which a longer programme might conflict with Shed routine. Moreover, this structure was

pragmatic enough to consider whether SFL was feasible in the real-world, capricious Shed environment while prioritising future sustainability within existing funding structures. This structure and format were also informed by what worked in other programmes in Ireland with similar cohorts of men within community settings (Kelly et al., 2019a). In terms of its design, the flexibility of SFL such as the optional components provided Sheddors with an opportunity to tailor SFL to suit their needs while also instilling a sense of autonomy and control:

*"I liked the fact that it was modular and that you consulted people about their particular interest beforehand"*

(SFL participant)

In summary, SFL emerged from an invested process of engagement, consultation, relationship building and pilot testing. These efforts seeded partnership networks that understood the processes and recognised the value in engaging men with health. This was an important consideration at a time when Sheds had been earmarked as settings that facilitated access to HTR men and where expectations placed on Sheds to expand into formal healthcare delivery may have caused tensions within Sheds (Bergin & Richardson, 2020). While it was recognised that the implementation evaluation would lead to refinement of SFL, meaning its structure could ultimately evolve, it was understood that this process of delivery and vested partnerships were the crux of its sustainability:

*'The partners add a different dimension to it [SFL] because we can't be experts in all aspects of men's health. We were able to use their expertise, use our own expertise and understanding of what works with Men's Sheds to package SFL in such a way that it got the men's interest and kept them engaged across the programme as well.'*

(Organisation stakeholder)



**Figure 6: 2.2 Sheds for Life stakeholder map at systems, organisation, provider and Shed level**

*IMSA= Irish Men's Sheds Association, SFL= Sheds for Life, HSE= Health Service Executive & Sláintecare (Funding SFL), Pobal (administration and management of Sláintecare SFL funding), IHF= Irish Heart Foundation (health check and CPR provider) ICS=Irish Cancer Society & MKF= Marie Keating Foundation (cancer awareness component), NOSP= National Office of Suicide Prevention (safeTALK component), DHF= Dental Health Foundation (oral health components) GIW=Get Ireland Walking & Siel Bleu (physical activity provider), HFME= Healthy Food Made Easy (HSE; healthy eating and cooking component), Age Action (digital literacy component), MHI=Mental Health Ireland (mental health component), Other (providers who may deliver new SFL content)*

### 3.3: Step 3: Identification of implementation determinants (barriers and facilitators)

The purpose of identifying contextual barriers and facilitators to SFL implementation was to enhance implementation effectiveness through integration of research findings into practice (Koorts et al., 2018). Barriers and facilitators were identified throughout SFL implementation via the multiple data collection techniques outlined at Shedder, Shed, PO, organisation and systems level. The CFIR was used as a guide to group determinants at each level of implementation- some of which influenced all ecological levels. Table 15 describes the determinants to SFL implementation as guided by the CFIR with adaptations that were also context-specific. Figure 7 also conceptualises the most prominent determinants in an ecological model of SFL implementation



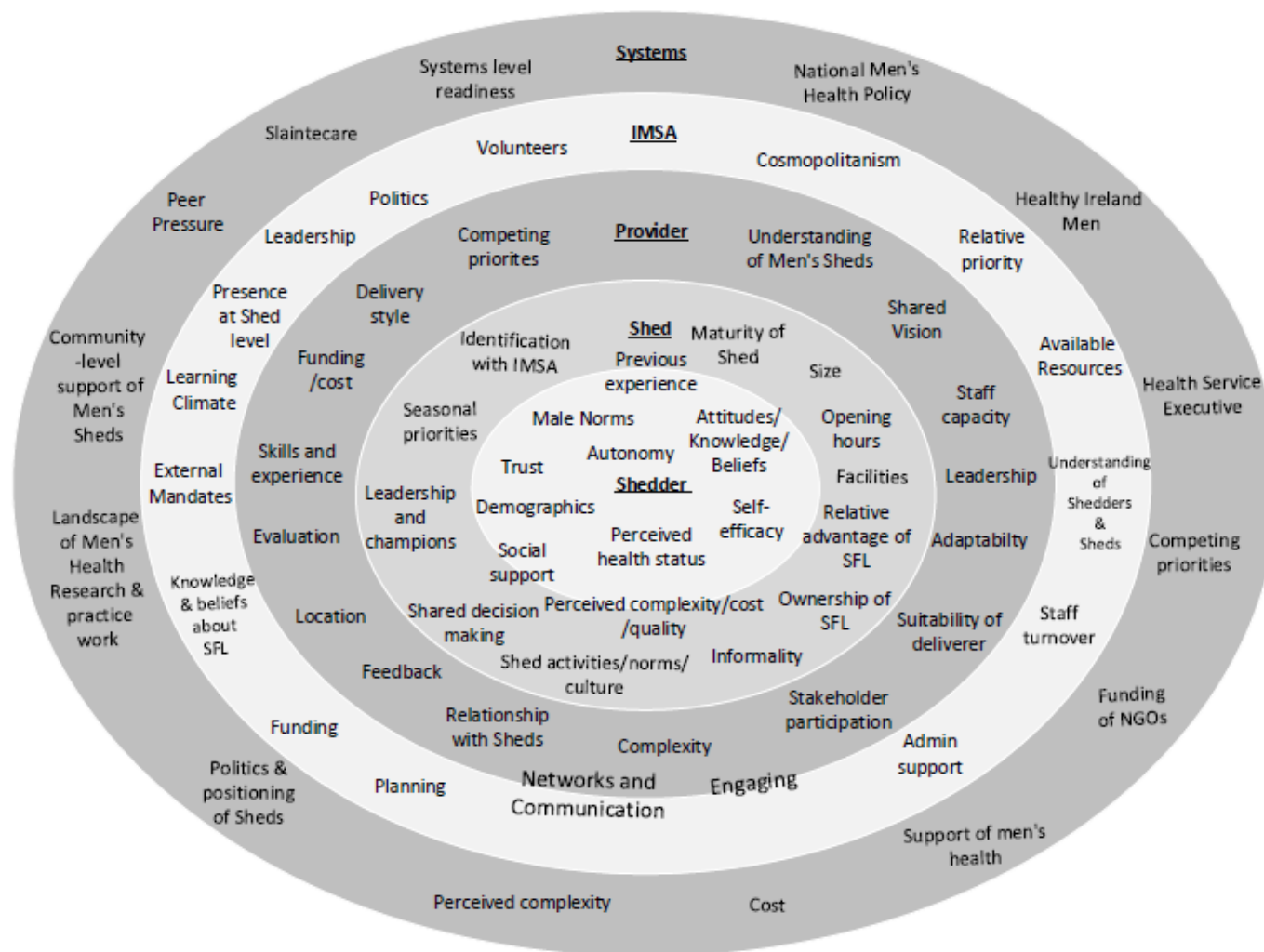


Figure 7: 8.3: An adapted ecological model of SFL implementation (Koorts et al., 2018)

**Table 15: 8.2: Determinants of SFL implementation across individual provider, organisational and systems level as per CFIR (Damschroder et al., 2009)**

Identified determinants	Description
<b>Shedder (User) &amp; Shed (Inner Setting) level</b>	
Personal attributes (Male norms)	Shedders' perceptions of how acceptable it is for men to discuss or engage with health issues.
Perceived health status	Shedders who overestimate their health status may underestimate their perceived need of SFL (McGrath, Murphy, et al., 2022b).
Demographic of Shedders	The likelihood of HTR men engaging with SFL/the diversity of backgrounds as a facilitator to engaging HTR Shedders.
Knowledge and beliefs about the intervention	Shedders' attitudes toward, and value placed on SFL, as well as familiarity with facts, truths and principles related to SFL.
Previous experience	Shedders past experiences of 'health' programmes as an influencing factor to engagement with SFL/Sheds past experiences of external providers delivering health components in Sheds.
Autonomy	The importance Shedders place on maintaining a sense of autonomy and control/ Implementing SFL while respecting Shedder autonomy – no compulsion to undertake an activity.
Trust	The need for Shedders to become familiar with and trust POs prior to engagement.
Self-efficacy	Shedders' belief in their own capability to participate in SFL.
Perceived complexity/cost/quality	Shedders' perception of the difficulty and intricacy of participating in SFL as well as perceived cost. Sheds' perception of the cost of the time commitment and potential disruptiveness of SFL to Shed routine. Sheds' perception of how well SFL is presented and subsequent belief it will lead to desired outcomes.
Relative advantage of SFL	Shedders' perception of the advantage of participating in SFL versus no intervention.
Social support	Shedders' sense of motivation and safety participating with fellow Shedders. Level of social support in Sheds to encourage sustained engagement (peer mentoring and peer support).
Shared decision making	Whether a Shed decides to participate in SFL or not based on group consensus or select individual(s).
Leadership (opinion leaders) and champions	Shedders who have formal or informal influence on the attitudes and beliefs of other Shedders with respect to SFL. Perceptions that leaders in Sheds who act as point of contact have about SFL and their choice to filter messages about SFL to Shedders.

	Shedders who dedicate themselves to overcoming resistance or indifference that SFL may provoke in Sheds.
Identification with the organisation	How Shedders perceive the organisation (trust versus mistrust) and their relationship and degree of commitment to the IMSA.
Intervention source – Ownership of SFL	Shedders' identification of SFL as being developed by Shedders or externally developed.
Compatibility - Shed activities, norms and culture	The compatibility of norms, culture and nature of activities and work systems in different Sheds with SFL (e.g. workshop vs social focus).
Compatibility - Seasonal priorities	Shed activities increase during certain periods of the year (e.g. Christmas, summer) which may impact acceptability of SFL.
Compatibility – Informality of Sheds	The degree of tangible fit between SFL and the informal nature of Sheds where informality is important to ethos while attendance and participation is sporadic.
Structural characteristics - maturity, size, opening hours, and facilities	The maturity of Sheds as an influencing factor in recognising the value of SFL (e.g. older vs newer Sheds). The physical size of the Shed and number of Shed members to accommodate SFL. The sporadic opening hours of Sheds and ability to schedule SFL activities. The facilities of Sheds to accommodate SFL (e.g. running water, kitchen facilities).
<b>Provider level</b>	
Shared vision	Provider organisations who have a desire or mandated remit to engage men in their health endeavours.
Relative advantage – evaluation	The POs perception of the advantage of their component of SFL being externally evaluated.
Compatibility – competing priorities	The degree of fit of SFL within the PO among other priorities.
Complexity	POs perception of the difficulty of implementation and the intricacy and number of steps to implement (e.g. identifying deliverers, coordination across locations).
Shedder needs and resources – understanding of Men's Sheds	The extent to which Shedders' needs as well as barriers and facilitators to meet those needs are accurately known and prioritised. The extent to which the ethos and environment of Sheds is accurately known and respected during delivery.
Shedder needs and resources – delivery style	How providers deliver their component of SFL (informal vs formal ; facilitative vs didactic style).
Shedder needs and resources – relationship with Sheds	Amount of time invested by providers to build relationships with Shedders.
Patient needs and resources – suitability of deliverer	How the programme deliverer is perceived by Shedders in terms of age, gender, experience.
Self-efficacy - skills and experience	Deliverers' beliefs in their own capabilities to execute courses of action to deliver SFL component effectively.
Available resources – staff capacity	The capacity and number of staff available to deliver SFL components.
Available resources - location	The capacity to deliver SFL components in multiple locations and regions.

Available resources- funding/cost	The level of funding available for POs to dedicate to on-going delivery. The perceived cost and return on investment of SFL for organisations.
Opinion Leaders – Leadership	Individuals within the PO who have a formal or informal influence on the attitudes and beliefs of their colleagues with respect to implementing SFL.
Networks and communication	The nature and quality of formal and informal communication with the PO, organisation, deliverers of SFL.
Engaging	The POs capacity to involve appropriate individuals in the implementation of SFL through education and training.
Adaptability	The degree to which the PO can adapt, tailor, refine or reinvent the SFL component to suit Shedder & Shed needs.
Access to knowledge & information - feedback	Iterative feedback from the evaluation of SFL for POs to incorporate into work tasks.
Cosmopolitanism – Stakeholder participation	Opportunity for POs to have ownership of SFL while networked with other external organisations.
<b>Organisational level</b>	
External mandates & funding	Men's health policy which recommends delivery of tailored men's health programmes. Pressure by external mandates to implement SFL within a specific timeframe. Amount of systems level funding received to implement SFL.
Available resources (admin support, money, time, staff)	The capacity of the organisation to dedicate resources for ongoing SFL implementation. The capacity and number of staff within the organisation to implement SFL effectively. The capacity of the organisation to dedicate required admin support to coordinate SFL. Staff turnover within the organisation.
Understanding of Sheddors and Sheds	The extent to which Shedder needs as well as facilitators and barriers to meet those needs are accurately known and prioritised by the organisation (e.g. new staff).
Knowledge and beliefs about SFL	Attitudes toward, and value placed on SFL as well as familiarity with facts and principles related to SFL – particularly new staff.
Relative priority	Perception of the importance of implementation of SFL within the organisation among competing priorities.
Learning climate	Transparent communication where team members feel they are essential, valued and knowledgeable partners.
Organisational incentives and rewards	The capacity of the organisation to retain staff and key implementers of SFL through incentives (promotions, salary).
Leadership	Key implementers in the organisation who understand the principles of SFL, recognise its value and positioning within the wider system and can advocate for needs at Shedder level.

	The role of the Shed support volunteers in encouraging engagement with SFL and acting a conduit between the organisation and Sheds.
Networks and communication (Politics & presence)	The nature and quality of social networks and quality of formal and informal communication with the organisation and between the organisation and Sheds. Capacity of the organisation to have a ground-level presence with Sheds to foster positive perceptions of the organisation.
Cosmopolitanism	The degree to which the organisation is networked with and maintains relationships with other stakeholder organisations.
Engaging	Capacity of the organisation to attract and involve appropriate stakeholders in the implementation of SFL through combined strategies (social marketing, training) and maintain momentum for implementation. Capacity of the organisation to involve Sheddors in the use of SFL through combined strategies (education, gender-specific approaches, role modelling).
<b>Systems level</b>	
Systems level readiness	The impact of the COVID-19 on readiness to implement SFL due to the complexity of disruption at all levels of the implementation environment.
Evidence strength and quality	Rich landscape of men's health research and practice work supporting the belief the SFL will have desired outcomes. Dedicated men's health training (ENGAGE) to build PO capacity.
National men's health policy	Ireland's national men's health policy championing men's health practice – encouraging buy-in.
Healthy Ireland Men	Strategic framework for men's health under the implementation of Healthy Ireland – national framework for population health.
Support of men's health	Systems level understanding of the need for gender-specific men's health approaches and the positioning of men and masculinities.
Competing priorities	Ability to secure support for SFL amongst competing priority areas.
Community-level support of Men's Sheds	Attitudes towards , recognition and value placed on Sheds in communities.
Politics and positioning of Sheds	The tangible fit of Sheds within the remit of different government departments and how they align with government priorities.
Perceived complexity	Perceived difficulty by decision makers of the difficulty of implementing SFL considering the intricacy of multiple stakeholders and variables.
Cost	The perceived cost of implementing SFL compared to other interventions as a funding determinant.
Health Service Executive	The capacity of the HSE structures to support sustainability of SFL.

Slaintecare	Ten-year programme to transform health and social care services – shift of services to community setting & capacity to support SFL.
Funding of NGOs	Level of adequate and stable funding available for NGOs providing important public services.
Peer pressure	Pressure for other organisations at local or regional level to implement health and wellbeing in Sheds in silo which may detract from SFL.

### 3.3.1 Determinants at Shedder and Shed level

Table 15 provides a description of the implementation determinants at Shed and Shedder level. Table 16 outlines implementation outcomes, their influencing determinants as well as strategies to address barriers towards implementation at Shed and Shedder level. Alongside the scoping work (Bergin & Richardson, 2020) which highlighted the importance of respecting the Shed environment as a core determinant to Shedders' acceptability of SFL, SFL was built upon an evidence base of men's health research and practice work that employed gender-specific strategies to engage men with health while utilising the Shed as a foundation for SFL (Department of Health and Children, 2008; Kelly et al., 2019a; Osborne et al., 2016; Sharp et al., 2018; Wyke et al., 2015). This helped to engage HTR Shedders in a familiar and safe way and to overcome barriers at the individual level such as previous adverse experiences with engaging in health and Shedders perceptions of socially acceptable ways that men should behave in relation to discussing and engaging with health issues:

*"Women talk about their health, they talk about their feelings whereas fellas, you're a man! You don't talk about it."*

(SFL participant)

The recruitment phase of SFL was a critical facilitator to implementation as this period allowed trust and relationship building which was key to acceptability and adoption of SFL by Shedders:

*"We had sort of a trust and faith in the programme because it wasn't just a fob"*

(SFL participant)

The time spent in the Sheds by the researcher and health and wellbeing team was also critical at this point in terms of identifying the local contextual factors and structural characteristics within Sheds that needed to be considered in molding SFL to suit individual Sheds. This also facilitated an understanding of the intricacies of the different operational systems of individual Sheds which determined that SFL should be seasonal (autumn & spring) and that SFL

would not be appropriate to Sheds currently engaged in demanding project work. This was an important finding in terms of respecting the environments of Sheds and generating positive perceptions of SFL among Sheddors rather than it being seen as an innovation foisted upon them. Moreover, this was a critical time to identify formal and informal opinion leaders in Sheds that would facilitate buy-in, to ensure whole Sheds received adequate communication about SFL and to dispel misconceptions about SFL. The relationships within Sheds were also key determinants to implementation of SFL. In particular the social support and informal peer mentoring among Sheddors was key to supporting and engaging more HTR Sheddors. Moreover, Sheddors recognised the value of SFL in enriching the social support within Sheds by bringing Sheddors together:

*“It became more of a social aspect than we had had and I think bonds might have been strengthened a bit because of the course and I think it was good for the Shed”*

(SFL participant)

The co-design process, targeted (delivered directly in Sheds) delivery and modular format of SFL instilled a sense ownership, autonomy and control over SFL within Sheds which was key to acceptability and adoption. Sheddors recognised the value of SFL being implemented directly in Sheds which was key for engagement of HTR Sheddors:

*“Sheds for life worked because it came to us. We wouldn’t be as forthcoming as to go to it. That’s men for you.”*

(SFL participant)

Overall at Shed and Shedder level, the implementation of SFL demonstrated feasibility and impact in terms of positive and sustained health and wellbeing outcomes among participants as outlined in a SFL outcomes paper (McGrath, Murphy, Egan, & Richardson, 2022). Moreover, SFL successfully transferred across Shed settings demonstrating its transferability and feasibility for scale-up in this regard. In terms of penetration the design of SFL demonstrated that it was capable of reaching the target cohort of HTR men within Sheds. Penetration has been highlighted elsewhere (McGrath et al., 2022b) but was assessed via administrative data and attendance records. This determined that of the n=565 Sheddors eligible to participate in SFL, n=421 enrolled, a reach rate of 75%. The adoption of SFL at Shedder level was facilitated by the



gender-specific strategies and co-design process where Sheddars worked in partnership with the researcher and IMSA team to identify best practice at Shed level:

*“I think that what it is here [SFL] is whatever we are going to do we are going to do it together and I think it’s the sense of togetherness”*

(SFL participant)

The informal delivery approach was a key facilitator to sustained engagement of Sheddars. Overall the approach was appropriate to the Shed environments, which are highly variable informal settings, and implementation requires careful consideration of the multiple determinants outlined. It is also important to note that these variables do not remain fixed and evolve with Shedder needs. Therefore, in order for further implementation of SFL to remain impactful and appropriate to the Shed setting, the determinants and strategies outlined are critical to its sustained success most notably investment in relationships and partnerships with Sheddars.

### *3.3.2 Determinants at Provider level*

Partnerships are key to the successful implementation of SFL in terms of both delivery of SFL content but also in terms of championing the wider SFL movement and providing valuable insights to address facilitators of and barriers to SFL within the stakeholder engagement process. Fostering partnerships with those who shared the vision and recognised the relative advantage in accessing a group of HTR men in their health promotion endeavours was key to acceptability and initial adoption of SFL at PO level. Moreover, the administrative assistance by the IMSA in terms of coordination and delivery of SFL limited complexity for POs thus enhancing acceptability. The stakeholder engagement instilled a sense of ownership among POs of SFL and, alongside the enjoyment and sense of reward offered from working in Sheds, adoption of SFL remained high for POs throughout implementation of SFL, which is demonstrated by their continued and sustained engagement:

*“You’re going into a formed group. They’ve already gelled and are ready, and primed for information and once it’s facilitated well - it’s just a pleasure to deal with that group you know, knowing that they’re at risk and the messages that we want to give.”*

(SFL deliverer)

The stakeholder engagement, real-time feedback and discussion facilitated by the research team and the IMSA was a key strategy to overcoming barriers in relation to fidelity and adaptations needed to strengthen delivery such as ensuring an informal delivery style, suitable deliverers for Sheds and encouraging relationship building among POs and Sheddors. Indeed, the informal nature of Sheds can present challenges to implementation (e.g. sporadic attendance) and was a key discussion point throughout stakeholder meetings. However SFL was refined to be delivered in an informal, interactive and relaxed way with a conversational tone. Through iterative feedback POs of SFL were encouraged to spend time building rapport and trust with participants prior to delivery of SFL components. Informal delivery respects the ethos of the Sheds and facilitates comfort and active participation. Moreover, trust facilitates a sense of safety and a positive dynamic where participants can be open and honest. This was also an important facilitator in promoting understanding of Sheddors and Sheds for all stakeholders alongside the capacity building focus of the GEEMS and ENGAGE training.

Feasibility and cost for the POs must be viewed in the context of continually shifting variables within the wider implementation climate. For instance, while adoption and POs' commitment to SFL remain high, these organisations are predominately NGOs meaning that sustained funding can be precarious. Therefore, commitment is largely contingent on determinants such as staff capacity and funding as well as key implementers and leaders within the individual POs who maintain support and momentum for SFL. This must also be considered in terms of the capacity of POs for scale-up of SFL. While POs may be committed to scaling up, funding structures are needed to support this:

*"These [POs and organisation collaborations] were mutually beneficial partnerships....these provider organisations had long terms goal of working with Sheds. I think that's become very apparent over the last couple of years the POs with us are with us from the very beginning."*

(Organisation stakeholder)

*"Its [scale-up] funding dependent. I mean we got involved obviously with Sheds for Life as did everybody because we saw the benefit and hoped that there would be future funding for it. But unless there is - I mean we couldn't continue to deliver. There is a lot of Sheds... finding out and we want to deliver but need some donation or funds to the charity to cover our time and costs"*

(PO stakeholder)

These determinants therefore require ongoing monitoring through continued engagement with the POs. Furthermore, in relation to appropriateness, although currently structured as a 10-week intervention with both core and optional components, SFL was designed as a flexible, dynamic programme, subject to ongoing adaptation to meet evolving needs. This means that the SFL implementation strategy also needs to remain flexible to accommodate new POs over time in response to new or evolving requirements and preferences from Shedders. Thus, the structure and partnership network of SFL will inevitably evolve and grow over time. Whilst this presents certain challenges, it can also be seen as a strength of SFL, not least in terms of its potential to remain fresh and contemporary, but also its embedment in real-world conditions where determinants are understood and can be managed. It is heavily invested in a partnership network that recognises the value of SFL and respects the ethos of Sheds.

### *3.3.3 Determinants at organisational level*

At the organisational level, there was general acceptability of the SFL initiative as the IMSA had an existing men's health remit which was supported by external funding of the National Health Service (HSE) and mandated by men's health policy (Department of Health and Children, 2008). While SFL took on significant momentum, this presented challenges for the organisation in terms of the capacity of its small team of staff to manage the significant level of administration work required and the complexity of multiple stakeholders at Shedder, Shed, PO and systems level:

*'There was so many different multiple partners and components that it was six day a week job, sometimes more'*

(Organisation stakeholder)

This also meant that there was pressure on the organisation to fulfil other competing priorities and to secure funding to support general operations and work systems. This brought potential to conflict with the ethos of SFL and Sheds themselves and meant that leadership by SFL implementers was critical to ensure implementation effectiveness of SFL. Advocacy was required

in terms of highlighting the importance of the foundational work required to implement SFL, ensuring that Shedd's needs remained prioritised and the Shed environment respected. This also meant careful selection of POs (as opposed to seeking partnerships or funding from organisations that didn't have consistent ideals):

*'Constantly having to try and fight that battle that they recognise health and wellbeing being is the anchor of all things Men's Sheds. Highlighting that having a presence on the ground with them is so important and that we shouldn't be removed from that in the organisation. And even when we are looking at corporate sponsors because the physical and mental health is such a key aspect of the Sheds, we really need to be careful who we work with and the messages they are out there giving about that as well. You know we could take money from various different provider organisations but are they right fit? Have the right ethos for the Sheds? It is really important to know.'*

(Organisation stakeholder)

Capacity was therefore a core determinant of SFL feasibility and scale-up both in terms of coordination and planning of SFL as well as maintaining important networks and communication at multiple levels, particularly at ground level with Sheds. The implementation of the first phase of SFL at organisational level was largely the responsibility of the health and wellbeing manager and researcher until further funding was secured for a health administration role:

*"Notwithstanding the sheer volume of work with the Sheds...the back and forth with the provider organisations who then have to work with their own individual tutors around their timetables, providing Sheds for Life stakeholder meetings as well. Organizing funding and payments for the different provider organisations and putting out MOUs and contracts with the provider organisations. It's all, all very admin intense. It certainly makes it easier now there is a fulltime administrator there to support it."*

(Organisation stakeholder)

While it was important at this time for key implementers within the host organisation to gain insights into the implementation of SFL across multiple levels, sustaining this momentum with limited capacity could ultimately be a barrier to the sustainability of SFL. For instance, the capacity demands required at ground level meant little attention could be awarded for advocacy at a systems level:

*"In terms of managing the development of it and the implementation meant, you know, with small staff numbers that the both of us had to get involved in a lot of on the ground stuff in terms of implementation. That's been fantastic in one sense in that it's been really able to inform and direct us in how SFL should be going and*

*constantly evolving. At the same time there is still that advocacy piece that is still needed to place health on the systems agenda in Men's Sheds that sometimes had to kind of get pushed to the side because there was so much hands on stuff."*

(Organisation stakeholder)

Moreover, the researcher's contribution to implementation efforts ended once the evaluation was complete. Alongside this, staff turnover is an inevitable feature of NGOs because of more limited prospects of promotion, job security and salary increments. This meant that there was limited capacity to retain staff who understood the intricacies of SFL, as well as a loss of leadership at organisational level which was also a consequence of contextual shifts due to the COVID-19 pandemic. Therefore, persistent barriers to sustainability and subsequent scale-up of SFL at organisational level are leadership and staff resources:

*"I think the fact that the programme has grown significantly the whole SFL umbrella over the last four years and it was very clear from the beginning there would need to be more staff in order to upscale it and further develop it. So trying to make the case that, that you can't run a national programme with one person was something that was challenging"*

(Organisation stakeholder)

Nevertheless, the evaluation of SFL which demonstrated that the programme is cost effective (McGrath et al., 2022a), reaches HTR groups (McGrath et al., 2022b) and provides important benefits in terms of health and wellbeing for Shedders (McGrath et al., 2022c), meant that it was possible to leverage financial support for SFL at a systems level. This meant that the Irish Men's Sheds Association was awarded ongoing funding for delivery costs of SFL under 'Sláintecare'- a framework for health service reform in Ireland which focuses on preventative strategies within the community setting (Government of Ireland, 2021) which was integrated into a sustainable funding model under the public health framework, Healthy Ireland (Health Service Executive, 2017). While this funding increases the sustainability of SFL, in terms of scalability, the organisation will likely need further funding support to increase capacity of staff to oversee delivery of SFL in multiple locations. While there are capacity issues that may impact scalability of SFL, the initiative has demonstrated it is an effective, transferable model that is scalable with the right leadership and support at organisational level:

*“The biggest threat, the main thing is the finances. The demand is there in the Sheds. There is enough interest from the provider organisations. The provider organisations can match out demand for delivery as long as we can give some financial contribution to it.”*

(Organisation stakeholder)

As with all NGOs, there was significant disruption to the organisation during the COVID-19 pandemic (Tierney & Boodoosingh, 2020). Alongside staff turnover mentioned above, this impact was felt across multiple levels in terms of Shed closures and the direct impact on Shedders (McGrath et al., 2020), funding disruptions and pressure to fulfil previous mandates agreed pre-pandemic. This ultimately rendered it unfeasible to deliver SFL throughout the pandemic due to multiple contextual factors beyond safety concerns, such as Shed readiness and capacity of POs to deliver. However with the arrival of a sustainable funding stream and the evidence to support the efficacy of SFL with envisioned adaptations and leadership – the demand for SFL is likely to be high at Shedder level. While POs remain committed to SFL it will be important for the organisation to continue its engagement of key stakeholders involved in SFL delivery to regain momentum and renew vigor that may have been lost during COVID-19 as well as establish new relationships required to respond to Shedders’ needs post-pandemic, where the pandemic may have elevated wellbeing as a priority:

*“I think that people have this opinion that “Oh wellbeing is something nice and fluffy there” but the reality is that wellbeing is the difference between us being able to get up in the morning and not so it shouldn’t be seen as a nice fluffy add on. It is something that should really be prioritised...being able to offer something like this to the men is being able to keep them well enough to continue to attend and return to their Sheds.”*

(Organisation stakeholder)

#### 3.3.4 Determinants at systems level

Operations at systems level have an important influence on the sustainability and scalability of SFL. Local communities are supportive of Sheds which is an important facilitator to implementation of SFL in terms of accessing resources at community level. While Sheds are viewed as important spaces at local level and recognised as an effective way of reaching men, there are issues with

local services seeking to implement health initiatives in Sheds while operating in silo from the national organisation. This could be a potential barrier to the wider acceptability of SFL if it becomes associated at Shed level with other initiatives that did not give the same level of due consideration to the need to adopt gendered approaches to programme delivery, relationship building, and respecting the ethos of Sheds:

*“I suppose one of the other concerns I have is that there's other agents of the state, either in the health service or otherwise, doing work in Men's Sheds and developing their own programmes, trying to get funding for them”*

(HSE stakeholder)

The funding of NGOs is also an important systems level determinant of sustainability of SFL. While NGOs are important contributors to preventative services, funding is a prevailing issue which has a significant impact in their capacity to deliver as well as recruit and retain important staff members that are often overworked and under rewarded (Asogwa et al., 2022). This was amplified during the COVID-19 pandemic and is an important variable in the implementation of SFL in terms of both the overseeing body and the POs capacity to deliver.

The strength and quality of evidence gathered was a key determinant of acceptability and adoption of SFL at a systems level. Policy, research and practice work also supported the need for men's health initiatives at community level (Department of Health and Children, 2008) which were further incorporated into strategic frameworks at policy level (Health Service Executive, 2017). Furthermore, as previously highlighted, the evidence from the SFL evaluation helped in securing funding under Slaintecare – (Government of Ireland, 2021). This was fortuitous for SFL as the programme fit the remit of Slaintecare reform and also the new ‘Healthy Communities’ health service structures which focus on addressing health inequalities through a geographical (area-based) population profiling and segmentation approach (Government of Ireland, 2021). This approach has the potential to place SFL on a more solid footing within the implementation system without betraying the essence or integrity of the programme.

**Table 16: 8.3: What strategies enhance implementation in SFL? Outcomes of SFL, influencing determinants and strategies to address implementation barriers**

Implementation Outcome Definition of outcome <sup>(Proctor et al., 2011)</sup>	Measurement	Level <sup>(Proctor et al., 2011)</sup>	Influencing determinant(s)	Strategies to address barriers to implementation and enhance outcomes
Acceptability <i>Acceptability</i> is the perception among implementation stakeholders that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory.	Stakeholder consultations & Interviews  Focus groups, Interviews & Ethnography	Provider  Shedder	Shared vision Relative advantage Compatibility & Complexity  Personal attributes Knowledge & beliefs about SFL Previous experience Trust Perceived complexity Relative advantage Identification with organisation Ownership Compatibility & structural characteristics	<ul style="list-style-type: none"> <li>• <i>Allied partnership approach</i>: SFL was delivered and designed in collaboration with POs who clearly perceived the advantage of implementing SFL through a shared vision, aligning with their organisation in accessing a HTR group of men. SFL responded to the increasing calls <i>by national policies</i> to implement gender-specific strategies that engage HTR men with health which were applicable to PO's.</li> <li>• <i>Stakeholder engagement</i>: POs were continually engaged to promote shared decision making in the implementation of SFL to limit perceived complexity.</li> <li>• The intervention was designed and refined with <i>underlying gender-specific approaches</i> that enhanced the organic health promotion in Sheds.</li> <li>• <i>Targeted intervention</i>: delivered in a targeted way by bringing SFL to the Sheds and delivering the majority of its components directly in the Sheds natural environment or other local community setting, which were viewed as <i>familiar, safe and non-clinical, environments</i> for Shedders. This removed barriers towards participation and made participation <i>convenient</i>.</li> <li>• <i>Expression of interest and Active Recruitment</i>: Sheds were encouraged through <i>shared decision making</i> to opt into SFL participation – it was not foisted on Shedders. When Sheds expressed interest the researcher and health and wellbeing team in the IMSA visited each individual Shed and discussed the process of SFL in an <i>informal</i> way, reducing perceived complexity, <i>building trust and actively recruiting</i> individual Shedders and addressing their concerns. This strategy also aimed to enhance the relationship and <i>sense of trust between the IMSA and Sheds</i>.</li> <li>• <i>Co design process</i>: SFL was described to prospective participants as a programme “for Shedders by Shedders”. Prospective participants were encouraged to see themselves as <i>pioneers</i>, actively shaping the programme through their participation and paving the way for future delivery and scale-up. Reinforcing Shedder’ <i>sense of ownership</i> was</li> </ul>



designed to build safety and trust, and to reassure participants that SFL was not being implemented to undermine the routine environment and ethos of the Sheds. Involving Sheddors in the implementation process also facilitated <i>access to local knowledge and resources</i> for SFL implementation while building relationships enhanced the sense of <i>social capital</i> that positively influenced implementation.				
Adoption <i>Adoption</i> is defined as the intention, initial decision, or action to try or employ an innovation or evidence-based practice.	Stakeholder consultations, interviews & observation	Provider	Shared vision Understanding of men's health Opinion leaders Stakeholder participation	<ul style="list-style-type: none"> <li>POs who <i>understood the value</i> of implementing SFL in Sheds and understood the need for gender-specific approaches were engaged in the <i>stakeholder process</i>.</li> <li><i>Opinion leaders</i> within the POs were valuable in <i>building momentum</i> to join the partnership network.</li> <li>The <i>Participatory Research Approach</i> where all key stakeholders acted as decision makers in SFL design and implementation that is <i>built upon evidence-based practice</i> was a key facilitator in adoption at PO level.</li> </ul>
	Consultation & Observation	Organisation	External mandates & funding Understanding of Sheddors Relative priority Leadership	<ul style="list-style-type: none"> <li>The implementing organisation responded to both <i>top down</i> (policy and funding incentives) and <i>bottom up</i> (Shedder needs) calls to deliver health promotion in Sheds.</li> <li>Sheds for Life was viewed a priority programme in the organisation.</li> <li><i>Leadership</i> from key implementers (health and wellbeing manager and researcher) who <i>worked in partnership</i> to strengthen implementation enhanced the perceived <i>importance of SFL among other competing priorities</i>.</li> </ul>
	Administrative data, Focus groups, Interviews & Ethnography	Shed setting	Trust Social support Self-efficacy Leadership Shared decision making Autonomy Knowledge & beliefs about SFL	<ul style="list-style-type: none"> <li><i>Trust and relationship building</i> through time spent in the Shed setting at recruitment phases was a key enabler of adoption within the Sheds. The <i>co-design</i> process facilitated reassurance among Sheddors that SFL would remain <i>respectful of the Shed</i> environment and the <i>autonomy</i> of Sheddors.</li> <li>Shed support volunteers or <i>champions</i> played a key role in encouraging Sheds to try SFL. <i>Designated contact points</i> in each Shed act as a conduit between Sheddors and programme delivery.</li> <li><i>Leaders within Sheds</i> were also pivotal to adoption and engagement at Shed level and time was spent with identified leaders during Shed visits and national Shed volunteer coordinator events to <i>ensure that key influencers understood the value of SFL</i> for Sheds. <i>In person visits by the recruitment team</i> to Sheds were also a critical facilitator to adoption as it ensured that <i>messages about SFL were disseminated to all Sheddors</i> (rather than one influencer who may not intend to adopt) and this encouraged shared decision making among Sheds.</li> </ul>

<p>Appropriateness is the perceived fit, relevance, or compatibility of the innovation or evidence based practice for a given practice setting, provider, or consumer; and/or perceived fit of the innovation to address a particular issue or problem.</p>	<p>Focus groups, Interviews &amp; Ethnography, participatory research</p>	<p>Shedder &amp; Shed setting</p>	<p>Compatibility Ownership Autonomy Perceived complexity Structural characteristics</p>	<ul style="list-style-type: none"> <li>• SFL capitalised on the organic health promotion that occurs through the already existing social support between Shed members in Sheds. More reticent Sheddors were encouraged to participate by Sheddors with a higher sense of self-efficacy.</li> <li>• Use of “Hooks”: A free comprehensive health check at the beginning of SFL was a critical incentive to engage men in the SFL programme alongside other life-skill components such as CPR.</li> </ul>
				<ul style="list-style-type: none"> <li>• Male specific: An underlying principle of SFL was to deliver in the male-only environment of the Shed in the company of like-minded men which promotes a sense of safety and motivation through friendly competition.</li> <li>• SFL was co-designed as a tailored intervention with core components but allows autonomous decision making over adaptable or supplementary elements which the Sheds can “self-select” into. It is continually refined in collaboration with Sheddors to respond to their needs.</li> <li>• Respecting the Shed environment: The co-design process and early testing of SFL determined characteristics of Sheds to be key determinants of implementation (see Table 15).</li> <li>• Timing: Sheddors were recommended to designate a specific day of the week to dedicate to SFL so that it does not encroach on the typical routine of the Shed. A readiness assessment also informed whether SFL is suitable for a Shed at that time in terms of competing priorities, resources or maturity (e.g. newer Sheds may see SFL as an opportunity to build relationships whereas Sheds heavily established in workshop based activities may view SFL as detracting from primary Shed aims). During assessment by implementers at recruitment phase, Sheddors with few resources or members may use nearby community resources or join with another Shed to participate in SFL. As determined via co-design, SFL also aimed to be implemented during times that are conducive with the Shed environment such as spring or autumn avoiding busier project periods for the Sheds such as Christmas or summer.</li> <li>• Sheds for life was delivered free of charge to eliminate cost barriers for Sheddors.</li> <li>• Autonomous Participation: Alongside the expression of interest process, individual Sheddors were asked to participate in as much of SFL as possible while recognising and respecting that other life commitments happen. The central goal of SFL is to enrich, not undermine the Sheds already health enhancing environment and so</li> </ul>

Stakeholder consultations, interviews & observation	Provider	Complexity Delivery style Relationship with Sheds Networks & communication Adaptability	<p>alongside ongoing collaboration with Shedders, participants of SFL were also <i>guided not to overburden</i> themselves by committing to too many SFL components.</p> <ul style="list-style-type: none"> <li>• <i>Structure, Clarity &amp; Supportive Resources:</i> As perceived complexity was a noted determinant, participants received <i>supportive resources</i> during SFL such as dedicated SFL and Healthy Food Made Easy handbooks as well as material on mental health and other various components. Participants were visited by the recruitment team to explain the process of SFL and also receive <i>text reminders and prompts</i> during SFL delivery along with <i>programme calendars and screening appointment cards</i>.</li> <li>• Both <i>formal and informal meetings</i> with stakeholders were used to limit complexity for POs and the IMSA coordinated and oversaw delivery of individual SFL components.</li> <li>• <i>Credibility and capacity building:</i> POs were seen as part of an allied partnership network bringing expertise from a variety of credible and informed sources thus enhancing perceived quality of SFL in Sheds. POs also participate in GEEMS and ENGAGE training for effectively working with men.</li> <li>• <i>Adaptability:</i> POs through stakeholder engagement were encouraged to tailor their components to suit both the cohort of men and the Shed environment.</li> <li>• <i>Informality of Sheds:</i> SFL was refined to be delivered in an <i>informal, interactive and relaxed way with a conversational tone</i>. Through iterative feedback POs of SFL were encouraged to spend time <i>building rapport and trust with participants prior to delivery of SFL components</i>. Informal delivery respects the ethos of the Sheds and facilitates comfort and active participation.</li> <li>• <i>Strengths-Based Approach:</i> SFL aims to be delivered using a strengths based approach where facilitators <i>utilise the capacity, skills and knowledge of the men</i> while demonstrating empathy and respect and <i>using positive, non-stigmatising or non-judgemental language and tone</i>.</li> <li>• <i>Men's health policy</i> was an enabler to leverage support for SFL. Involving Shedders in the decision making process means the organisation was best positioned to understand and prioritise Sheds and Shedder needs.</li> <li>• The <i>sustained engagement</i> of appropriate stakeholders maintained momentum for implementation.</li> </ul>
	Organisation	External mandates & funding Understanding of Shedders Engaging	

Implementation Cost <i>Cost (incremental or implementation cost)</i> is defined as the cost impact of an implementation effort.		Provider	Available resources Complexity Adaptability Relative advantage	<ul style="list-style-type: none"> <li>While delivering SFL incurred additional time and monetary cost in terms of adaptations and delivery - <i>POs that were able to incorporate SFL into part of their routine delivery</i> could facilitate implementation with the advantage of accessing a group of HTR men for their own organisation.</li> <li><i>Sustainable funding</i> is a key determinant of SFL implementation and maintenance of partnerships. The capacity of the organisation to <i>network and engage key stakeholders who could support SFL delivery</i> was a key enabler of supporting implementation costs. The <i>evaluation</i> of SFL was a key facilitator in highlighting the impact and cost-effectiveness (McGrath, Murphy, et al., 2022a) of SFL which gave the organisation <i>leverage to engage funders</i> for substantial funding for SFL (e.g. Slaintecare).</li> </ul>
		Organisation	Funding Available resources Cosmopolitanism Engaging	
Feasibility <i>Feasibility</i> is defined as the extent to which a new treatment, or an innovation, can be successfully used or carried out within a given agency or setting	Stakeholder consultations, interviews & observation	Provider	Compatibility Adaptability Shedders needs & resources Available resources Complexity Leadership Engaging	<ul style="list-style-type: none"> <li>The <i>participatory research approach, pilot testing and partnership building</i> were key facilitators in ensuring feasibility at provider level.</li> <li>Feasibility has been demonstrated through <i>measurement of impact on health and wellbeing outcomes</i> of participants up to 12 months (McGrath, Murphy, Egan, &amp; Richardson, 2022)</li> </ul>
	Stakeholder consultations, interviews & observation	Organisation	Available resources Understanding of Shedders Relative priority Leadership Cosmopolitanism Engaging	
	Focus groups, Interviews & Ethnography	Shed setting	Compatibility Structural characteristics Intervention source Leadership	<ul style="list-style-type: none"> <li>The co-design process where <i>SFL was viewed as “internally” developed</i> was critical to ensure that SFL was compatible and appropriate for Sheds. The initiative was also based upon evidence-based practice that engages men at community level, previous piloting of SFL informed the current strategy</li> <li>Leadership was also a key facilitator at Shed level to ensure successful implementation of SFL.</li> </ul>

				<ul style="list-style-type: none"> <li>The implementation team endeavoured to deliver SFL directly in the Shed setting, <i>where resources were lacking in Sheds</i>, kits including portable ovens and kitchen supplies were sourced to facilitate delivery of HFME within the Shed.</li> </ul>
<p>Fidelity</p> <p><i>Fidelity</i> is defined as the degree to which an intervention was implemented as it was prescribed in the original protocol or as it was intended by the programme developers</p>	Stakeholder consultations, interviews & observation	Provider	<p>Self-efficacy</p> <p>Knowledge and beliefs about the intervention</p> <p>Available Resources</p> <p>Adaptability</p> <p>Access to information &amp; knowledge</p>	<ul style="list-style-type: none"> <li>Fidelity was viewed as an important outcome for SFL as it moved across Shed settings. <i>Fidelity was facilitated by consistent use of POs. Stakeholder engagement</i> was used to ensure deliverers at ground level understood the underlying principle of SFL and GEEMS and ENGAGE training was made available.</li> <li><i>Iterative feedback</i> though the participatory research approach was used to address any identified issues with fidelity. It was recognised through the process evaluation that <i>adaptations at local level were necessary for fidelity</i> of SFL and they were facilitated through a consultation process.</li> </ul>
<p>Penetration</p> <p>Penetration is defined as the integration of a practice within a service setting and its subsystems.</p>	Administrative data & observation	Shed setting	<p>Knowledge &amp; beliefs about the intervention</p> <p>Perceived complexity</p> <p>Leadership</p> <p>Ownership</p> <p>Compatibility</p>	<ul style="list-style-type: none"> <li><i>Penetration of SFL at Shed level was encouraged through multiple implementation and gender-specific strategies</i> outlined. Penetration in phase 1 delivery was captured by assessing the number of Sheddors in the participating Sheds who eligible to attend versus the number of Sheddors who enrolled in SFL.</li> <li><i>Assessment of the baseline profiles of Sheddors also assessed whether SFL was reaching the HTR cohort within Sheds</i> (McGrath. A, 2022)</li> </ul>
	Consultation and observation	Organisation	<p>External mandates &amp; funding</p> <p>Knowledge and beliefs about the intervention</p> <p>Relative priority</p> <p>Leadership</p>	<ul style="list-style-type: none"> <li><i>Penetration at the organisational level was facilitated by the evaluation of SFL</i> which demonstrated the efficacy and cost-effectiveness of the approach. Sheds for Life was recognised by the organisation as a priority programme which is capable of leveraging support for Sheds at a systems level. Leadership of key implementers was an important enabler to champion SFL at organisational level.</li> </ul>
<p>Sustainability</p> <p><i>Sustainability</i> is defined as the extent to which a newly implemented treatment is maintained or</p>	Consultation and observation	Organisation	<p>External mandates &amp; funding</p> <p>Available resources</p> <p>Relative priority</p> <p>Organisational incentives and rewards</p> <p>Leadership</p>	<ul style="list-style-type: none"> <li><i>Sustainability of SFL is facilitated by leadership at organisational level</i> and the necessary resources needed to maintain momentum among stakeholders across implementation levels. The ability of the organisation to retain key implementers as well as the support and funding at systems level are key determinants of sustainability.</li> </ul>

institutionalized within a service setting's ongoing, stable operations	Networks and communication Cosmopolitanism Engaging
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### 3.4 Scale up of Sheds for Life

Finally, when scoring the readiness of SFL scalability using the Intervention Scalability Assessment Tool (ISAT; Milat et al., 2020), SFL is an initiative that merits scale-up, providing careful attention is paid to fidelity, workforce capacity and leadership (see Figure 7). Assessment of scalability has determined a horizontal scale-up approach as most suitable within the SFL context (Milat et al., 2020). This is defined as the introduction of SFL across different Shed settings in a phased manner, following the pilot, through a stepwise expansion, learning lessons along the way to help refine further expansion (Milat et al., 2020). The SFL assessment highlights several domains (particularly across part A) that are high scoring while other domains scored lower as outlined in Figure 8. For further insights into the scoring of SFL scalability see Supplementary File 1 (Appendix G).

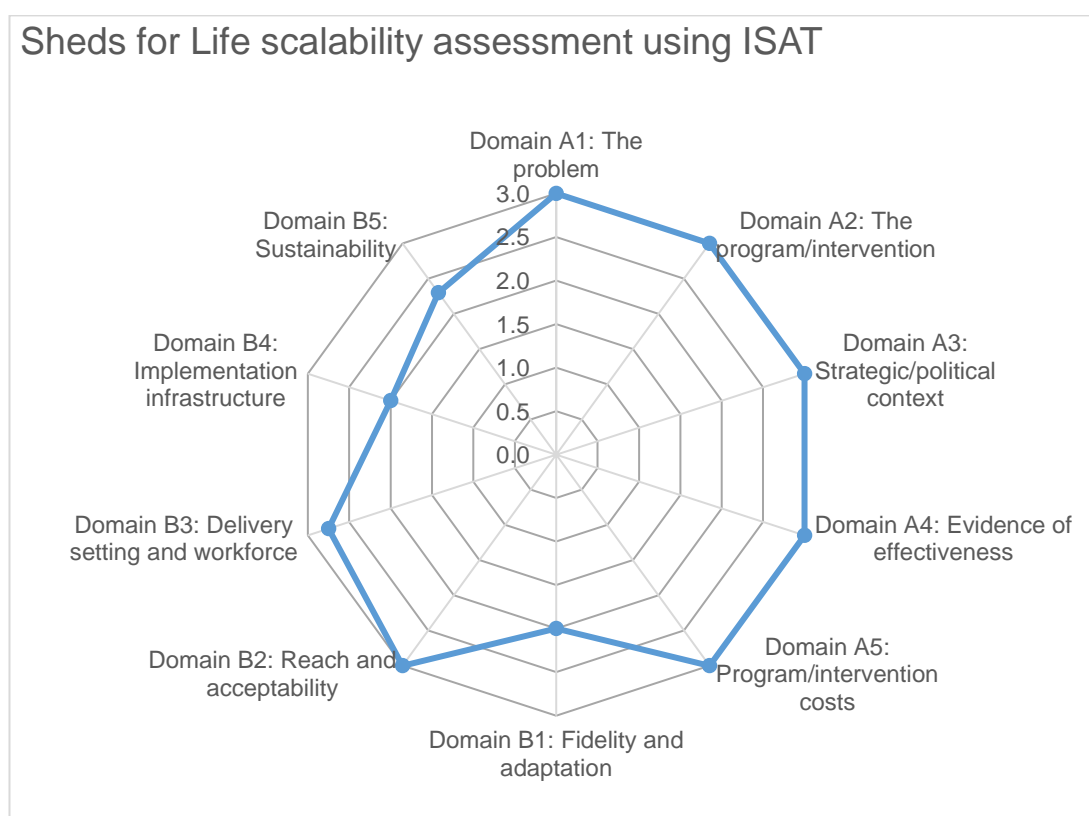


Figure 8: 8.4: Sheds for Life scalability assessment using ISAT (Milat et al., 2020)

*ISAT= Intervention Scalability Assessment Tool*

## 4 Discussion

This research describes the process and determinants of SFL implementation both of which inform implementation effect. The careful selection of implementation frameworks was an important facilitator towards guiding this work which helped to limit further complexities of an already complex implementation climate (Damschroder, 2019; Nilsen & Bernhardsson, 2019). For the SFL evaluation, three frameworks were applied to guide the process, identify determinants and capture outcomes (Damschroder et al., 2009; Koorts et al., 2018; Proctor et al., 2011) which proved important for the research team when applying a new and innovative science to evaluation.

This work has highlighted the value of implementation research in monitoring the complexities of a multi-level co-developed intervention. While participatory research approaches are critical to the success of complex real-world innovations such as SFL they require a long-term process with commitment to sustainability (Israel et al., 2005). This can present challenges when attempting to reconcile limited community-based resources with what is needed to capture the complexities of implementation within a system of continually shifting variables (Hawe, 2015). Indeed, a limitation to this research is the capacity of a small research team to monitor all levels of implementation and therefore it is possible that important determinants at either Shedder, PO, organisational or systems levels may have been overlooked. In the case of SFL however, it is important to remember that complexity is not just a property of the intervention but of the context or system into which it is placed, which includes multiple and dynamic interacting parts that generate nonlinear relationships (Hawe, 2015). While this research may not provide a definitive list, it plays an important role in capturing the process of implementation for scale-up of SFL as well as providing a blueprint for other community-based health initiatives in general, and men's health initiatives in particular, that may stand to benefit from this process. The messiness of implementation requires strong leadership and advocacy which was a core determinant of SFL's successful implementation. Implementation science requires strong partnerships between the implementers and researchers involved in the intervention (Leeman et al., 2017). For SFL this working partnership provided



valuable momentum to implementation efforts. However, when the research becomes part of the implementation process, there is a risk that when this active ingredient is removed from further implementation that the effect may be impacted - a potential unintended consequence of implementation approaches (Gruß et al., 2020). For instance, in the case of SFL the researcher spent hundreds of hours within Sheds discussing SFL and engaging with, and building relationships with Sheddors. Indeed, Sheddors may not have distinguished the evaluation from the intervention. The researcher was placed at the epicentre of a small, albeit national organisation, which oversaw the implementation and assumed multiple roles within the implementation efforts, particularly during COVID-19. This means that the researcher becomes a core part of implementation efforts. In this case the researcher was not solely viewed as external consultant but rather a key advisor within the SFL team (Wolfenden et al., 2017). Understandably, this can raise questions about objectivity and impartiality which required the researcher to navigate ethical implications of an implementer/researcher role. Indeed this work mirrored many of the first-hand experiences captured by Cheetham et al. (2018) of how researchers can be subject to political pushes, pressures and sense of accountability. However, the assistance of the research team, SFL advisory, consultation with international academics and local researchers, combined with an open and transparent process of knowledge co-production with SFL stakeholders along with assertive boundary negotiations, were important in facilitating the embedded researcher to remain independent and impartial. Embedding a researcher has advantages too (Cheetham et al., 2018; Wolfenden et al., 2017), particularly in the case of public health and community-based organisations which may not have the resources to conduct rigorous evaluation, where funding is short-term and staff are heavily involved with hands-on activities. Indeed, Wolfenden et al. (2017) argue that the challenges and costs of evaluating intervention trials, particularly those assessing the impact of implementation strategies, means that trials testing the impact of health interventions or implementation strategies represent 11% and 2% of research output, respectively. This research therefore provides a valuable contribution to translational research and, in terms of the sustainability of SFL, the dissemination of the findings is

proving valuable in leveraging further resources. Nevertheless, understanding the role of researchers at the intersection of academia and community-based practice is an important consideration for implementation science efforts.

While this research has highlighted multiple determinants that impacted and continue to impact SFL implementation, effective strategies outlined such as the gender-specific approaches at Shed level have increased the potential for, and demonstrated the utility of, the Shed setting as a suitable environment for SFL implementation. It has demonstrated that the model is transferrable despite the variability of Sheds when determinants such as the importance of relationship building, active recruitment and co-design processes are considered. An important question for SFL is ultimately what fidelity of the initiative looks like, particularly post pandemic. Indeed, while SFL is currently structured as 10-week intervention with multiple programme offerings, this implementation science study highlights that while there should be fidelity to core components of SFL in terms of content to retain effect (McGrath et al., 2022c), the process of implementation and key implementation strategies are perhaps more critical to SFL fidelity than strict adherence to programme content. In fact the inherent nature of Sheds means a constantly changing practice environment which is a key challenge for implementation research (Nilsen & Bernhardsson, 2019). A critical juncture for SFL scalability, to potentially 450 Sheds in Ireland, will be its ability to maintain the co-designed nature of SFL, and the time spent investing in relationships with Sheds. In fact, without Sheddors' acceptability and perceived appropriateness of SFL, there will ultimately be no implementation as the Sheds rightfully own SFL. The importance of these approaches is highlighted in the wider context of men's health research where the focus on addressing gender inequality in health programming has become more clearly conceptualised as a gender-transformative approach (Ruane-McAteer et al., 2019).

This research has determined that currently SFL is an appropriate and acceptable model that has been widely adopted at Shed and PO level, while also establishing itself as a leading priority programme for its host organisation. The hybrid-effectiveness design of the SFL evaluation has demonstrated that SFL has emerged as the most appropriate model to reach

the target cohort of HTR men (McGrath et al., 2022b). Moreover, it has captured the implementation process and identified important facilitators and barriers to enhance implementation efforts. It is also efficacious (McGrath et al., 2022c) and cost-effective (McGrath, Murphy, et al., 2022a). It is a scalable model that has also now established itself within the systems environment. The future of SFL and its potential to continue to engage Shedders and enhance their health and wellbeing outcomes is bright. Its scalability largely relies on leadership, financial and human resources and increased capacity for staff to oversee its delivery. Scaling up using a horizontal scale-up approach which introduces SFL to Sheds in a phased manner is feasible and yet requires continued refinement during further expansion (Milat et al., 2020). This approach by its very definition means it is important that research efforts remain to monitor the scalability of SFL in order for the initiative to retain fidelity to its ethos and integrity as it begins to scale up nationally. Indeed, real-world implementation means that, even if it were possible to ensure that all implementation barriers to scalability were identified and subsequently addressed, additional threats to the implementation and scale-up process that are not anticipated will likely emerge (McAlearney et al., 2016). Milat et al. (2016), in a guide to scaling up interventions, place emphasis on subsequent evaluation and monitoring efforts during scale-up that focus on measuring effectiveness over time as well as other important implementation outcomes such as levels of penetration, adoption and acceptability. Nevertheless, our identification of implementation strategies (Table 17) provides tangible examples for researchers and practitioners that can act as a 'how to' guide for successful implementation of community-based interventions. The key determinants highlighted in this work demonstrate that understanding the influence of the *process* is as important as the outcome. While effectively guiding the process can be complex, this can be made more manageable by using the right implementation approach. The implementation process must recognise the value of investing time in relationships and capacity building through working in partnership. This is the very essence of community-based work and can mean the 'how' of implementation is as health enhancing as the 'what'.

## **5 Conclusion**

This research has captured the process and determinants of effective implementation of a community-based men's health promotion programme. Guided by implementation science, it has informed the scalability of SFL as well as identifying a 'how to' of implementation strategies that can act as a blueprint for other men's health settings and programmes and health promotion more broadly. The evaluation of SFL highlights the importance of knowledge co-production in men's health work as well as in translational and implementation research efforts. While the evaluation of real-world multi-level interventions is complex, this work highlights the value and utility of embedded research which facilitates iterative decision making and allows adaptations to implementation subsequently promoting translation of research and knowledge production into practice in real-time. The evaluation demonstrates the importance of gender-specific approaches to men's health promotion where co-designed processes can help to positively redefine what health engagement means to HTR men. This work highlights that the process of implementation is as critical as the content that is delivered, meaning fidelity to the process is fundamental to retain effectiveness in scale-up efforts. This is the first evaluation to capture an implementation process of health promotion in Sheds. Moreover, this work makes a valuable contribution to research where there exists a dearth of research outputs capturing implementation strategies. It offers practitioners and researchers an example of the operationalisation of implementation frameworks in practice as well as identifying strategies to engage key stakeholders, the most important of which are those who will ultimately use, and should rightfully own, the intervention. Therefore real-world interventions should be designed with this in mind through strengths based, grassroots approaches.

## **Conflict of interest statement**

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

### **Author contribution statement**

Conceptualisation, A.M., N.M. and N.R.; Methodology, A.M., N.M. and N.R.; Funding acquisition, A.M., N.M. and N.R.; Investigation, A.M.; Project administration, A.M., N.M. and N.R.; Supervision, N.M. and N.R.; Visualisation, A.M., N.M. and N.R.; Writing—original draft, A.M.; Writing—review and editing, A.M., N.M. and N.R. All authors have read and agreed to the published version of the manuscript.

### **Contribution to the field**

This work uses implementation science to evaluate a community-based men's health initiative 'Sheds for Life' in Irish Men's Sheds. The complex challenges that men face in terms of health engagement are well documented and the Men's Sheds have been identified as spaces that are not only organically health enhancing, but have the potential to reach men who may otherwise not engage with traditional health services. Yet, to date there has been no formal evaluation of health promotion implementation in Sheds and care must be taken when attempting to bring structured health promotion to their informal, variable and unstructured environments. Moreover, Sheds for Life exists within a system of continually shifting variables such as organisational capacity to deliver. Therefore, understanding barriers and facilitators to implementation are vital to assess scalability. Sheds for Life is a co-designed, tailored initiative delivered directly in the Men's Sheds. This research uses participatory research approaches with key stakeholders guided by established implementation frameworks to capture the process, identify determinants and strategies to overcome barriers to implementation. Findings make a valuable contribution to knowledge by providing a 'how to' guide for implementation of health promotion in Sheds as well as men's health and community-based health promotion more broadly.

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## **Ethics statements**

### **Studies involving animal subjects**

No animal studies are presented in this manuscript.

### **Studies involving human subjects**

The studies involving human participants were reviewed and approved by Waterford Institute of Technology Research Ethics Committee (REF: WIT2018REC0010). The patients/participants provided their written informed consent to participate in this study.

### **Inclusion of identifiable human data**

Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

### **Data availability statement**

The datasets presented in this article are not readily available because: the raw data supporting the conclusions of this article will be made available by the authors, upon reasonable request. Requests to access the datasets should be directed to Aisling McGrath, [aisling.mcgrath@setu.ie](mailto:aisling.mcgrath@setu.ie).

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## **6 Addendum to Chapter 8**

Considering the Milat et al. (2016) guide to scaling up health interventions, the Sheds for Life evaluation has met the criteria of assessing effectiveness, reach, adoption, its ability to align with the strategic context, and acceptability and feasibility have been demonstrated. Moreover, scoring of the ISAT tool has showcased the initiative to meet the criteria for scale-up with careful attention required for fidelity, leadership and capacity (Milat et al., 2020). Furthermore, Indig et al. (2017), discuss how interventions found effective in a controlled setting should be scaled-up and an added strength to SFL is its implementation testing in what was certainly an uncontrolled and unpredictable environment. However, scale-up is a complex process and applying a multi-level perspective on transition to scale is required (Bulthuis et al., 2020). Moreover, while SFL has had a demonstrable impact on the health and wellbeing outcomes of Sheddars, dilution of this impact should be avoided and often in the process of scaling-up health interventions, the effectiveness is reduced due to difficulties in maintaining the dose and fidelity of the original implementation (Milat et al., 2016).

## **Chapter 9: Discussion**

### **9.1 Introduction to the chapter**

This thesis set out to evaluate the scalability of Sheds for Life, a community-based men's health promotion programme in Men's Sheds in Ireland. This final chapter presents an integrated discussion which begins with a summary of findings. This chapter will also discuss the current and future progress of scale-up of Sheds for Life. The strengths and limitations of the overall body of research will then be discussed followed by implications for research, policy and practice and final conclusions.

### **9.2 Summary of findings and their application to scalability assessment**

#### **9.2.1 Introduction and Literature Review**

There are clear gender disparities in terms of health outcomes and levels of health engagement. These are a reflection of deep rooted systemic failures in societies and emphasis should be placed on challenging the narrative that getting sicker and dying younger is a natural phenomenon inherited by men (WHO, 2018c). Indeed, there have been failures across all levels of society to account for the ways that gender intersects with economic, political, environmental and social determinants of health and their influence on men's exposure to risk factors and how they engage with health (Baker, 2020). The literature discussed current trends in men's health outcomes as well as risk factors and behaviours that exacerbate morbidity and mortality risk for men. It highlighted that the determinants of men's health are complex with roots in both sex and biological make-up as well as social constructs relating to gender and masculinity (Connell, 2012). Indeed socialisation within dominant traits of masculinity creates barriers to help-seeking for men (Höhn et al., 2020) which bring significant consequences for men's health and wellbeing (Carson, 2020). Moreover, men who display high levels of traditional masculinity and overact male roles are more likely to be socially disadvantaged (Feigelman et al.,



2021) and HTR, alongside other marginalised subpopulations of men (WHO, 2018c). The literature presented justifies a rationale for gendered approaches to men's health promotion where currently there exists a distinct lack of services versed in these approaches with little consideration of gender influences on health (Morgan et al., 2018). Importantly it argues that understanding how gender shapes men's health practices is a critical first step in developing effective health promotion strategies that might appeal to men (WHO, 2018b). It highlights the community setting which has demonstrated efficacy in implementing men's health initiatives that can effectively integrate gendered approaches that reframe male attitudes toward health engagement (Oliffe et al., 2020). Considering the community-based nature of Men's Sheds, alongside their unique ability to attract cohorts of HTR men in an environment that is inherently health promoting (Bergin & Richardson, 2020; Kelly et al., 2021b), they are primed settings to deliver more targeted health promotion to men. However the literature argues for careful implementation of this approach as initiatives that fail to account for gender can perpetuate gender stereotypes and inequalities (Snell-Rood et al., 2021). Moreover, in the case of Sheds, formalising healthcare may disrupt the fabric of Sheds as informal peer-run spaces, the essence of which makes them attractive to HTR men (Bergin & Richardson, 2020; Lefkowich & Richardson, 2016). This determined a need for careful design and evaluation of health promotion in Sheds and more broadly a need to address a knowledge gap in the documentation and dissemination of effective gendered interventions that promote men's health (Bergin & Richardson, 2020; Sharp et al., 2022). While research on the health enhancing potential of Sheds is plentiful, these predominantly consist of small sample sizes and qualitative methods and there is limited empirical work to capture this (Kelly et al., 2021a). Moreover, there are calls for researchers to document implementation approaches, particularly for complex multi-level interventions, and yet implementation strategies account for only 2% of research output (Wolfenden et al., 2017). The literature presented highlights the advantage of minimising translation issues in real-world settings by applying implementation science from the outset (Bauer et al., 2015). This is particularly relevant in the case of SFL where there are a host of intervening variables across Shedder, Shed, provider, organisational and systems level.

This determined a need for an effectiveness-implementation design to assess the efficacy and implementation effectiveness of SFL with a view to evaluating scalability (Curran et al., 2012; Milat et al., 2016). The literature also highlighted the challenges researchers can face with selecting the most applicable implementation frameworks where many exist (Villalobos et al., 2019). An assessment of the literature determined a need for a process, determinant and outcomes framework (Nilsen, 2020). This would allow the SFL evaluation to design a process of implementation as well as capture key determinants and strategies with a view to scale-up. The overarching aim of the work was to assess the scalability of SFL through a mixed methods approach. The studies presented in this work therefore all play a role in contributing to the overall work of scalability assessment.

#### 9.2.2 Chapter 2: Sheds for Life protocol

While Chapter 2 presents the methodology for the evaluation of SFL, this was an ongoing and evolving process and indeed, it can be difficult to discern where the process ends and the results begin, considering the iterative nature of an implementation process (Koorts et al., 2018). With this in mind, the proposed methods for monitoring the process of implementation were in fact results of early stakeholder engagement and characterisation of the implementation environment across multiple levels to understand contextual factors that could inform identification of the most feasible evaluation methods. Chapter 2 highlights the case for implementation science and its relevance to SFL as a multi-level, complex, real world initiative with multiple, dynamic and interacting parts (Hawe, 2015). It captures the development of SFL and the invested process of partnership engagement and forging of relationships at Shedder level. It outlines a vision for SFL as one that will evolve in line with its co-design ethos and will continue to respond to the needs of Sheddors. Moreover, it highlights the importance of a gendered foundational layer to SFL, built upon the inherent health promotion in Sheds in conjunction with gender-specific strategies informed by other works and engagement with Sheddors during the piloting of SFL (Bergin & Richardson, 2020; Hunt et al., 2020; Kelly et al., 2021c; Lefkowich et al., 2015). Chapter 2 also outlines the methods

utilised in the effectiveness-implementation hybrid design and the rationale for the application of this approach, namely its ability to pragmatically promote translation into the real-world context while providing valid estimates of effectiveness (Curran et al., 2012). It provides a detailed description of the mixed methods approach used to inform implementation and intervention effects, i.e. health and wellbeing outcomes and implementation efforts (Damschroder, 2020; Nilsen & Bernhardsson, 2019). The methods for the economic evaluation of SFL provides insights into the overall cost effectiveness of SFL as well informing implementation outcome 'Cost'. In summary, Chapter 2 makes a valuable contribution to knowledge by proposing an implementation strategy to assess the scalability and impact of SFL. More broadly, the approach provides an important blueprint for practitioners and researchers and has implications for health promotion in Sheds but also on practice in the fields of men's health, public health and health promotion.

### 9.2.3 Chapter 3: Baseline characteristics of SFL participants

Chapter 3 discusses the utility of Sheds as a setting for engaging HTR men and what a vision for health promotion in Sheds should ultimately look like. Additionally, it highlights a deficit in men's health literature in terms of understanding the demographic of men who participate in health promotion in Sheds. The results highlight that 70% of Sheds and 75% of the Sheddors within them opted into SFL, demonstrating the capability of SFL to engage Sheddors, which informs implementation outcome 'penetration'. The analysis of Shedder characteristics also determined that a cohort of Sheddors who opted into SFL were considered HTR, (i.e. older, retired, lesser educated men). Similarly, SFL was effective in engaging a cohort of at-risk men who fell into categories for chronic disease, including hypertension, high risk BMI and waist circumference, family history of heart disease, diabetes and stroke, inactivity, and inadequate intake of fruit and vegetables. Sheddors' propensity to seek health information was inversely associated with education level and positively associated with marital status. Sheddors who lived alone were at increased risk of loneliness and poorer mental wellbeing highlighting the importance of engaging more isolated men in health promotion endeavours in

Sheds. Sheddors reported their subjective health in positive terms, in spite of high risk factor prevalence, and older men were in better health in terms of both subjective and objective health measures. This may be due to the Shed-health link, and calls for future research to understand why different age cohorts of men attend Sheds and what makes a Shedder feel 'subjectively' healthy, which is important for engaging men and tailoring health promotion in Sheds. It also provides insights into an important knowledge gap where Sheds are seen as attractive spaces to implement health promotion, and yet, little is known about the men who attend them in terms of their sociodemographic and health and wellbeing characteristics (Albrecht et al., 2021; Kelly, et al., 2019b; Milligan et al., 2016; Wilson & Cordier, 2013). This chapter highlights the importance of health promotion strategies in Sheds which normalise engagement with health through gender-specific and age and literacy appropriate approaches. Chapter 3 highlights the utility of Sheds and the SFL approach to reach beyond the 'worried well' and engage a cohort of HTR men. This informs implementation outcomes reach/penetration and is an important indicator for evaluating the scalability of SFL.

#### 9.2.4 Chapter 4: The impact of COVID-19 on Sheds for Life participants

Chapter 4 was an unforeseen but important juncture for the SFL evaluation, namely understanding the impact COVID-19 had on the sustainment of positive health and wellbeing outcomes post SFL. More broadly, it provided an important and serendipitous opportunity to provide timely insights through longitudinal data on the impact COVID-19 had on the health and wellbeing of a cohort of Sheddors during social restrictions and Shed closures. The chapter discussed the disproportionate impact of COVID-19 on men, particularly those who are socially disadvantaged and discussed how the pandemic turned a spotlight on the need for gendered approaches to men's health (Baker et al., 2020; Smith et al., 2020). It compared the findings from the 6-month follow-up stage carried out during the COVID-19 pandemic in the second SFL cohort, with the 6-month findings from the first SFL cohort, completed pre-COVID-19. The sharp increase in Sheddors who were 'lonely' (1.4% to 29.7%) when Sheds were closed and social restrictions enforced, highlighted the impact of

COVID-19 in terms of loneliness and the importance of the Shed as a protective factor against loneliness, particularly for more vulnerable men at risk of isolation. Indeed consistent with other findings (Campbell, 2020) more lonely Sheddors reported poorer subjective wellbeing and lower physical activity levels with inactive Sheddors more likely to become less active. While COVID-19 negatively influenced health and wellbeing, improvements in mental wellbeing attributable to SFL were sustained

#### 9.2.5 Chapter 5: The impact of Sheds for Life on the health and wellbeing outcomes of participants

Chapter 5 describes the health and wellbeing outcomes of Sheds for Life (SFL) participants up to 12 months determining the efficacy of SFL, which in turn, informs its suitability for scale-up. The chapter uses literature to reiterate the importance of tailoring health promotion to suit the needs of men, particularly those most HTR and highlights the utility of Sheds as a suitable setting in which to do this. It highlights the underpinning vision of SFL as an initiative which aims to normalise conversations about health and wellbeing in Sheds and encourage help seeking among Sheddors through the use of gendered and participatory research approaches. The research reports on questionnaire findings captured at baseline, 3, 6 and 12 months, comparing the intervention group with a wait-list control, while the phased cohort approach allowed consideration of COVID-19 as a potential confounder. Results demonstrated that outcomes related to subjective wellbeing, mental wellbeing, physical activity, social capital and healthy eating significantly increased post SFL ( $p < 0.05$ ) compared to no significant changes in the control group up to 3 months. Regression indicated that the odds of meaningful improvement for mental wellbeing was significantly higher for Sheddors that had lower mental wellbeing (OR 0.804) and lived alone (OR 0.638) at baseline. These Sheddors also had higher odds of experiencing positive changes in life satisfaction (OR 0.911) and trust (OR 0.928), while inactive Sheddors had higher odds of becoming more active (OR 0.582), with Sheddors who lived alone having higher odds of improving their food preparation and cooking skills (OR 0.481). Chapter 5 highlighted the potential of SFL to improve the health and wellbeing

of all Sheddars but in particular, its potential to encourage more positive gains for Sheddars who may have been harder to reach at baseline. Results reflect a positive indication that the gender-specific approaches which underpinned SFL such as fostering the non-clinical, safe environment and utilising a strengths-based approach was conducive towards encouraging positive attitudes towards health engagement. The chapter does however highlight a natural levelling of results meaning that it is important for SFL to incorporate maintenance approaches into its design that should be implemented and monitored during scale-up. The successful reach and improvement of health outcomes in targeted Sheds is a testament to its potential for scale-up and informs the effectiveness arm of the implementation hybrid design. More broadly, it makes the case for health promotion in Sheds, demonstrating its potential to engage HTR men and improve health outcomes and provides insights into the first formally evaluated health promotion endeavour in Sheds.

#### 9.2.6 Chapter 6: Sheddars experiences of the impact of Sheds for Life

Chapter 6 presents the qualitative findings from the SFL evaluation, from the perspective of Sheddars. This chapter complements the quantitative findings and provides more depth of meaning and richer insights into these findings. The chapter discusses the role of masculinity and its influence on men's health. It discusses how complex social constructs of gender can impact and create barriers to men's help seeking and health engagement. It also discusses masculinity within a gender transformative approach, highlighting a need for men to have reflexivity and a sense of agency about their masculinity and the potential of gender-transformative approaches to broaden the interpretation of masculinity and the socially acceptable ways in which masculinity can be expressed. Considering the ethnographic lens to this research, the work uses a reflexive thematic analysis approach to faithfully capture Sheddars' experiences while acknowledging the reflexive influence of the researcher. Results depicted three key themes; Creating the 'right environment', Normalising meaningful conversations; a legacy for 'talking health' and; Transforming perceptions of how men 'do health'. It builds upon previous work which called for careful consideration of how SFL should be

implemented in Sheds (Bergin & Richardson, 2020). The results captured the potential of Sheds to be health enhancing as standalone entities that were further enriched by the SFL initiative. The findings highlight the importance of engagement strategies and strengths based approaches when implementing health promotion in Sheds and the potential of SFL to be gender transformative. It argues that the approach to SFL is critical to maintain this potential and highlights the importance of Sheddors remaining key decision makers in the evolution of SFL. The findings also support research which demonstrates that participating in male-specific environments allows Men's Shed members permission to become more open with each other in discussions (Milligan et al., 2016), a finding which was further enriched by SFL through the discussion of explicit health messages that can extend permission to Sheddors to engage in this practice and build momentum to normalise meaningful conversations in Sheds. In terms of the overall SFL evaluation, it corroborates the quantitative findings and demonstrates the efficacy of SFL - a key consideration in scalability assessment (Milat et al., 2016). More broadly, it is the first study which captures Shedder's experiences of structured health promotion in Sheds and highlights the potential of the approach to engage men with health and transform perceptions of openly discussing health discourse as positive masculine behaviour.

#### 9.2.7 Economic Evaluation of Sheds for Life

Chapter 7 describes the economic evaluation of SFL and highlights the importance of this approach in order to justify resources for policy makers and funders of men's health. The study used the SF-6D (a preference-based measure of health with a six-dimensional health status classification: physical functioning, role functioning, social functioning, pain and discomfort, mental health and vitality (Brazier et al., 2002) with repeated measures at baseline, 3, 6 and 12 months to compute a utility score for SFL participants. Direct and indirect costs of SFL programme delivery were used to generate QALYs for the intervention group compared to the wait-list control. Results determined that Sheddors had high baseline utility scores which may be associated with the imbued health promotion qualities of Sheds. Results demonstrated the

intervention group experienced an average 3.3% gain in QALYS from baseline to 3 months and a further 2% gain from 3 months to 6 months at an estimated cost per QALY of €15,724, meaning SFL is a cost-effective initiative when considering national thresholds. A further sensitivity analysis determined the probability of success with the intervention is extremely high, even when the costs per QALY exceed current costs of €15,000. This research demonstrates SFL as a cost-effect model, a key consideration in scalability assessment (Milat et al., 2020), which further supports the case for scale-up of SFL. In terms of men's health promotion, it is the first study to consider an economic evaluation of health promotion in Sheds and provides much needed evidence to men's health stakeholders in terms of garnering investment, not only in Shed related health promotion, but community-based men's health promotion more broadly.

#### 9.2.8 The implementation of Sheds for Life

Chapter 8 outlines the overall evaluation of the implementation of Sheds for Life. It highlights the process of implementation and the identified determinants (barriers and facilitators) that influence implementation. It also discusses the strategies used to enhance implementation with a combined view of the process, determinants and strategies used to inform implementation outcomes and scalability assessment. The chapter makes the case for implementation science and CBPR approaches and the importance of creating partnerships with the people for whom the research is ultimately meant to benefit. It discusses the complexities of SFL across Shed, Shedder, provider, organisation and systems level and the utility of operational implementation frameworks to guide implementation of complex, multi-level interventions. The approach used mixed methods guided by a process (Koorts et al., 2018), determinant (Damschroder et al., 2009) and evaluation framework (Proctor et al., 2011) to evaluate the implementation of SFL. The work highlighted the process as key to developing an evidence base and ensuring suitability of intervention design and stakeholder engagement which fostered acceptability, adoption and ensured appropriateness. The process of monitoring the implementation environment across multiple levels through embedded



research was also critical to identifying determinants of implementation and subsequent strategies to address barriers where feasible. The research determined that strong leadership and advocacy were core determinants of SFL's successful implementation and the participatory approach provided valuable momentum to implementation efforts. While the chapter highlighted multiple and enduring determinants of SFL implementation, effective strategies such as the gender-specific approaches at Shed level increased the potential for, and demonstrated the utility of, the Shed setting as a suitable environment for SFL implementation. It demonstrated that the model is transferrable despite the variability of Sheds when determinants such as the importance of relationship building, active recruitment and co-design processes are considered. It discusses scalability of SFL within a horizontal scale-up approach which is feasible when careful attention is paid to fidelity, workforce capacity and leadership. In terms of the overall body of work, this chapter completes the scalability assessment and calls for further research to monitor scale-up efforts, highlighting that fidelity to the process of delivery is as important as the content. This chapter makes a valuable contribution to knowledge by capturing implementation strategies where research of this kind is extremely limited (Wolfenden et al., 2017). It provides a 'how to' guide for implementing health promotion endeavours in Sheds and more generally. It poses important questions about embedded research and the role of researchers in community-based work and advocates for participatory research approaches designed with the end user having an active role and always in mind.

Overall evaluation of scalability has determined SFL is a scalable model. When considering the Milat et al. (2016) guide to scaling up health interventions, Table 17 demonstrates how the evaluation has addressed Step 1: scalability assessment which assesses the suitability of the intervention for scale-up.

**Table 17: Representation of how thesis chapters addressed scalability assessment (Milat et al., 2016)**

Step: Scalability assessment: assess the suitability of the intervention for scaling up							
Action	Description	Chapter 3: Baseline characteristics of SFL participants	Chapter 4: The impact of COVID- 19	Chapter 5: Health and Wellbeing outcomes	Chapter 6: Shedders' experiences of the impact of SFL	Chapter 7: Economic Evaluation of SFL	Chapter 8: The Implementation of SFL
1.1 Assess effectiveness	Determine effectiveness, intervention effect size, unintended consequences and differential effects	✓	✓	✓	✓		✓
1.2 Assess potential reach and adoption	Determine if the likely reach and adoption of the intervention is extensive enough to have a population impact	✓		✓			✓
1.3 Assess alignment with the strategic context	Determine whether the intervention is consistent with national, state or regional policy directions. Even highly effective interventions may struggle to obtain funding if they are not aligned with the priorities of funding agencies						✓
1.4 Assess acceptability and feasibility	Judge whether the intervention could realistically be scaled up, given what is known about its costs, workforce requirements, time required, infrastructure requirements and acceptability to stakeholders					✓	✓

### **9.3 Considerations for scale-up of Sheds for Life**

Each chapter summarised above contains a distinct discussion in terms of its contribution to the overall body of work, research and practice. Moreover the preceding sections of this integrated discussion have highlighted how the work has informed an assessment of SFL scalability. In truth, while it has determined that SFL is a model worthy of scale-up, there are important considerations that warrant further discussion. This section will discuss what scale-up of Sheds for Life may look like and also offer some reflections on how Sheds for Life is currently progressing.

#### **9.3.1 What does scale-up look like?**

A question posed in Chapter 8 was “what does scale-up of Sheds for Life ultimately look like?”. A corollary to this question is “what does fidelity to Sheds for Life look like at scale?”. This requires reflexivity on what the unique elements of the implementation process were that may help to maintain effect at scale. For instance, while the content and structure of SFL added an important contribution to benefits gained by Sheddors, the research has remarked upon the process as being critical where in contrast, the structure and content could ultimately evolve over time. This is an important consideration for SFL and it will be important that new implementers of the initiative understand the emphasis that needs to be placed on the investment in relationships at Shedder level, maintaining and strengthening the gendered lens to SFL as well as maintaining the co-design approach and continuing to build capacity of providers to deliver SFL in a way that is respectful and appropriate to the Sheds. Indeed, these are the key ingredients of SFL that leave a lasting legacy in Sheds. Therefore fidelity during scale-up of SFL means firstly retaining a process of engagement with all stakeholders and secondly introducing health promotion that responds to the needs of Sheddors. This can be challenging to maintain considering a limited workforce

at organisational level and advocacy and leadership will be required to prioritise fidelity to the key ingredients at scale as well as address health systems gaps that might influence its successful scale-up (Bulthuis et al., 2020). So fidelity to the process, rather than to specific delivery content is fundamental.

The next important consideration is what a feasible approach to scale-up might look like considering the needs and capacity at Shed, organisational and provider level. Chapter 8 recommended a horizontal scale-up approach meaning that SFL would be scaled-up in a stepwise expansion as opposed to a vertical approach that would introduce SFL simultaneously across a whole system (Milat et al., 2020). Introducing SFL in a phased manner is a sensible and informed route as it allows refinement of the initiative as it is delivered across Sheds while maintaining feasibility for organisational capacity to coordinate and provider capacity to deliver. Moreover, this approach is respectful of Sheddors who expressed a desire for a seasonal approach (autumn and spring) to SFL delivery. Indeed, this approach was discussed at stakeholder level and as chapter 2 outlined, a phase two implementation was due to occur. However the onset of COVID-19 rendered this unfeasible in light of Shed closures, restrictions and staff redeployment. What was proposed was a three year bi-annual plan for scale-up of SFL where the initiative would be delivered to circa 300 Sheddors across autumn and spring from 2022-2025. For this to occur successfully, it is important, as recommended in chapter 8, that evaluation and monitoring remain because effectiveness should be monitored, adaptations will certainly be required to maintain effect and, this will mean ensuring a level of fidelity to the SFL approach (Milat et al., 2020). Moreover reach and adoption are at the heart of scalability and it is important that these outcomes for effective implementation are evaluated during scale-up (Milat et al., 2020). There is a clear rationale for scale-up as well as the identification of an acceptable approach for scaling-up which has reached stakeholder consensus (Step 2). Therefore, SFL is on a solid footing for scale-up to occur. What should happen next are steps 3 and 4 which call for careful

preparation for scale-up and then, scale-up of the intervention making necessary adjustments based on performance data (Milat et al., 2016).

### 9.3.1 Where is Sheds for Life now?

While Steps 3 and 4 set the best course of action for scale-up, the caveat to SFL as a real-world project means that ultimately challenges emerge to impact its trajectory. While chapter 8 highlights the determinants to SFL implementation and subsequent scale-up, this section provides further insights through an account of the progress of Sheds for Life and the challenges it currently faces.

As previously mentioned, the original research design of this work had factored in a stage two implementation plan with a view to delivering SFL across a further four counties. However as highlighted in chapter four and five, COVID-19 interrupted the research plan. Fortuitously, the embedded research approach meant that it was possible to continue to work within the organisation and monitor the determinants of implementation. The onset of the pandemic led to a host of barriers to further implementation of SFL which ultimately meant SFL, as it was intended, was not delivered throughout the two years of the pandemic. This was due to Shed closures, social restrictions and safety concerns as many Shed environments were not compliant with health and safety considerations required for protection against the virus. Sheddens, as an older cohort of men, were naturally also concerned about their safety and survival of their Shed during the pandemic and therefore had other competing priorities outweighing SFL. At provider level, many staff had been redeployed to pandemic related operations outside of their routine work. At organisational level the pandemic was a catalyst for staff turnover which saw the loss of the CEO and health and wellbeing manager of the organisation. This had ramifications for SFL as in particular, the health and wellbeing manager not only understood the ethos of the initiative but also had a critical role in leadership and advocacy. Understandably during this time, the organisation faced external pressures to fulfil mandates which called for the organisation to

implement a version of SFL to utilise its funding. Considering that the organisation had new leadership, this meant there were polarised views to implement SFL to fulfil funding commitments, while on the other hand it was not possible to do so while remaining faithful to the ethos of the initiative. The research team advocated against implementation of SFL in this form as it could ultimately lead to a negative impact. Attempts were made to implement a version of SFL online as the organisation had no discernible route to deliver an in-person model. This was strongly advocated against by the research team because notwithstanding the digital divide faced by Sheddors, this approach risked further isolating HTR men, nor could it retain the gendered approach to SFL without the foundation of the Shed. While the views of the research team were well received, the organisation were in an impossible position under threat of funding loss, ultimately meaning that a version of SFL was delivered online. An evaluation of this reflected that indeed, it engaged a small cohort of Sheddors (n=30) that were not considered HTR, and it had no impact on health and wellbeing outcomes. In February 2022, a new health and wellbeing manager joined the organisation which injected new momentum to deliver SFL. However currently the reopening of Sheds has been slow and has not yet reached pre-pandemic levels. Moreover, consultation with Sheddors reflected a view that the priorities of Sheds during this time would be to re-establish their Sheds and re-engage their members, meaning they would prefer SFL to be delivered at the latter end of 2022. Indeed, it was highlighted by the research team that the focus for health and wellbeing in relation to Sheds would perhaps be better placed on encouraging Sheddors safely back into their Sheds, particularly Sheddors that were most vulnerable, then introducing SFL when feasible, to address new health concerns faced by Sheddors. While it was envisioned that SFL would be an important facilitator in renewing interest in health and wellbeing, this was an important consideration as a key element to SFL is its co-design approach where Sheddors do not feel it is foisted upon them. During this time, SFL was awarded a sustainable funding stream which would be renewed annually under Sláintecare (a ten-year programme for health and social care reform)

and Healthy Ireland, as highlighted in chapter 8. This was welcome news for SFL as it made the prospect of scale-up a feasible reality. However, this also brought more political push to deliver SFL under an impending service level agreement which meant delivery to 300 Sheddens under the previously outlined scale-up plan. This would be a challenging feat during 2022 while Sheds reopened and also created threats to fidelity to the process of SFL. While it was in the interest of the research team to advocate for retaining fidelity to the SFL process, understandably the organisation faced difficult decisions in how to fulfil their commitments as it would be important to ensure sustained funding. Currently, this means SFL is due to be implemented in summer 2022, despite Shedder requests for delivery outside of this season and researcher requests to deliver in autumn. This implementation phase is also lacking the investment in the co-design process and a key element of the recruitment phase. It is not clear what impact this approach will have and it currently has no mode of evaluation in place as it went beyond the scope of research capacity and conflicted with the evidence base.

While SFL has faced some unfortunate diversions, it still retains many strengths and its feasibility for scale-up. It now has a sustainable funding stream to support its sustained delivery which approves of the horizontal scale-up plan, underpinned by an evidence-base. The adoption of SFL at provider level, despite the uncertainty of COVID-19 remains high and provider organisations remain committed to delivering SFL and engaging with the process of scale-up. This has been reinforced by a sustainable funding model. At Shedder level, consultation with Sheddens has also reflected a high sense of adoption and it is envisioned that with the right process of engagement, Sheddens will continue to buy into SFL as it moves across Sheds. At organisational level, while the organisation has been subject to political pushes and external pressures, the current leadership respects and recognises the value of the research process and commitment to the research partnership remains. At systems level, the vision for Sláintecare focuses on reorienting health services back into the community-setting. This has brought

about restructuring of delivery models and the 'Healthy Communities' approach outlined in Chapter 8 should place SFL on a stronger foundation in terms of its alignment with policy and government priorities. While there have been threats to the fidelity of SFL, the initiative was designed with adaptation in mind. Therefore, SFL cannot fall victim to barriers which emanated from COVID-19 but rather it must adapt to a post pandemic implementation environment. This will require renewed vigour in the participatory research approach with a rigorous and monitored scale-up process as well as leadership at organisational level which advocates for responding to the needs of Shedders rather than top-down directives. Indeed, retaining fidelity to SFL means leadership which is guided by evaluation. Ultimately the goal for propelling SFL forward will be to continue research endeavours by monitoring and evaluating the process of scale-up which holds true to the evidence-base which has been created.

## **9.5 Strengths and limitations of the research**

The overall strengths and limitations of this body of work are presented below, as strengths and limitations of the individual chapters have been acknowledged and addressed within each of the papers (Chapters 2-7).

### **9.5.1 Limitations**

- In terms of limitations to the work, phase-two of SFL implementation as originally outlined in the protocol was unsuccessful due to COVID-19. However, considering the depth and breadth of research generated from this work, it did not have significant repercussions on the original proposal.
- The small control group included in this study limited the process of comparison and the conclusions that could be drawn. Ultimately the wait-list-control approach meant that the control group received and became part of the intervention group. This was in part due to the capacity of a small research team to gather data across multiple



locations at intersections of critical phases of the research process. COVID-19 also halted plans to recruit a further control cohort. However, this is an important learning for future research in community-based work to perhaps prepare for a wait-list control that does not receive the intervention until follow-up phases of the intervention cohort complete.

- Monitoring the implementation environment across multiple levels in this work was time and resource intensive for the researcher. This ultimately meant that there may have been missed opportunities to capture unforeseen implementation determinants particularly during the delivery of SFL across multiple locations. As highlighted in previous chapters, the informal nature and sporadic attendance within Sheds, coupled with the limited capacity for data collection ultimately meant follow-up rates varied across time points. However, adaptations to the data collection process during COVID-19 made it possible to uphold levels of response rates.
- As also highlighted throughout the multiple studies, the subjective nature of the data is open to bias. However, the results reflect valuable longitudinal data on wellbeing where this is subjective in its own right.
- While the relationships fostered in Sheds between the researcher and Sheddors was a strength to the co-design approach of the work, equally it could have led to bias where Sheddors may have responded based on what they believed the researcher wanted to hear. Indeed, the gender of the researcher as female may have encouraged some social desirability bias or led to guarded responses. However gender may have also been an asset to the research as Sheddors may have felt it more socially acceptable to be emotionally expressive in the presence of a female. Moreover, a female perspective lent some objectivity to the reflexive practice of the work (Lefkovich, 2019).
- COVID-19 was an unforeseen and unavoidable confounder in terms of the assessment of health and wellbeing outcomes, however every effort was made to account for this in the analysis of the data. The embedded

research approach may raise questions about the researchers ability to remain objective and impartial, however as outlined in Chapter 8, multiple stakeholder perspectives as well a clear boundary setting facilitated the researcher to retain a critical outlook on the process.

#### 9.5.2 Strengths

- A strength of this work is the embedded research approach which positioned the researcher at the epicentre of the implementation environment facilitating a unique and comprehensive view of the multiple levels of implementation. This approach encouraged rapid translation of research into practice through the process of SFL implementation through stakeholder engagement, knowledge generation through partnerships and adaptations to SFL.
- Similarly, the implementation science approach facilitated rapid research dissemination and exposure of the work to peer-review during the process which encouraged refinements.
- The co-design process of the work brought together multiple perspectives which encouraged a feasible delivery model to SFL where it could effectively respond to Shedd's needs with respect to capacity constraints.
- There was a transdisciplinary lens to this work in terms of men's health, public health and implementation science which was also an important strength and led to insightful and practical findings for these fields of work.
- The longitudinal nature of this work also strengthens findings. The application of implementation frameworks encouraged a rigorous and strategic process to research design and data collection which enhanced the capability to navigate a complex implementation environment.

## **9.6 Implications for research, policy and practice**

This research presents a number of important implications for research, practice and policy that have been discussed throughout the preceding chapters. The methodologies applied provide a blueprint for practitioners in the fields of men's health and community-based health promotion more broadly, in terms of evaluating initiatives using an implementation science approach as well as outlining the benefits of this approach. The research identifies multiple strategies in the realms of implementation and gendered approaches that can be utilised by practitioners in the design and implementation of their health endeavours. In terms of Men's Sheds research specifically, the research provides important findings which capture the demographics and health and wellbeing characteristics of Shedders as well providing important insights into what Shedders prioritise in terms of their health, addressing important gaps in the evidence-base (Foettinger et al., 2022; Kelly et al., 2021a; Wilson & Cordier, 2013). The work also provides data on the first evaluated health promotion approach in Sheds. It demonstrates the utility of Sheds as an effective setting for engaging HTR men with health promotion as well as offering an outline for an effective process of engagement that respects the Shed environment and Shedder autonomy. The work provides valuable longitudinal data on the impact of health promotion in Sheds as well as demonstrating its potential to be cost saving which arms practitioners with leverage to lobby support for health promotion in Sheds and men's health practice generally. The work has been spotlighted by the Global Action on Men's Health community for its contribution to men's health work (Dean, 2022). The qualitative element to the work highlights that health promotion in Sheds through the right process of engagement has the capability to normalise meaningful conversations about health and wellbeing in Sheds and thus be gender transformative (WHO, 2018c). From a policy perspective, this work demonstrates that with attention to constructions of masculinity, men's health promotion can be gender transformative and can effectively engage, as well as support men in sustainable health and wellbeing changes.

Indeed, alongside other effective programmes that utilise gendered approaches to engage men (Hunt et al., 2020; Kelly et al., 2019a), SFL contests the view that men *won't* take part in health-related endeavours. Rather it offers solutions for the public health community to find suitable strategies to engage men. This addresses a key focus within men's health policy in Ireland and calls for policy globally to place focus on research and evaluation that builds an evidence base for men's health strategies that can further inform policy (Baker, 2020; Department of Health and Children, 2008; Richardson & Carroll, 2018). The National Men's Health Policy (Department of Health and Children, 2008) has made a significant contribution to advancing men's health in Ireland, also aligning with government priority areas (Baker, 2020; Richardson & Carroll, 2018). This played a pivotal role in supporting this research and enhancing acceptability of SFL more broadly. In turn, this research has played a role in addressing the strategic aims set out in the National Men's Health Policy such as; promoting an increased focus on men's health research in Ireland; developing health promotion initiatives that support men to adopt positive health behaviours and to increase control over their lives and; building social capital within communities for men (Department of Health and Children, 2008; Richardson & Carroll, 2018). While there were calls to address inertia surrounding men's health at policy level, (Baker, 2020; Richardson & Carroll, 2018; Smith et al., 2020), the SFL evaluation draws attention to the potential gains to other sectors and government departments working in partnership to support men's health. For instance, SFL has demonstrated that this approach has a place within cross-governmental remits such as public health and wellbeing, mental health and older people and equality and disability that would benefit from a gendered lens through key actions within Healthy Ireland (Department of Health, 2013). Evidence of the cost-effectiveness of actions to improve men's health is rare and this work may prove timely at a point where the HSE has commissioned a review of Healthy Ireland Men (Health Service Executive, 2017; Men's Health Forum in Ireland, 2022). Indeed the cascade effect of this work played a pivotal role in funding procurement for SFL from Slaintecare in 2019 and offers the IMSA a solid

footing to encourage acceptability of SFL at a systems level. Moreover, policy has emphasised the importance of the use of evidence to advocate for services for other subpopulations of men (Richardson & Carroll, 2018) and indeed this work may have implications for the engagement of other HTR groups through targeted approaches. Alongside this, the proliferation of Sheds internationally means there is much potential for SFL to influence policy development and programme implementation beyond Ireland, having already demonstrated itself as a replicable model. Indeed, this work presents opportunities for future research beyond the monitoring of scale up of SFL nationally.

## **9.7 Conclusions**

The aim of this research was to evaluate the scalability of SFL. It did this through a process of examination which (a) assessed the reach and penetration of SFL determining that the majority of Sheds opt into SFL and the process is capable of engaging HTR men, (b) evaluated the impact of SFL on health and wellbeing outcomes of participants which highlighted its efficacy, (c) explored how Sheddards experienced SFL in practice highlighting its utility to be gender transformative, (d) evaluated the cost-effectiveness of SFL determining that it is good value for money and (e) evaluated the implementation which captured the process and identified determinants and strategies for effective implementation. In short, the research showcased SFL to be a feasible, effective, cost-effective, appropriate and acceptable model which is transferable and capable of scale-up. Importantly this research has demonstrated the potential for SFL to challenge harmful gender norms and normalise meaningful conversations for men in terms of their health and wellbeing. This emerged through an invested process of engagement and this research calls for prudent consideration of what fidelity to SFL looks like in its scale-up. Indeed it is *how* SFL was delivered that was critical to the engagement of men and the process of this delivery identified in this work should be retained within the ethos of SFL as it evolves through scale-up. In particular, this means utilising strengths-based approaches and placing

Shedders at the forefront of decision making. Sheds for Life has great potential to enhance the wellbeing of Shedders nationally and internationally through effective leadership, evaluation and monitoring of the approach at scale. This work makes a valuable contribution to knowledge by demonstrating the operationalisation of implementation frameworks in practice as well as identification of implementation and evaluation strategies that can act as a blueprint for health promotion in Sheds, men's health work and health promotion more broadly. It highlights the utility of Sheds as important spaces that not only engage HTR men with health promotion but that are also cost-effective, health enhancing and gender transformative. It challenges the narrative that men are unwilling to engage with health and calls on policymakers to recognise the value of tailored men's health promotion as with the right approach, men's health promotion makes a valuable contribution to gender equity and subsequent equality. It highlights the challenges of meeting competing demands of funding and pressures to demonstrate outcomes versus being true to the process and ethos of the approach. This work has demonstrated that while implementation research can be complex, its value is unparalleled in terms of encouraging sustainability of important community-based work through providing an evidence-based that can rapidly translate into impact with potential to cascade across the implementation environment from encouraging health behaviour change to harnessing support for implementation at systems level. Sheds for Life is *"helping men to trust their own experience and their expertise. Helping men to trust themselves to help one another"*.

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## Appendices

### Appendix A: Dissemination of research

#### Publications during PhD

McGrath, A., Murphy, N., & Richardson, N. (2021). The impact of the COVID-19 pandemic on the wellbeing of Irish Men's Shed members. *Health Promotion International*, 36(4), 1007-1019. doi:10.1093/heapro/daaa113

McGrath, A., Murphy, N. & Richardson, N (2021). Study protocol: Evaluation of Sheds for Life (SFL): A community-based men's health initiative designed "for Shedders by Shedders" in Irish Men's Sheds using a hybrid effectiveness-implementation design. *BMC Public Health*: <https://doi.org/10.1186/s12889-021-10823-8>

Cooper, J., Murphy, J., Woods, C., Van Nassau, F., McGrath, A., & Callaghan, D. et al. (2021). Barriers and facilitators to implementing community-based physical activity interventions: a qualitative systematic review. *International Journal Of Behavioral Nutrition And Physical Activity*, 18(1). doi: 10.1186/s12966-021-01177-w

McGrath, A., Murphy, N., Egan, T., Ormond, G., & Richardson, N. (2022). An Economic Evaluation of 'Sheds for Life': A Community-Based Men's Health Initiative for Men's Sheds in Ireland. *International Journal Of Environmental Research And Public Health*, 19(4), 2204. <https://doi.org/10.3390/ijerph19042204>

McGrath, A., Murphy, N., Egan, T., Ormond, G. & Richardson, N. (2022). 'Understanding Shedders: which sociodemographic, health and wellbeing characteristics best inform appropriate health promotion action and a 'Shed for Life'? *Health Promotion Journal of Australia*. doi:<https://doi.org/10.1002/hpja.649>

McGrath, A., Murphy, N., Egan, T. & Richardson, N. (2022). Sheds for Life: Health and Wellbeing outcomes of a tailored community-based health promotion initiative for Men's Sheds in Ireland. *BMC Public Health*, 22(1), 1590. doi:10.1186/s12889-022-13964-6

McGrath, A., Murphy, N. & Richardson, N. (2022). 'Sheds for Life': Delivering a gender transformative approach to health promotion in Men's Sheds. *Health Promotion International* [Under Review]

McGrath, A., Richardson, N. & Murphy, N. (2022). Strategies for effective implementation and scale-up of a multi-level co-designed men's health initiative 'Sheds for Life' in Irish Men's Sheds. *Frontiers in Health Services: Implementation Science*: 940034 <https://doi.org/10.3389/frhs.2022.940034>

#### Published Reports

McGrath, A. (2020). The Impact of COVID-19 on Irish Men's Sheds members and their Sheds: Qualitative Report DOI: 10.13140/RG.2.2.14846.31045

McGrath, A., Murphy, N. & Richardson, N (2021). Sheds for Life Impact Report: The Impact of Implementation Phase one on the health and Wellbeing outcomes of participants. ISBN: 978-1-8384706-09 DOI: 10.13140/RG.2.2.18365.38886

#### **Collaborations:**

Age and Opportunity (2021). Locked up, Locked in, Locked out! The impact of COVID-19 on physical activity in older people's groups. <https://ageandopportunity.ie/wp-content/uploads/2021/03/Impact-of-Covid-19-Report-Age-Opportunity.pdf>

Age and Opportunity (2020). Guidelines on Promoting the Safe Return of Older People to Recreational Sport and Physical Activity. <https://www.sportireland.ie/sites/default/files/media/document/2020-07/age-opportunity-guidelines.pdf>

TILDA (2021). Altered lives in a time of crisis: The impact of the COVID-19 pandemic on the lives of older adults in Ireland. <https://tilda.tcd.ie/publications/reports/pdf/c19-key-findings-report/COVID-19%20Key%20Findings%20Report.pdf>

#### **Conferences proceedings**

McGrath A., Murphy, N. & Richardson, N. (2019). "Shedding light on men's health" - Evaluating the scalability of a community-based men's health promotion programme "Sheds for Life" through the application of implementation science (Academic Poster). *SPHeRE Network 5th Annual Conference*. Royal College of Surgeons – Dublin Ireland

McGrath A., Murphy, N. & Richardson, N. (2019). Implementation of a community-based men's health promotion programme 'Sheds for Life' in Irish Men's Sheds. *Institute of Public Health Annual Conference*. Titanic- Belfast Ireland

McGrath A., Murphy, N. & Richardson, N. (2020). "Sheds for Life" -A Community based men's health promotion programme using gender sensitive strategies to engage hard to reach men in Irish Men's Sheds. *American Public Health Association Annual Meeting and Expo* – San Francisco. Virtual.

McGrath A., Murphy, N. & Richardson, N. (2020). The impact of the COVID-19 pandemic on the wellbeing of Irish Men's Shed members: Lessons from Sheds for Life. *Joint Public Health Conference*. Virtual.

McGrath, A., Murphy, N. & Richardson, N. (2020). Sheds for Life: Insights into the impact of COVID-19 on wellbeing outcomes of Men's Shed members. *International Men's Day HSE*. Virtual.

McGrath A., Murphy, N. & Richardson, N. (2021). "Men will talk in the right environment" working in partnership with Irish Men's Shed members to design and implement an appropriate program model that engages men with health and wellbeing. *Interdisciplinary Conference on Men and Masculinities*. University of Washington Tacoma. Virtual.

McGrath A., Murphy, N. & Richardson, N. (2021). Sheds for Life: Proactively promoting and engaging men in the men's shed setting with physical activity and wellbeing. *Irish Physical Activity Research Collaboration conference*. Virtual.

McGrath A., Murphy, N. & Richardson, N. (2021). Understanding the local contextual factors that impact engagement of hard-to-reach men in community-based health promotion. Lessons to date from "Sheds for Life". *WIT postgraduate conference*. Virtual.

McGrath A., Murphy, N. & Richardson, N. (2021). Sheds for Life: A gender transformative men's health programme to promote positive ageing *Positive Ageing Knowledge Exchange*. Virtual.

McGrath A., Murphy, N. & Richardson, N. (2021). Evaluating implementation of a community-based men's health programme "Sheds for Life" in Irish Men's Sheds. *ISPAH Conference 2021*. Virtual.

McGrath A., Murphy, N. & Richardson, N. (2022). Engaging hard to reach groups in physical activity-good practice examples from non-traditional settings. Accepted for: *ISPAH Conference 2022*. Abu Dhabi.

McGrath A., Murphy, N. & Richardson, N. (2022). Evaluating the impact and scalability of a community-based men's health promotion programme "Sheds for Life" in Irish Men's Sheds. Accepted for: *HEPA EUROPE Conference*. Nice, France.

#### **Other features:**

Agriculture department webinar to explore "Men's Sheds" as rural support systems. Oral presentation. July 2021.  
<https://content.govdelivery.com/accounts/MNDHS/bulletins/2e60ecb>

Sheds for Life Impact Report Launch. *Men's Health Week webinar*. Oral presentation. 14/06/2021

Sheds for Life impact report launched by Minister for Health, Stephen Donnelly: <https://www.youtube.com/watch?v=znE2iopfJAU&t=2059s>

#### *Newspaper articles and online media features:*

Dean, T. (2022) Men's Sheds boost health and are cost-effective. *Trends in Urology and Men's Health*: <https://doi.org/10.1002/tre.0030074>

Irish Times: <https://www.irishtimes.com/news/social-affairs/men-gripped-by-loneliness-during-coronavirus-pandemic-1.4593104>

Irish Examiner: <https://www.irishexaminer.com/news/arid-40313405.html>

WIT news: <https://www.wit.ie/news/news/sheds-for-life-impact-report-highlights-positive-findings-for-mens-wellbeing>

Roscommon Herald: <https://roscommonherald.ie/2020/09/20/covid-19-having-huge-impact-on-mens-shed-members/>

Technological Higher Education Association (THEA):  
<http://www.thea.ie/impact2020/the-men-s-shed-movement--highlighting-the-importance-of-safeguarding-community-for-wellbeing/>

Leitrim Observer: <https://www.leitrimobserver.ie/news/home/581083/mens-sheds-a-structure-and-a-social-connection.html>

Carlow Nationalist: <https://carlow-nationalist.ie/2021/06/15/mens-sheds-improve-mental-health-and-wellbeing/>

HSE Health and Wellbeing news:  
<https://hsehealthandwellbeingnews.com/international-mens-day-19th-november/>

Dublin People:  
<https://dublinpeople.com/news/northsideeast/articles/2020/10/16/northside-mens-shed-in-urgent-need-of-their-own-premises/>

Irish Research Council: <https://research.ie/what-we-do/loveirishresearch/blog/mental-health-and-wellbeing-in-ireland/>

Government of Ireland: <https://www.gov.ie/en/publication/cf284-slaitecare-in-action-2019/#sheds-for-life-improving-health-and-wellbeing-for-men-in-their-own-communities>

The Global Academy: <https://theglobalacademy.ac/waterford-institute-of-technology/ms-aisling-mcgrath/>

Pause Project: <https://pause-project.eu/practices/223-mens-sheds>

Irish Physical Activity Research Collaboration: <https://i-parc.ie/?p=679>

#### *Radio interviews:*

29 September 2020: WLR FM discussion on the impact of COVID-19 on Men's Sheds

16<sup>th</sup> June 2021: WLR FM discussion on Sheds for Life for Men's Health week

15<sup>th</sup> June 2021: Dublin City FM with Olivia Cronin to discuss Sheds for Life Impact report

#### *Podcasts:*

*TeachCOLAB* podcast: Community Engagement during the pandemic  
<https://podcasts.apple.com/ie/podcast/community-engagement-during-the-pandemic/id1568018456?i=1000552851884>

9Plus Podcast: Women in Research <https://anchor.fm/9plus/episodes/Women-in-Research-e1f4d4u>

## Appendix B: Protocol Paper Additional File 1 (Chapter 2): SFL operationalisation of the PRACTIS guide

Operationalisation of the PRACTIS guide to identify process of SFL implementation	
Intervention: Men's Health and Wellbeing programme "Sheds for Life"	
<b>Target outcome</b>	Engaging HTR men with health and wellbeing. Improve knowledge, attitudes and health and wellbeing outcomes (PA, Diet, Mental Wellbeing)
<b>Population Setting</b>	Community-based men's health programme in the men's shed setting. Target group: Men's Shed members
<b>Step 1: Characterize implementation setting parameters</b>	<p><u>Place</u>: Targeted Intervention delivered directly in the men's shed setting</p> <p><u>People &amp; Process</u>: 10 week gender-specific, structured intervention targeting Men's Shed members across four counties. Consists of core pillars of a health check, healthy eating, physical activity and mental health with several other optional components tailored to individual Sheds. Participating Sheds "self-select" into SFL via an expression of interest process and individual Shed members are actively recruited by research team and IMSA by visiting individual Sheds.</p> <p>Delivered by allied provider organisations whose ethos align with the goals of the IMSA and can effectively respond to the needs of Men's Shed members. Organisations who have participated in the Guidance for Effective Engagement with Men's Sheds training and understand and respect the ethos and environment of the Sheds.</p> <p><u>Provisions</u>: Training workshop and manual for facilitators, expression of interest forms for participant recruitment, SFL handbook for participants, attendance records, and attendance certificates. Supplementary resources. Text-based reminders and programme calendars. Self-reported questionnaires administered by trained researchers.</p> <p>Principles: Intervention – Engage HTR men with health, normalise conversations about health in the Shed environment. Enhance knowledge and awareness about health topics. Improve health outcomes; subjective wellbeing, diet, physical activity, mental health, social capital.</p>

	<p><i>Implementation</i> – Targeted intervention delivered within the shed setting. Uses existing infrastructure of Sheds where men naturally congregate and builds upon its inherent health promoting qualities such as the male-specific environment, sense of safety and social support.</p>
<b>Step 2: Identify and engage key stakeholders</b>	<p>Stakeholders represented the participant, provider, organisational and community/systems levels. Created a stakeholder group (Organisations delivering elements of SFL, academics, the IMSA and funding bodies), to guide study design, evaluation and intervention protocol and adaptation.</p>
<b>Step 3: Identify contextual barriers and facilitators</b>	<p>Org. and provider level barriers: i) capacity of IMSA staff and providers to implement Systems level: ii) sustained funding body User characteristics iii) variable Shed settings, engaging HTR men, beliefs about health and wellbeing</p>
<b>Step 4: Address/assess barriers</b>	<p><i>Formative evaluation:</i> Scoping work in Sheds informed blueprint for acceptable delivery model of SFL. Formation of strategic partnerships to respond to needs of Sheddors. Piloting of SFL elements in Sheds. Identification of suitable providers to implement SFL in participating counties. Capacity building focus to ensure providers understood delivery approach. Training manuals and workshops developed and implemented for providers. Stakeholder group provided feedback to guide development of intervention processes and materials. SFL structured into a ten-week intervention. Implementation and evaluation designed in collaborative process.</p> <p>Strategies to address barriers: Community based participatory research approach employed to work closely with provider level stakeholders in ongoing process to address capacity barriers and identify suitable facilitators for implementation on the ground.</p> <p>Assessment of suitability of potential funding streams.</p> <p>Design of implementation and gender- specific strategies to maximise participation in SFL. Including Sheddors as both active participants in the research and programme. Assessment of individual Shed settings to inform adaptations required for effective implementation</p> <p>Process/outcome evaluation: Effectiveness-implementation hybrid approach to assess the impact and implementation outcomes of SFL to promote the systematic of the intervention across individual, provider, organisational and systems level.</p> <p>Economic evaluation:</p>

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Cost-effectiveness analysis of SFL to demonstrate that the intervention impact and value for money of SFL to prospective funders.

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**Appendix C: Protocol Paper Additional File 2 (Chapter 2): All items from the World Health Organisation Trial Registration Data Set**

Data category	Information
Primary registry and trial identifying number	International Standard Randomised Controlled Trial Number (ISRCTN79921361)
Date of registration in primary registry	5 <sup>th</sup> March 2021
Secondary identifying numbers	N/A
Source(s) of monetary or material support	Irish Research Council
Primary sponsor	Irish Research Council (Project ID EBPPG/2018/256).
Secondary sponsor(s)	N/A
Contact for public queries	Dr Noel Richardson, National Centre for Men's Health, Institute of Technology Carlow Email: noel.richardson@itcarlow.ie
Contact for scientific queries	Dr Noel Richardson, National Centre for Men's Health, Institute of Technology Carlow Email: noel.richardson@itcarlow.ie
Public title	Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme through the application of implementation science
Scientific title	The effect of a 10-week gender-specific men's health intervention on health and wellbeing outcomes of Irish Men's Shed members
Countries of recruitment	Ireland
Health condition(s) or problem(s) studied	Promotion of physical activity, subjective wellbeing, mental-well-being and healthy diet in Men's Shed members
Intervention(s)	10 week men's health initiative consisting of; Four core pillars including: 1. An initial free health check [BMI, waist circumference, BP, cholesterol, glucose and carbon monoxide] 2. Structured 1 hour weekly exercise of either a) a facilitated group walking program or b) group exercise focusing on strength, balance and mobility 3. A facilitated four hour mental health workshop 4. A cooking and health eating course (2.5 hours weekly for six weeks)

	The intervention consists of several other facilitated, optional workshops that Sheds can select including; CPR, suicide prevention, diabetes awareness, cancer awareness, digital literacy, bereavement, dementia awareness and oral health awareness. The core objectives of the intervention are standardised across delivery sites.
Key inclusion and exclusion criteria	Inclusion criteria: Adult males in the men's shed setting Exclusion criteria: Non-proficiency in the English language
Study type	Interventional Multicentre longitudinal pragmatic controlled trial Primary purpose: prevention
Date of first enrolment	04/03/2019
Target sample size	600
Recruitment status	Recruiting Recruitment end date 06/09/2021
Primary outcome(s)	Time frame: 12 months General health history, help-seeking and perception Self-rated health Changes in physical activity Physical activity self-efficacy Subjective wellbeing Mental wellbeing Social Capital Dietary habits Alcohol and smoking
Key secondary outcomes	Cost-effectiveness Assessment of implementation outcomes Assessment of optional intervention components, tracking changes in confidence, knowledge and attitudes assessed at baseline, 3, 6 and 12 months

## Appendix D: Protocol Paper Additional File 3 (Chapter 3): SPIRIT checklist – Standard Protocol Items for interventional trials



STANDARD PROTOCOL ITEMS: RECOMMENDATIONS FOR INTERVENTIONAL TRIALS

SPIRIT 2013 Checklist: Recommended items to address in a clinical trial protocol and related documents\*

Reporting Item		Explanatory Note:	Location	Page Number
<b>Administrative Information</b>				
<b>Title</b>	<u>#1</u>	Descriptive title identifying the study design, population, interventions, and, if applicable, trial acronym	Title	<b>1,2</b>
<b>Trial registration</b>	<u>#2a</u>	Trial identifier and registry name. If not yet registered, name of intended registry	Abstract: Trial Registration	<b>3</b>
<b>Trial registration: data set</b>	<u>#2b</u>	All items from the World Health Organisation Trial Registration Data Set	Additional File	
<b>Protocol version</b>	<u>#3</u>	Date and version identifier	Issue Date 5 <sup>th</sup> March 2021: Version 1	Abstract: Trial Registration <b>3</b>
<b>Funding</b>	<u>#4</u>	Sources and types of financial, material, and other support	Funding Declaration	<b>29</b>
<b>Roles and responsibilities: contributorship</b>	<u>#5a</u>	Names and roles of protocol contributors	Author Contributions	<b>29</b>
<b>Roles and responsibilities: sponsor contact information</b>	<u>#5b</u>	Name and contact information for the trial sponsor	Funding Declaration	<b>29</b>
<b>Roles and responsibilities: sponsor and funder</b>	<u>#5c</u>	Role of study sponsor and funders, if any, in study design; collection, management, analysis, and interpretation of data; writing of the report; and the decision to submit the report for publication, including whether they will	Funding Declaration	<b>29</b>

		have ultimate authority over any of these activities		
<b>Roles and responsibilities: committees</b>	<b>#5d</b>	Composition, roles, and responsibilities of the coordinating centre, steering committee, endpoint adjudication committee, data management team, and other individuals or groups overseeing the trial, if applicable (see Item 21a for data monitoring committee)	Methods : SFL programme design	<b>10</b>
<b>Introduction</b>				
<b>Background and rationale</b>	<b>#6a</b>	Description of research question and justification for undertaking the trial, including summary of relevant studies (published and unpublished) examining benefits and harms for each intervention	Background: Men's Health – The Need for Gender Specific Approaches	<b>3</b>
<b>Background and rationale: choice of comparators</b>	<b>#6b</b>	Explanation for choice of comparators	Background: Community-Based Men's Health Promotion in Men's Sheds	<b>4</b>
<b>Objectives</b>	<b>#7</b>	Specific objectives or hypotheses	Background: Implementation Science and the need for Pragmatic Evaluation	<b>6</b>
			Paragraph 2	
<b>Trial design</b>	<b>#8</b>	Description of trial design including type of trial (eg, parallel group, crossover, factorial, single group), allocation ratio, and framework (eg, superiority, equivalence, non-inferiority, exploratory)	Methods: Part 1: Evaluating the Effectiveness of SFL-Research Design: Overview & Participants and Sampling	<b>15</b>
<b>Methods: Participants, interventions, and outcomes</b>				
<b>Study setting</b>	<b>#9</b>	Description of study settings (eg, community clinic, academic hospital) and list of countries where data will be collected. Reference to where list of study sites can be obtained	Methods: Part 1: Evaluating the Effectiveness of SFL-Research Design:	<b>15</b>

			Participants and Sampling	
<b>Eligibility criteria</b>	<u>#10</u>	Inclusion and exclusion criteria for participants. If applicable, eligibility criteria for study centres and individuals who will perform the interventions (eg, surgeons, psychotherapists)	Methods: Part 1: Evaluating the Effectiveness of SFL-Research Design: Participants and Sampling	<b>15</b>
<b>Interventions: description</b>	<u>#11a</u>	Interventions for each group with sufficient detail to allow replication, including how and when they will be administered	Methods: SFL programme design and Table 1: Structure of SFL phase 1 including workshops in development for phase 2 delivery	<b>10</b>
<b>Interventions: modifications</b>	<u>#11b</u>	Criteria for discontinuing or modifying allocated interventions for a given trial participant (eg, drug dose change in response to harms, participant request, or improving / worsening disease)	N/A	
<b>Interventions: adherence</b>	<u>#11c</u>	Strategies to improve adherence to intervention protocols, and any procedures for monitoring adherence (eg, drug tablet return; laboratory tests)	Methods: Engagement of HTR Men Using Gender-Specific Implementation Strategies	<b>11</b>
<b>Interventions: concomitant care</b>	<u>#11d</u>	Relevant concomitant care and interventions that are permitted or prohibited during the trial	N/A	
<b>Outcomes</b>	<u>#12</u>	Primary, secondary, and other outcomes, including the specific measurement variable (eg, systolic blood pressure), analysis metric (eg, change from baseline, final value, time to event), method of aggregation (eg, median, proportion), and time point for each outcome. Explanation of the clinical relevance of chosen efficacy and harm outcomes is strongly recommended	Part 1: Evaluating the Effectiveness of SFL-Research Design : Evaluating the Effectiveness of SFL- Data collection  Part 2: Evaluating the Implementation of SFL-	<b>15, 17, 20</b>

			Research Design: Overview	
			Table 2: SFL Effectiveness-Implementation Hybrid design	
<b>Participant timeline</b>	<u>#13</u>	Time schedule of enrolment, interventions (including any run-ins and washouts), assessments, and visits for participants. A schematic diagram is highly recommended (see Figure)	Methods: Part 1: Evaluating the Effectiveness of SFL-Research Design: Participants and Sampling	<b>15</b>
<b>Sample size</b>	<u>#14</u>	Estimated number of participants needed to achieve study objectives and how it was determined, including clinical and statistical assumptions supporting any sample size calculations	Methods: Part 1: Evaluating the Effectiveness of SFL-Research Design: Participants and Sampling	<b>15</b>
<b>Recruitment</b>	<u>#15</u>	Strategies for achieving adequate participant enrolment to reach target sample size	Methods: Part 1: Evaluating the Effectiveness of SFL-Research Design: Participants and Sampling	<b>15, 11</b>
			&	
			Methods: Engagement of HTR Men Using Gender-Specific Implementation Strategies	
<b>Methods: Assignment of interventions (for controlled trials)</b>				

<b>Allocation: sequence generation</b>	<b>#16a</b>	Method of generating the allocation sequence (eg, computer-generated random numbers), and list of any factors for stratification. To reduce predictability of a random sequence, details of any planned restriction (e.g., blocking) should be provided in a separate document that is unavailable to those who enroll participants or assign interventions	N/A
<b>Allocation concealment mechanism</b>	<b>#16b</b>	Mechanism of implementing the allocation sequence (eg, central telephone; sequentially numbered, opaque, sealed envelopes), describing any steps to conceal the sequence until interventions are assigned	N/A
<b>Allocation: implementation</b>	<b>#16c</b>	Who will generate the allocation sequence, who will enrol participants, and who will assign participants to interventions	N/A
<b>Blinding (masking)</b>	<b>#17a</b>	Who will be blinded after assignment to interventions (eg, trial participants, care providers, outcome assessors, data analysts), and how	N/A
<b>Blinding (masking): emergency unblinding</b>	<b>#17b</b>	If blinded, circumstances under which unblinding is permissible, and procedure for revealing a participant's allocated intervention during the trial	N/A
<b>Methods: Data collection, management, and analysis</b>			
<b>Data collection plan</b>	<b>#18a</b>	Plans for assessment and collection of outcome, baseline, and other trial data, including any related processes to promote data quality (eg, duplicate measurements, training of assessors) and a description of study instruments (eg, questionnaires, laboratory tests) along with their reliability and validity, if known. Reference to where data collection forms can be found, if not in the protocol	Methods: Part 1: Evaluating the Effectiveness of SFL-Data collection and Data Analysis <b>17,19</b>
<b>Data collection plan: retention</b>	<b>#18b</b>	Plans to promote participant retention and complete follow-up, including list of any	Methods: Part 1: Evaluating the <b>16</b>

		outcome data to be collected for participants who discontinue or deviate from intervention protocols	Effectiveness of SFL-Data collection	
<b>Data management</b>	<u>#19</u>	Plans for data entry, coding, security, and storage, including any related processes to promote data quality (eg, double data entry; range checks for data values). Reference to where details of data management procedures can be found, if not in the protocol	Ethics, Consent and Data Management	<b>13</b>
<b>Statistics: outcomes</b>	<u>#20a</u>	Statistical methods for analysing primary and secondary outcomes. Reference to where other details of the statistical analysis plan can be found, if not in the protocol	Methods: Part 1: Evaluating the Effectiveness of SFL-Data analysis	<b>19, 23</b>
			&	
			Methods: Part 2: Evaluating the Implementation of SFL -Data analysis	
<b>Statistics: additional analyses</b>	<u>#20b</u>	Methods for any additional analyses (eg, subgroup and adjusted analyses)	Methods: Part 1: Evaluating the Effectiveness of SFL-Data analysis	<b>19</b>
			Paragraph 1	
<b>Statistics: analysis population and missing data</b>	<u>#20c</u>	Definition of analysis population relating to protocol non-adherence (eg, as randomised analysis), and any statistical methods to handle missing data (eg, multiple imputation)	Methods: Part 1: Evaluating the Effectiveness of SFL-Data analysis	<b>19</b>
<b>Methods: Monitoring</b>				
<b>Data monitoring: formal committee</b>	<u>#21a</u>	Composition of data monitoring committee (DMC); summary of its role and reporting structure; statement of whether it is independent from the sponsor and competing interests; and reference to where further	N/A	



		details about its charter can be found, if not in the protocol. Alternatively, an explanation of why a DMC is not needed		
<b>Data monitoring: interim analysis</b>	<b>#21b</b>	Description of any interim analyses and stopping guidelines, including who will have access to these interim results and make the final decision to terminate the trial	Dissemination	<b>27</b>
<b>Harms</b>	<b>#22</b>	Plans for collecting, assessing, reporting, and managing solicited and spontaneously reported adverse events and other unintended effects of trial interventions or trial conduct	Ethics, Consent and Data Management	<b>13</b>
<b>Auditing</b>	<b>#23</b>	Frequency and procedures for auditing trial conduct, if any, and whether the process will be independent from investigators and the sponsor	N/A	
<b>Ethics and dissemination</b>				
<b>Research ethics approval</b>	<b>#24</b>	Plans for seeking research ethics committee / institutional review board (REC / IRB) approval	Ethics, Consent and Data Management	<b>13</b>
<b>Protocol amendments</b>	<b>#25</b>	Plans for communicating important protocol modifications (eg, changes to eligibility criteria, outcomes, analyses) to relevant parties (eg, investigators, REC / IRBs, trial participants, trial registries, journals, regulators)	N/A	
<b>Consent or assent</b>	<b>#26a</b>	Who will obtain informed consent or assent from potential trial participants or authorised surrogates, and how (see Item 32)	Ethics, Consent and Data Management	<b>13</b>
<b>Consent or assent: ancillary studies</b>	<b>#26b</b>	Additional consent provisions for collection and use of participant data and biological specimens in ancillary studies, if applicable	N/A	
<b>Confidentiality</b>	<b>#27</b>	How personal information about potential and enrolled participants will be collected, shared, and maintained in order to protect confidentiality before, during, and after the trial	Ethics, Consent and Data Management	<b>13</b>
<b>Declaration of interests</b>	<b>#28</b>	Financial and other competing interests for principal	Declarations: Funding and	<b>29</b>

		investigators for the overall trial and each study site	Competing Interests	
<b>Data access</b>	<b>#29</b>	Statement of who will have access to the final trial dataset, and disclosure of contractual agreements that limit such access for investigators	Ethics, Consent and Data Management:	<b>13</b>
<b>Ancillary and post trial care</b>	<b>#30</b>	Provisions, if any, for ancillary and post-trial care, and for compensation to those who suffer harm from trial participation	N/A	
<b>Dissemination policy: trial results</b>	<b>#31a</b>	Plans for investigators and sponsor to communicate trial results to participants, healthcare professionals, the public, and other relevant groups (eg, via publication, reporting in results databases, or other data sharing arrangements), including any publication restrictions	Dissemination	<b>29</b>
<b>Dissemination policy: authorship</b>	<b>#31b</b>	Authorship eligibility guidelines and any intended use of professional writers	Dissemination	<b>29</b>
<b>Dissemination policy: reproducible research</b>	<b>#31c</b>	Plans, if any, for granting public access to the full protocol, participant-level dataset, and statistical code	Dissemination	<b>29</b>
<b>Appendices</b>				
<b>Informed consent materials</b>	<b>#32</b>	Model consent form and other related documentation given to participants and authorised surrogates	Available on request	
<b>Biological specimens</b>	<b>#33</b>	<b>Plans for collection, laboratory evaluation, and storage of biological specimens for genetic or molecular analysis in the current trial and for future use in ancillary studies, if applicable</b>	N/A	

\*It is strongly recommended that this checklist be read in conjunction with the SPIRIT 2013 Explanation & Elaboration for important clarification on the items. Amendments to the protocol should be tracked and dated. The SPIRIT checklist is copyrighted by the SPIRIT Group under the Creative Commons "[Attribution-NonCommercial-NoDerivs 3.0 Unported](#)" license.

## Appendix E: Baseline Characteristics paper additional file 1 (Chapter 3): Descriptives for individual cooking and food preparation confidence constructs correlated with education levels

Confidence constructs cooking and food preparation (N%) ***				Correlated with Education
<b>Cooking Using Raw Ingredients</b>				
Not at all confident (50) 13.1%	Somewhat confident (91) 21.2%	Confident (88) 23.0%	Very confident (163) 42.7%	0.163**
<b>Following a simple recipe</b>				
Not at all confident (50) 13.1%	Somewhat confident (85) 22.3%	Confident (109) 28.5%	Very confident (182) 36.1%	0.236**
<b>Planning meals before shopping</b>				
Not at all confident (95) 24.9%	Somewhat confident (56) 22.5%	Confident (96) 52.1%	Very confident (105) 27.5%	0.208**
<b>Shopping for food on a budget</b>				
Not at all confident (77) 20.3%	Somewhat confident (82) 21.6%	Confident (107) 28.2%	Very confident (114) 30.0%	0.227**
<b>Shopping for healthier food to eat</b>				
Not at all confident (65) 17.0%	Somewhat confident (94) 24.6%	Confident (110) 28.8%	Very confident (113) 29.6%	0.259**
<b>Cooking new foods</b>				
Not at all confident (119) 31.2%	Somewhat confident (85) 22.3%	Confident (77) 20.2%	Very confident (101) 26.4%	0.281**
<b>Cooking healthier foods</b>				
Not at all confident (64) 16.8%	Somewhat confident (93) 24.4%	Confident (113) 29.7%	Very confident (111) 29.1%	0.243**
<b>Storing food safely</b>				
Not at all confident (35) 9.2%	Somewhat confident (63) 16.5%	Confident (125) 32.7%	Very confident (159) 41.6%	0.162**
<b>Using leftovers to cook other meals</b>				
Not at all confident (86) 22.6%	Somewhat confident (88) 23.1%	Confident (99) 26.0%	Very confident (108) 28.3%	0.169**
<b>Cooking whole raw chicken from scratch</b>				
Not at all confident (86) 22.5%	Somewhat confident (63) 16.5%	Confident (83) 21.7%	Very confident (150) 39.3%	0.179**
<b>Reading food labels</b>				
Not at all confident (90) 23.6%	Somewhat confident (82) 21.5%	Confident (91) 23.8%	Very confident (119) 31.2%	0.204**
<b>Food Hygiene</b>				
Not at all confident (27) 7.1%	Somewhat confident (56) 14.7%	Confident (126) 33%	Very confident (173) 45.3%	0.199**

\* Difference in confidence based on education levels: education is positively correlated to confidence

\*\* Difference is significant at p<0.01

\*\*\*12-item confidence constructs for preparation and cooking practices adapted from Garcia et al., (2017)

**Appendix F: Economic Evaluation - Supplementary File 1 (Chapter 7):  
Histograms of Six dimensions of the SF-6D at baseline**

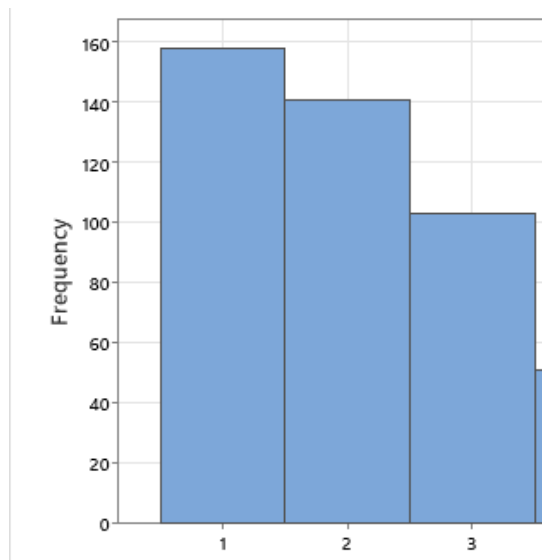


Figure 1: Physical Functioning dimension

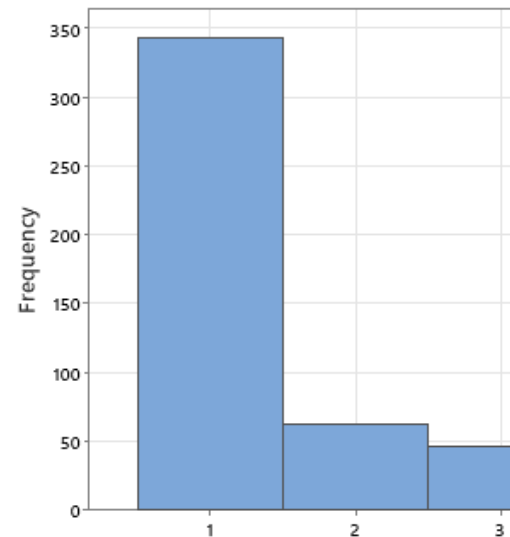


Figure 2: Social Functioning dimension

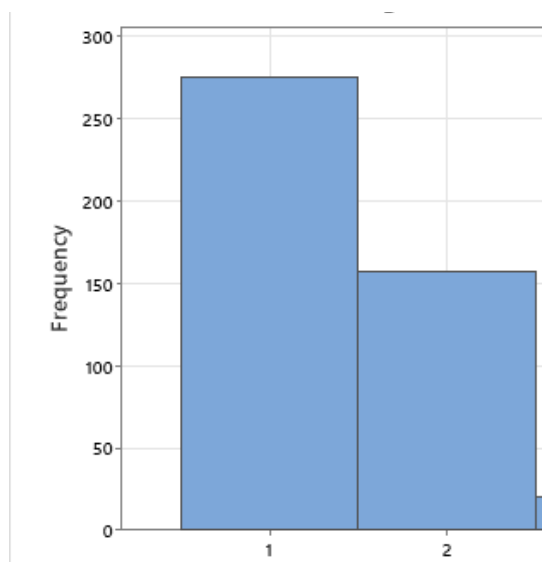


Figure 3: Role limitations dimension

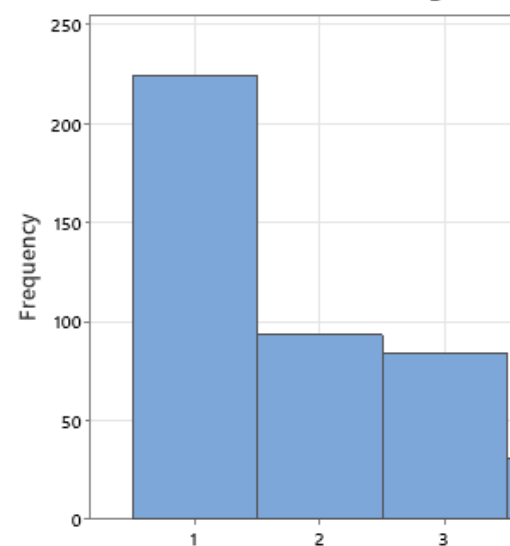


Figure 4: Pain dimension

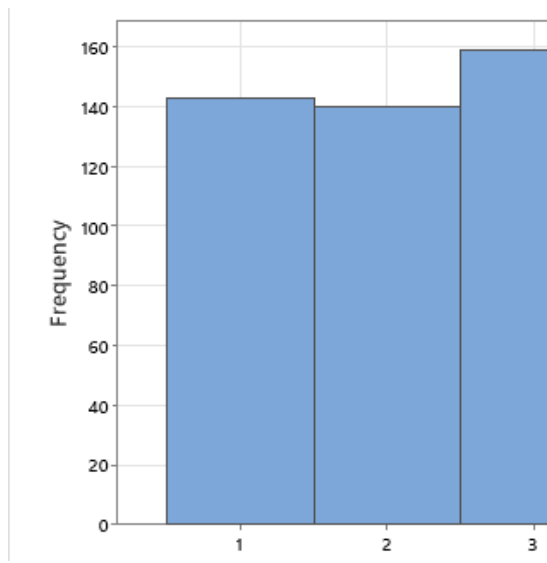


Figure 5: Mental Health Dimension

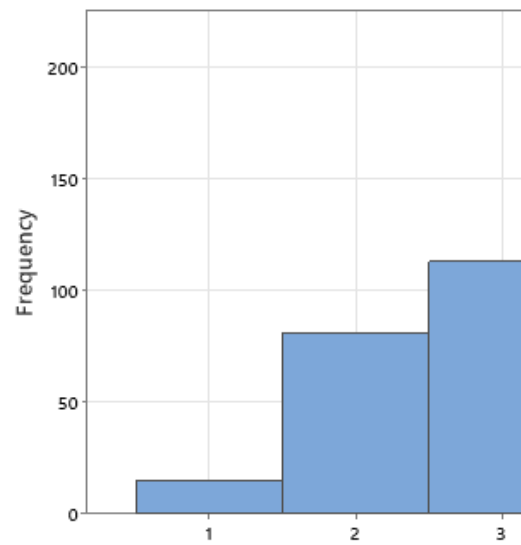


Figure 6: Vitality Dimension

Histograms for the six elements of SF-6D at baseline are shown above. For the dimensions of; Physical Functioning, Role Limitation, Pain, Mental Health and Social Functioning (Figures 1 to 5) lower values represent healthier outcomes and the skewed nature of the histograms to the left demonstrates participant's high rating of wellbeing across the dimensions at baseline. For the Vitality dimension (figure 6) higher vitality ratings are represented by higher values on the scale as this dimension is reversed scored. The skewness to the right on this histogram again represents participant's higher ratings of vitality at baseline

## Appendix G: Supplementary File 1: Scoring of the Intervention Scalability Assessment tool (Chapter 8)

### Supplementary File 1: ISAT scoring for horizontal scale up\* of Sheds for Life

<b>Domain A1: The Problem</b>					
Is the problem of sufficient concern to warrant scale up of the intervention/program to address it?	N/A	0	1	2	3
<b>Domain A2: The intervention</b>					
Will the outcomes delivered by this intervention address the needs of the target group (and/or) problem?	N/A	0	1	2	3
<b>Domain A3: Strategic/Political Context</b>					
Is addressing the problem consistent with policy/strategic directions or priorities?	N/A	0	1	2	3
Will scaling up the intervention be strategically useful to funders/funding agency?	N/A	0	1	2	3
Average score for Domain A3	3				
<b>Domain A4: Evidence of Effectiveness</b>					
Is there compelling evidence (from the literature or elsewhere) to indicate that the intervention is effective in addressing the problem in the target population?	N/A	0	1	2	3
<b>Domain A5: Intervention costs and benefits</b>					
Is there evidence that the benefits of the intervention exceeded the costs?	N/A	0	1	2	3
<b>Domain B1: Fidelity and adaptation</b>					
Will the core components of the scaled up intervention be consistent with what was previously shown to be effective?	N/A	0	1	2	3
If the core components of intervention are to be changed/adapted from its original form during scale up, will the impact of the changes/adaptations likely be favourable?	N/A	0	1	2	3
Can program fidelity be monitored and/or maintained if implemented at scale?	N/A	0	1	2	3
Average score for Domain B1	2				
<b>Domain B2: Reach and acceptability</b>					
Does the intervention have the potential to reach the intended target population at scale?	N/A	0	1	2	3
Is the intervention likely to be acceptable to the target population?	N/A	0	1	2	3
Average score for Doman B2	3				
<b>Domain B3: Delivery setting and workforce</b>					
Is the delivery setting(s) selected to deliver the program at scale consistent with that used in previous studies?	N/A	0	1	2	3
Is the delivery workforce selected to deliver the program at scale consistent with that used in previous studies?	N/A	0	1	2	3
Is the intervention likely to be acceptable to the delivery workforce involved in its delivery at scale?	N/A	0	1	2	3
If the intervention requires integration into existing organisational or community structures, how likely is it to be feasible?	N/A	0	1	2	3

Average score for Domain B3	2.75				
<b>Domain B4: Implementation infrastructure</b>					
Are the implementation infrastructure requirements of the intervention/program feasible for scale up?	N/A	0	1	②	3
<b>Domain B5: Sustainability</b>					
Is the level of integration of the intervention into delivery settings required for implementation at scale sustainable?	N/A	0	1	2	③
Is the level of resourcing required to implement the intervention at scale sustainable?	N/A	0	1	②	3
Is the delivery workforce selected for implementation at scale sustainable?	N/A	0	1	②	3
Average score for Domain B5	2.33				
<i>N/A = not applicable 0=Not at all 1=to a small extent 2=somewhat 3= to a large extent</i>					
<i>Scoring:</i> The purpose of these readiness questions is to assist in identifying the strengths and weaknesses across the domains. Each question is scored from 0–3, where the minimum score for each domain is 0 and the maximum score is 3. In order to derive a final score for the domain, the average score across the questions is taken (if there is more than one question).					
<i>* Scaling up using a horizontal approach involves the introduction of an intervention across different sites or groups in a phased manner, often beginning with a pilot program, followed by stepwise expansion, learning lessons along the way to help refine further expansion (Milat et al., 2020)</i>					

## Appendix H: Ethical Approval

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REF: WIT2018REC0010

11<sup>th</sup> December, 2018.

Ms. Aisling McGrath,  
90, Central Avenue,  
Lisduggan,  
Waterford.

Dear Aisling,

Thank you for bringing your project '*Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme "Sheds for Life" through the application of implementation science*' to the attention of the WIT Research Ethics Committee.

Based on our discussions with you we are happy to grant full ethical approval to this project.

We will convey this decision to Academic Council.

Yours sincerely,

Dr. Michael Harrison,  
Acting Chairperson,  
WIT Research Ethics Committee

cc: Dr. Niamh Murphy



## Appendix I: Baseline participant questionnaire

Baseline Questionnaire

Assigned Code (For official use only): \_\_\_\_\_

Have you signed an informed consent form?

Yes

☐

No

☐

### Irish Heart Foundation Health Check

**NB: This data is to be replicated from the participant's personal record card**

Height (M)	
Weight (Kg)	
Waist Circumference	
Body Mass Index	
Blood Pressure (mmHg)	
Blood Glucose	
Total Cholesterol (mmol/l)	
HDL:	LDL: Triglycerides:
Carbon Monoxide (If smoker)	

Have you been referred to your GP?

Yes

☐

No

☐

When was the last time you visited your GP?

\_\_\_\_\_

\_\_\_\_\_

Recommendations by IHF nurse:

\_\_\_\_\_

\_\_\_\_\_

### About Yourself

1. Please state your date of birth \_\_\_\_\_  
[day/month/year]

2. Which of the following best describes your ethnic background?

(Please tick **one** box only)

White (Irish, Irish Traveller, Any other white background)

☐

Black or Black Irish (African or Any other black background)

☐

Asian or Asian Irish (Chinese or Any other Asian background)

☐

Other (including mixed background)

☐

If 'other', please specify \_\_\_\_\_

**3. Which of the following best describes your level of education?**

(Please tick **one** box only)

Primary education only ☐

Some or completed secondary education ☐

Some or completed third level education ☐

Some or completed postgraduate education ☐

**4. Which of the following best describes you? (Please tick **one** box only)**

Married / cohabiting ☐ Widowed ☐ In a relationship ☐

Separated /divorced ☐ Single ☐

**5. Which of the following best describes you? (Please tick **one** box only)**

I live alone ☐ I live with family/wife/partner ☐ I live with friends ☐

**6. Which of the following best describes you? (Please tick **one** box only)**

Employed (full time) ☐ Employed (part time) ☐

Self-employed ☐ Unemployed and looking for work ☐

Looking after home/family ☐ Retired from paid work ☐

Student ☐ Volunteer ☐

Unable to work due to long term illness/disability ☐

Unemployed

☐

7. How long have you been a member of a men's shed? \_\_\_\_\_

8. How often do you attend your shed?

More than twice a week ☐ Once a week ☐ Every fortnight ☐  
Once a month ☐ Every few months ☐

9. I would say my health is: (Please tick **one** box only)

Excellent ☐ Very good ☐ Good ☐  
Average ☐ Poor ☐

10. Are you someone who likes to find out lots of different information about your health?

Often ☐ Sometimes ☐  
Rarely ☐ Never ☐

### Physical Activity

11. In the past week, on how many days have you done a total of 30 minutes or more of physical activity, which was enough to raise your breathing rate?

(This may include sport, exercise, brisk walking or cycling for recreation or to get to and from places but should not include housework or physical activity that may be part of your job.)

Please circle the relevant number of days: (circle one)

0 1 2 3 4 5 6 7

**WALKING FOR TRANSPORT OR RECREATION** (travelling to work, the shop or from place to place or for exercise or leisure).

12. a) During the last 7 days, on how many days did you walk for at least 10 minutes at a time for leisure or transport? Please circle one number.

0 1 2 3 4 5 6 7

b) How much time did you usually spend on one of those days, in minutes, walking? \_\_\_\_\_ Minutes

13. How confident are you right now that you could exercise three times per week

for 20 minutes if:

	Not Confident							Very Confident			
1. The weather was bothering you	0	1	2	3	4	5	6	7	8	9	10
2. You were bored by the program or activity	0	1	2	3	4	5	6	7	8	9	10
3. You felt pain when exercising	0	1	2	3	4	5	6	7	8	9	10
4. You had to exercise alone	0	1	2	3	4	5	6	7	8	9	10
5. You did not enjoy it	0	1	2	3	4	5	6	7	8	9	10
6. You were too busy with other activities	0	1	2	3	4	5	6	7	8	9	10
7. You felt tired	0	1	2	3	4	5	6	7	8	9	10
8. You felt stressed	0	1	2	3	4	5	6	7	8	9	10
9. You felt depressed	0	1	2	3	4	5	6	7	8	9	10

### About your wellbeing

#### Overall Well-being

**14. Overall, how satisfied are you with your life nowadays? Where 0 is 'not at all satisfied' and 10 is 'completely satisfied' (please circle one)**

0 1 2 3 4 5 6 7 8 9 10

**15. Overall, to what extent do you feel that the things you do in your life are worthwhile? Where 0 is 'not at all worthwhile' and 10 is 'completely worthwhile' (please circle one)**

0 1 2 3 4 5 6 7 8 9 10

**16. Below are some statements about feelings and thoughts.**

Please Circle the box that best describes your experience

Statements	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5

I've been able to make up my own mind about things	1	2	3	4	5
--	---	---	---	---	---

17. Scale: INSTRUCTIONS: Indicate how often each of the statements below is descriptive of you. Think about your experience before becoming a member of the men's shed and also how you feel today. (Please circle one number for each) (1=Rarely, 2=Sometimes, 3=Often)						
Statements	Before joining the men's shed			Today		
How often do you feel that you lack companionship?	1	2	3	1	2	3
How often do you feel left out?	1	2	3	1	2	3
How often do you feel isolated from others?	1	2	3	1	2	3

### Social Capital

**18. How much do you agree or disagree with the following statement? "I feel like I belong to this shed"?**

Strongly Agree ☐ Agree ☐  
Disagree ☐ Strongly Disagree ☐

**19. How much do you agree or disagree with the following statement? "If I needed help, there are people who would be there for me".**

Strongly Agree ☐ Agree ☐  
Disagree ☐ Strongly Disagree ☐

**20. Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please tell me on a score of 0 to 10, where 0 means you can't be too careful and 10 means that most people can be trusted.**

0 1 2 3 4 5 6 7 8 9 10

**21. Instructions:** This information will let us know how you feel and how much you are capable of going through your daily activities. Please mark the item that is closest to how you feel for each question. If you have doubts about how to answer, try to answer as accurately as possible. (please tick one box for each)

### **A) Physical functioning**

- Your health does not limit you in vigorous activities ☐
- Your health limits you a little in vigorous activities ☐
- Your health limits you a little in moderate activities ☐
- Your health limits you a lot in moderate activities ☐
- Your health limits you a little in bathing and dressing ☐
- Your health limits you a lot in bathing and dressing ☐

### B) Role limitation

You have no problems with your work or other regular daily activities as a result of your physical health or any emotional problems ☐

You are limited in the kind of work or other activities as a result of your physical health ☐

You accomplish less than you would like as a result of emotional problems ☐

You are limited in the kind of work or other activities as a result of your physical health and accomplish less than you would like as a result of emotional problems ☐

### C) Social functioning

Your health limits your social activities...

None of the time ☐

☐

the time ☐

☐

☐

Some of the time

A little of

Most of the time

All of the time

### D) Pain

How often does your pain interfere with your normal work (both outside the home and housework)

You have no pain ☐

bit ☐

It does not interfere ☐

A little

Moderately ☐

Quite a bit ☐

Extremely ☐

### E) Mental health

You feel tense or downhearted and low...

None of the time ☐

☐

the time ☐

☐

☐

Some of the time

A little of

Most of the time

All of the time

### F) Vitality

You have a lot of energy

None of the time ☐

☐

the time ☐

☐

☐

Some of the time

A little of

Most of the time

All of the time

**22. Do you currently smoke cigarettes, cigars, a pipe or use chewing tobacco?**  
(Please tick one box only)

Never Smoked ☐ Former Smoker ☐ Current Smoker ☐

**23. If you are a current smoker, how many per day on average do you 'smoke'?**

\_\_\_\_\_

**24. Do you drink alcohol?** Yes ☐ No ☐

**25. Example of a unit of alcohol: A pub measure of spirits (35.5ml); small glass of wine (12.5%); half-pint of normal beer (2units in a pint); alcopop (275 ml).**

How many days of the week do you drink? \_\_\_\_\_

How many units of alcohol do you drink per session? \_\_\_\_\_

---

### Healthy Food Made Easy

**26. How many portions of fruit and/or vegetables (including pulses, salad, vegetables, fruit juices and fresh, dried and canned fruit) did you eat yesterday? (Please circle one only)**

None    1    2    3    4    5    6    7+

**27. For your main meals, what kind of cooking do you mainly do at the moment?**  
(Please tick as many boxes as apply)

Don't cook at all ☐ Put ready meals in microwave or oven ☐  
☐ Put together ready-made ingredients (sauce jars) to make a meal ☐  
☐ Prepare meals from scratch (using raw ingredients) ☐

**28. How often do you prepare and cook your own meals?**

Often ☐ Sometimes ☐  
Rarely ☐ Never ☐

**29. How willing are you to cook and prepare your own meals?**

Extremely Willing ☐ Very Willing ☐  
Somewhat Willing ☐ Not at all Willing ☐

**30. On a scale of 1 (not at all confident) to 4 (very confident) please tick which number best shows how confident you feel about the following: (please circle one box only for each)**

	Not at all confident 1	Somewhat Confident 2	Confident 3	Very Confident 4
Cooking using raw ingredients	1	2	3	4
Following a simple recipe	1	2	3	4
Planning meals before shopping	1	2	3	4
Shopping for food on a budget	1	2	3	4
Shopping for healthier food to eat	1	2	3	4
Cooking new foods	1	2	3	4
Cooking healthier foods	1	2	3	4
Storing food safely	1	2	3	4
Using leftovers to cook other meals	1	2	3	4
Cooking whole raw chicken from scratch	1	2	3	4
Reading food labels	1	2	3	4
Food Hygiene	1	2	3	4

Answer the following questions if participating in the Diabetes Ireland Workshop

31. Do you have Diabetes ?      Yes ☐      If yes which type ?.....      No ☐

32. If No do you think you are      LOW ☐      MODERATE ☐      OR HIGH ☐      risk of getting  
Type 2 diabetes ?

(Please tick one box only for each)

33.	Questions	Yes	No	Don't know
A	Diet and exercise are just as important as medication to control diabetes.			
B	The way I prepare my food is as important as the foods I eat.			
C	Shaking and sweating are signs of high blood glucose.			
D	Regular Exercise will reduce the risk of type 2 diabetes			
E	Diabetes can damage your kidneys and other organs			
F	Frequent urination may be a sign of diabetes			
G	Diabetes often causes poor circulation			

34. Answer the following if participating in Safe Talk  
workshop



(Please tick one box only for each)

- A How confident are you in dealing with the needs of someone who may be suicidal
- B How confident are you in identifying appropriate services that Individuals in distress could be referred on to?
- C I would be willing to talk openly and directly to a person about suicide
- D I feel prepared to talk directly and openly to a person about suicide

Strongly Confident	Very confident	Somewhat confident	A Little Confident	Not at all confident
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

35. Answer the following if participating in online resource training

How certain are you that you would succeed in the following:	Very Certain	Certain	Somewhat Certain	Uncertain	Very uncertain
Accessing a website to source information					
Sending and receiving an email					
Using social media e.g. facebook					
Staying connected with family and friends online e.g. Skype					
Online banking, shopping and motor tax renewal					
Getting online and using apps on your smartphone					

36. Answer the following if participating in the Oral Health Workshop (Dental Health Foundation)

A. How would you rate the health of your gums and teeth?

Excellent ☐ Very good ☐ Good ☐ Average ☐ Poor ☐ Very poor ☐ Don't know ☐

B. How important is looking after your oral health to you?

Very important ☐ Important ☐ Moderately Important ☐ Of Little Importance ☐ Unimportant ☐

C. How confident are you in looking after your oral health ?

- ☐ Strongly confident      ☐ Somewhat confident      ☐ Not at all confident  
☐ Very confident      ☐ A little confident

**D. It is important to brush my teeth twice a day**

Strongly Agree ☐ Agree ☐ Undecided ☐ Disagree ☐ Strongly Disagree ☐

**E. It is important to visit my dentist once a year :**

Very important ☐ Important ☐ Moderately Important ☐ Of Little Importance ☐  
 Unimportant ☐

**37. Answer the following if participating in the Mental Health and Wellbeing Workshop  
(Mental Health Ireland)**

**(Please tick one box only for each)**

How certain are you about the following:	Very Certain	Certain	Somewhat Certain	Uncertain	Very uncertain
I have a good understanding about how to manage my mental health and wellbeing					
I am comfortable that I could have a conversation about my mental health					
I feel equipped with practical supports to maintain and enhance my mental wellbeing					

**38. Answer the following if participating in the CPR workshop (Irish Heart Foundation)**

**(Please tick one box only for each)**

- A **How confident do you feel in recognising cardiac arrest and calling the emergency services?**
- B **How confident do you feel operating an AED (defibrillator?)**
- C **How confident do you feel performing chest compressions?**

Strongly Confident	Very confident	Somewhat confident	A Little Confident	Not at all confident

**39. Answer the following if participating in the Cancer prevention Workshop (National Screening Service)**

**(Please tick one box only for each)**

<b>How much do you agree with the following statements</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Somewhat Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
I have a clear understanding of the cancer related early-detection signs to look out for					
I have clear understanding of the cancers most prevalent in men (Lung, bowel, prostate, and skin)					
I have a clear understanding of cancer screening in Ireland					
It is important to me to attend Bowel Screen					
It is important to me to attend Retina Screen (Answer if you are diabetic, otherwise tick NA <input type="checkbox"/> )					

**Thank you for completing this Questionnaire**

## Appendix J: Follow-up participant questionnaire with COVID-19 measures

### Sheds for Life with COVID-19 assessment

Follow up Questionnaire (six months)      Assigned Code (For official use only): PO2\_\_\_\_\_

Have you previously signed an informed consent form?      Yes    ☐    No  
☐

### About Yourself

**1. Prior to COVID-19 restrictions how often did you attend your shed?**

More than twice a week    ☐      Once a week    ☐      Every fortnight    ☐  
Once a month    ☐      Every few months    ☐

**2. a) Currently I would say my health is: (Please tick **one** box only)**

Excellent    ☐      Very good    ☐      Good    ☐  
Average    ☐      Poor    ☐

**b) Prior to COVID-19 I would have said my health was: (Please tick **one** box only)**

Excellent    ☐      Very good    ☐      Good    ☐  
Average    ☐      Poor    ☐

**3. Are you someone who likes to find out lots of different information about your health?**

Often    ☐      Sometimes    ☐  
Rarely    ☐      Never    ☐

### Physical Activity

**4. Since the COVID-19 pandemic I have been doing physical activity:**

More than usual    ☐      About the same    ☐  
Less than usual    ☐

**5. In the past week, on how many days have you done a total of 30 minutes or more of physical activity, which was enough to raise your breathing rate?**

(This may include sport, exercise, brisk walking or cycling for recreation or to get to and from places but should not include housework or physical activity that may be part of your job.)

Please circle the relevant number of days: (circle one)

0 1 2 3 4 5 6 7

6. Think about all the activities that you did in a typical week before the social distancing restrictions were introduced. On how many days did you do a total of 30 minutes of more of physical activity, which was enough to raise your breathing rate?

Please circle the relevant number of days: (circle one)

0 1 2 3 4 5 6 7

7. **WALKING FOR TRANSPORT OR RECREATION** (travelling to work, the shop or from place to place or for exercise or leisure).

a) During the last 7 days, on how many days did you walk for at least 10 minutes at a time for leisure or transport? Please circle one number.

0 1 2 3 4 5 6 7

b) How much time did you usually spend on one of those days, in minutes, walking? \_\_\_\_\_ Minutes

Think about the time you spent **walking** in a typical week before the social distancing restrictions were introduced. This includes at work and at home, walking to travel from place to place, and any other walking that you have done solely for recreation, sport, exercise, or leisure.

c) During those 7 days, on how many days did you walk for at least 10 minutes at a time for leisure or transport? Please circle one number.

0 1 2 3 4 5 6 7

d) How much time did you usually spend on one of those days, in minutes, walking? \_\_\_\_\_ Minutes

8. How confident are you right now that you could exercise for three times per week for 20 minutes if:

	Not Confident								Very Confident			
1. The weather was bothering you	0	1	2	3	4	5	6	7	8	9	10	
2. You were bored by the program or activity	0	1	2	3	4	5	6	7	8	9	10	
3. You felt pain when	0	1	2	3	4	5	6	7	8	9	10	

exercising											
4. You had to exercise Alone	0	1	2	3	4	5	6	7	8	9	10
5. You did not enjoy it	0	1	2	3	4	5	6	7	8	9	10
6. You were too busy with other activities	0	1	2	3	4	5	6	7	8	9	10
7. You felt tired	0	1	2	3	4	5	6	7	8	9	10
8. You felt stressed	0	1	2	3	4	5	6	7	8	9	10
9. You felt depressed	0	1	2	3	4	5	6	7	8	9	10

**9. Did you attend the Sheds for Life exercise classes? (Siel Bleu or Get Ireland Walking)**

Yes ☐ No ☐

**10. How confident are you that you will continue the exercises you learned during Sheds for Life? Where 0 is 'not at all confident' and 10 is 'completely confident' (please circle one)**

0 1 2 3 4 5 6 7 8 9 10

**11. Since the COVID-19 pandemic have you participated in the online Siel Bleu classes for shedders?**

Yes ☐ No ☐ Did not know about the classes ☐

### **About your wellbeing**

**12. Overall, how satisfied are you with your life nowadays? Where 0 is 'not at all satisfied' and 10 is 'completely satisfied' (please circle one)**

0 1 2 3 4 5 6 7 8 9 10

**13. Thinking back to before COVID-19 restrictions, how satisfied were you with life? Where 0 is 'not at all satisfied' and 10 is 'completely satisfied' (please circle one)**

0 1 2 3 4 5 6 7 8 9 10

**14. Overall, to what extent do you feel that the things you do in your life are worthwhile? Where 0 is 'not at all worthwhile' and 10 is 'completely worthwhile' (please circle one)**

0 1 2 3 4 5 6 7 8 9 10

15. Thinking back to before COVID-19 restrictions, to what extent did you feel that things you do in life are worthwhile? Where 0 is 'not at all worthwhile' and 10 is 'completely worthwhile' (please circle one)

0 1 2 3 4 5 6 7 8 9 10

16. Below are some statements about feelings and thoughts.

Please Circle the box that best describes your experience

Statements	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5

Scale: INSTRUCTIONS: Indicate how often each of the statements below is descriptive of you. . (Please circle one number for each)

Statements	Over the past ten weeks			Prior to social distancing		
	Rarely	Sometimes	Often	Rarely	Sometimes	Often
How often do you feel that you lack companionship?	1	2	3	1	2	3
How often do you feel left out?	1	2	3	1	2	3
How often do you feel isolated from others?	1	2	3	1	2	3

### Social Capital

17. How much do you agree or disagree with the following statement? "I feel like I belong to this shed"?

Strongly Agree ☐ Agree ☐  
Disagree ☐ Strongly Disagree ☐

18. How much do you agree or disagree with the following statement? "If I needed help, there are people who would be there for me".

Strongly Agree ☐ Agree ☐

Disagree



Strongly Disagree



**19. Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please tell me on a score of 0 to 10, where 0 means you can't be too careful and 10 means that most people can be trusted.**

0 1 2 3 4 5 6 7 8 9 10

**20. Instructions:** This information will let us know how you feel and how much you are capable of going through your daily activities. Please mark the item that is closest to how you feel for each question. If you have doubts about how to answer, try to answer as accurately as possible. (please tick one box for each)

#### **G) Physical functioning**

Your health does not limit you in vigorous activities



Your health limits you a little in vigorous activities



Your health limits you a little in moderate activities



Your health limits you a lot in moderate activities



Your health limits you a little in bathing and dressing



Your health limits you a lot in bathing and dressing



#### **H) Role limitation**

You have no problems with your work or other regular daily activities as a result of your physical health or any emotional problems



You are limited in the kind of work or other activities as a result of your physical health



You accomplish less than you would like as a result of emotional problems



You are limited in the kind of work or other activities as a result of your physical health and accomplish less than you would like as a result of emotional problems



#### **I) Social functioning**

Your health limits your social activities...

None of the time ☐



the time ☐



Some of the time

A little of

Most of the time

All of the time



### J) Pain

How often does your pain interfere with your normal work (both outside the home and housework)

- You have no pain ☐ It does not interfere ☐ A little bit ☐
- Moderately ☐ Quite a bit ☐
- Extremely ☐

### K) Mental health

You feel tense or downhearted and low...

- None of the time ☐ Some of the time ☐
- ☐ A little of the time ☐
- ☐ Most of the time ☐
- ☐ All of the time ☐

### L) Vitality

You have a lot of energy

- None of the time ☐ Some of the time ☐
- ☐ A little of the time ☐
- ☐ Most of the time ☐
- ☐ All of the time ☐

### About your lifestyle

21. Do you currently smoke cigarettes, cigars, a pipe or use chewing tobacco?  
(Please tick one box only)

- Never Smoked ☐ Former Smoker ☐ Current Smoker ☐

22. a) If you are a current smoker, how many per day on average do you 'smoke'?

\_\_\_\_\_

b) If you are a current smoker, how many per day on average did you smoke prior to COVID-19? \_\_\_\_\_

23. Do you drink alcohol? Yes ☐ No ☐

24. Example of a unit of alcohol: A pub measure of spirits (35.5ml); small glass of wine (12.5%); half-pint of normal beer (2units in a pint); alcopop (275 ml).

- a. How many days of the week do you drink? \_\_\_\_\_
- b. How many units of alcohol do you drink per session? \_\_\_\_\_

- c. Prior to COVID-19 how many days of the week did you drink?  
\_\_\_\_\_
- d. Prior to COVID-19 how many units of alcohol did you drink per session?  
\_\_\_\_\_

### **Healthy food made easy**

- 25. a) How many portions of fruit and/or vegetables (including pulses, salad, vegetables, fruit juices and fresh, dried and canned fruit) did you eat yesterday? (Please circle one only)**

None      1      2      3      4      5      6      7+

- b) Prior to COVID-19 how many portions of fruit and/or vegetables (including pulses, salad, vegetables, fruit juices and fresh, dried and canned fruit) did you eat in a typical day? (Please circle one only)**

None      1      2      3      4      5      6      7+

- 26. a) For your main meals, what kind of cooking do you mainly do at the moment?**

Don't cook at all    ☐                      Put ready meals in microwave or oven    ☐  
 Put together ready-made ingredients (sauce jars) to make a meal    ☐  
 Prepare meals from scratch (using raw ingredients)                      ☐

- b) Prior to COVID-19 for your main meals, what kind of cooking did you mainly do?**

Don't cook at all    ☐                      Put ready meals in microwave or oven    ☐  
 Put together ready-made ingredients (sauce jars) to make a meal    ☐  
 Prepare meals from scratch (using raw ingredients)                      ☐

- 27. a) How often do you prepare and cook your own meals?**

Often                      ☐                      Sometimes                      ☐  
 Rarely                      ☐                      Never                      ☐

- b) Prior to COVID-19, how often did you prepare and cook your own meals?**

Often                      ☐                      Sometimes                      ☐  
 Rarely                      ☐                      Never                      ☐

**28. How willing are you to cook and prepare your own meals?**

Extremely Willing ☐ Very Willing ☐  
Somewhat Willing ☐ Not at all Willing ☐

**29. On a scale of 1 (not at all confident) to 4 (very confident) please tick which number best shows how confident you feel about the following: (please circle one box only for each)**

	Not at all confident 1	Somewhat Confident 2	Confident 3	Very Confident 4
Cooking using raw ingredients	1	2	3	4
Following a simple recipe	1	2	3	4
Planning meals before shopping	1	2	3	4
Shopping for food on a budget	1	2	3	4
Shopping for healthier food to eat	1	2	3	4
Cooking new foods	1	2	3	4
Cooking healthier foods	1	2	3	4
Storing food safely	1	2	3	4
Using leftovers to cook other meals	1	2	3	4
Cooking whole raw chicken from scratch	1	2	3	4
Reading food labels	1	2	3	4
Food Hygiene	1	2	3	4

**30. Did you participate in the Healthy Food Made Easy Programme?**

Yes ☐ No ☐

**31. Have you continued to practice the skills you learned during healthy food made easy?**

Often ☐ Sometimes ☐  
Rarely ☐ Never ☐

**Answering the following questions if participating in the Diabetes Ireland Workshop**

**32. Do you have Diabetes ?** Yes ☐ If yes which type ?..... No ☐

**33. If No do you think you are** LOW ☐ MODERATE ☐ OR HIGH ☐ **risk of getting Type 2 diabetes ?**

**34. (Please tick one box only for each)**

	Questions	Yes	No	Don't know
<b>A</b>	Diet and exercise are just as important as medication to control diabetes.			
<b>B</b>	The way I prepare my food is as important as the foods I eat.			
<b>C</b>	Regular Exercise will reduce the risk of type 2 diabetes			

**35. Did you participate in the diabetes workshop?**

Yes ☐ No ☐ Don't Know ☐

**Answer the following if participating in the safeTALK workshop**

**36. (Please tick one box only for each)**

- A** How confident are you in dealing with the needs of someone who may be suicidal
- B** How confident are you in identifying appropriate services that Individuals in distress could be referred on to?
- C** I would be willing to talk openly and directly to a person about suicide
- D** I feel prepared to talk directly and openly to a person about suicide

Strongly Confident	Very confident	Somewhat confident	A Little Confident	Not at all confident
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

**37. Did you participate in the safeTALK Workshop ?**

Yes ☐ No ☐ Don't Know ☐

**38. Answer the following if participating in the online resource (computer) training**

How certain are you that you would succeed in the following:	Very Certain	Certain	Somewhat Certain	Uncertain	Very uncertain
Accessing a website to source information					
Sending and receiving an email					
Using social media e.g. facebook					
Staying connected					

with family and friends online e.g. Skype																	
Online banking, shopping and motor tax renewal																	
Getting online and using apps on your smartphone																	
Did you participate in the online resource training?	Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know <input type="checkbox"/>																
Has this training been useful to get online during the COVID-19 restrictions?	<table> <tr> <td><b>Extremely useful</b></td> <td><input type="checkbox"/></td> <td><b>Very useful</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Moderately useful</b></td> <td><input type="checkbox"/></td> <td><b>Slightly useful</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Not at all useful</b></td> <td><input type="checkbox"/></td> <td></td> <td></td> </tr> </table>					<b>Extremely useful</b>	<input type="checkbox"/>	<b>Very useful</b>	<input type="checkbox"/>	<b>Moderately useful</b>	<input type="checkbox"/>	<b>Slightly useful</b>	<input type="checkbox"/>	<b>Not at all useful</b>	<input type="checkbox"/>		
<b>Extremely useful</b>	<input type="checkbox"/>	<b>Very useful</b>	<input type="checkbox"/>														
<b>Moderately useful</b>	<input type="checkbox"/>	<b>Slightly useful</b>	<input type="checkbox"/>														
<b>Not at all useful</b>	<input type="checkbox"/>																

### 39. Mental Health Workshop

How certain are you about the following:	Very Certain	Certain	Somewhat Certain	Uncertain	Very uncertain
I have a good understanding about how to manage my mental health and wellbeing					
I am comfortable that I could have a conversation about my mental health					
I feel equipped with practical supports to maintain and enhance my mental wellbeing					
Did you participate in the Mental Health Workshop?	Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know <input type="checkbox"/>				

### 40. Answer the following if participating in the CPR workshop

(Please tick one box only for each)

- How confident do you feel in recognising cardiac arrest and calling the emergency services?
- How confident do you feel operating an AED (defibrillator?)

Strongly Confident	Very confident	Somewhat confident	A Little Confident	Not at all confident

c) How confident do you feel performing chest compressions?


d) Did you participate in the CPR workshop?

Yes ☐ No ☐ Don't Know ☐

**41. Answer the following if participating in the Cancer Prevention workshop**

How much do you agree with the following statements	Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree
I have a clear understanding of the cancer related early-detection signs to look out for					
I have clear understanding of the cancers most prevalent in men (Lung, bowel, prostate, and skin)					
Did you participate in the Cancer Prevention Workshop?	Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know <input type="checkbox"/>				

**42. I would recommend the Sheds for Life programme to a friend:**

Strongly Agree ☐ Agree ☐  
 Disagree ☐ Strongly Disagree ☐

**43. Any feedback or recommendations about the Sheds for Life ten-week programme?**

---

**44. What have you missed most about your shed during the COVID-19 restrictions?**

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Thank you for completing this questionnaire

## Appendix K: Participant information sheet



### Information Letter for Participants of the Sheds for Life ten-week programme

**Full study title:** “Shedding light on men’s health: Evaluating the scalability of a community-based men’s health promotion programme ‘Sheds for Life’ through the application of implementation science”

Dear **Men’s Shed Member**,

As part of the Sheds for Life initiative the Irish Men’s Sheds Association will be running a ten-week wellbeing programme for men’s sheds members in your shed. As your shed has selected to take part in the programme you are now being invited to take part in the programme’s research study.

#### **What is involved?**

The study will involve your participation in the completion of **questionnaires and group interviews as well as some observational work** to gather relevant information and feedback to support the evaluation. These will happen at the beginning and end of the ten-week programme and at six and twelve months follow-up. With your permission, you will be asked to share health check and fitness results with the researcher. Audio recordings of the group discussions will also be made and observational notes will be taken.

#### **How do I take part?**

You can take part in this study by signing the informed Consent Form and participating in the Shed’s for Life ten-week programme. Participation in this study is completely **voluntary** and if you do agree to take part you are **free to withdraw at any time** up until the date of publication.

#### **What is the information used for?**

The information will be used to inform the results of an evaluation for the Irish Men’s Sheds Association and also a postgraduate PhD thesis. Results of the study will also be shared at conferences and in publications in order to showcase the impact of the programme.

#### **How will my privacy be protected?**

Waterford Institute of Technology will protect all the information about you and your part in this study. Your identity or personal information that may identify you will not be revealed or published. All data relating to you will be anonymised and in cases where a name is used, a pseudonym (false name) will be assigned. All data will be kept secured at all times,

hardcopies will be locked in a secure filing cabinet and electronic files will be password protected. Only the researchers and research supervisors will have access to this information. You are entitled to request the information you have shared at any time.

**What are the benefits?**

By participating in this study you will help to inform the study's results which will help in the future planning and development of Sheds for Life programmes offered in sheds. This will in turn help to support men's shed members to improve their overall health and wellbeing.

**What if something goes wrong?**

Your wellbeing is a top priority for the researcher and the Irish Men's Sheds association and every consideration will be given to safeguarding it. Besides dedicating some of your time to the research, there are no other foreseen negative consequences for you in taking part. It is possible that talking about your experiences in relation to your wellbeing may cause some distress. If that happens rest assured that you will be under no obligation to continue any discussion or answer any questions that make you uncomfortable. If you continue to feel distressed you will be signposted to the suitable support.

**Who can I contact if I have any questions or concerns?**

If you do agree to take part in the research element of this ten-week programme, you will be asked to sign an informed consent form after your initial health check. If you have any further queries or concerns please feel free to contact the researcher or the Irish Men's Sheds Association's health and wellbeing manager (details below).

**Researcher:  
Manager:**

Aisling McGrath,  
Postgraduate Researcher,  
Manager,  
Department of Sport and Exercise Science,  
Association,  
Waterford Institute of Technology  
Phone: 0852163077  
Email: aisling.mcgrath@postgrad.wit.ie

**Health and Wellbeing**

Edel Byrne,  
Health and Wellbeing  
Irish Men's Sheds  
Phone: 01-8916150  
Email: Edel@menssheds.ie

Kind Regards,

*Aisling McGrath*



## Appendix L: Participant consent form



### Consent form for “Sheds for Life” programme participants

**“Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme 'Sheds for Life' through the application of implementation science”**

PLEASE NOTE PARTICIPATION IS STRICTLY VOLUNTARY.

**Please tick EACH box and sign your name in the space below**

1. I confirm that I have read the document entitled ‘Information form for Sheds for Life programme participants’ and have had the opportunity to ask questions ☐

2. I am satisfied that I understand the information provided and have had enough time to digest the information ☐

3. I understand that my participation is voluntary and that I am free to withdraw at any stage throughout the study without reason and without my legal rights being affected ☐

4. I consent to allow my data to be shared for the purpose of the evaluation and for use in publications and I understand that all details shared with the researcher will remain confidential and my name will not be used in any publication. ☐

5. I am willing to share my health and fitness results with the researcher for the purpose of the evaluation. ☐

6. I agree to take part in the study entitled “Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme 'Sheds for Life' through the application of implementation science” ☐

Name: \_\_\_\_\_ (Please use block capitals)

Signature: \_\_\_\_\_

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

## **Appendix M: Provider information sheet and letter for aligning data collection**



### **Information Letter for Partners of the Sheds for Life ten-week programme**

**Full study title:** “Shedding light on men’s health: Evaluating the scalability of a community-based men’s health promotion programme ‘Sheds for Life’ through the application of implementation science”

Dear **Sheds for Life** programme partner,

You are receiving this letter because you have kindly agreed to deliver a component of the ten-week Sheds for Life programme in partnership with Irish Men’s Sheds Association. As you may know, this ten-week programme is the basis for an evaluation that the Irish Men’s Sheds Association are conducting in conjunction with Waterford Institute of Technology which your organisation is now being invited to take part in.

#### **Background to the Research**

Sheds for Life is a men’s health initiative developed by the Irish Men’s Sheds Association that seeks to engage typically hard-to-reach men in community based health promotion within the sheds setting. To date few “men-friendly” settings-based health promotion interventions have been developed or formally evaluated. There is also a lack of practical guidance on how to effectively plan, implement and scale-up these programmes. This means that the challenges of implementing and sustaining health interventions often emerge only after tightly-controlled efficacy trials are complete and conditions to disseminate and scale-up interventions become much more variable in the real-world setting. The exponential growth of Men’s Sheds in Ireland and the development of Sheds for Life presents a unique opportunity to address this gap.

#### **What does our participation in the study involve?**

Central to the effective implementation of the Sheds for Life initiative is a partnership approach between the Irish Men’s Shed Association and a range of other health-related partner organisation like yours. The aim of this research is to identify ways to successfully translate Sheds for Life into the sheds setting. To do this we hope to engage partners of the Sheds for Life programme such as you, so that we can work together to identify the factors that can lead to the successful implementation of Sheds for Life and more broadly, other

community-based men's health programmes. The study will involve your participation in the completion of **questionnaires and interviews as well as some observational work and record keeping** to gather relevant information and feedback to support the evaluation. These will happen on ongoing basis, more notably at the beginning and end of the ten-week programme and at subsequent follow-up periods. With your permission you will be asked to share your views and experiences with the researcher as well as some information related to costs of implementing the programme. Audio recordings will also be taken of any discussions.

#### **How do I take part?**

We hope that as a partner of the Sheds for Life programme you would be willing to share your knowledge and collaborate with the research team which will allow improved development and implementation of the programme. However, participation is completely **voluntary** and you are free to withdraw from the research at any time up until the date of publication. If you would like to take part please sign the informed consent form overleaf.

#### **Alignment of data collection:**

We understand that your organisation may already carry out some forms of evaluation within the sheds. Out of respect and fairness to the shed members participating in the study and in keeping with GDPR guidelines, we would ask that you liaise directly with the researcher so that unnecessary duplicate data is not collected during the study and stored by your organisation. As part of this evaluation the researcher will happy to evaluate elements of your programme for you and we ask that you are willing to align you data collection requirements with the researcher so that a consensus can be reached on what data to collect. This will ensure that data protection regulations are upheld and that the researcher is responsible for collecting, storing and accessing all data relating to the evaluation in line with GDPR requirements. We would like to work collaboratively with you to reach a consensus and you may be invited to attend meetings to share your views alongside other partners.

#### **What is the information used for?**

The information will be used to inform the results of the evaluation for the Irish Men' Sheds Association and also a postgraduate PhD thesis. Results of the study will also be shared at conferences and in publications in order to showcase the impact of the programme.

#### **How will my privacy be protected?**

Waterford Institute of Technology will protect all the information about you and your part in this study. Your identity or personal information that may identify you will not be revealed or published without your consent. All data relating to you will be anonymised and in cases where a name is used a pseudonym (false name) will be assigned. All data will be kept secured at all times, hardcopies will be locked in a secure filing cabinet and electronic files will be password protected. Only the researchers and research supervisors will have access to this information. You are entitled to request the information you have shared at any time.

#### **What are the benefits?**

By participating in this study you will help to inform the study's results which will help in the future planning and development of Sheds for Life programmes offered in sheds. This will in turn help to support men's shed members to improve their overall health and wellbeing. Your organisation's participation in this study will also mean that your organisation's component of Sheds for Life will be evaluated on your behalf allowing you to demonstrate results of your programme. If your organisation has normally gathered feedback independently, taking part in this evaluation will also mean that this will be done for you.

**What are the disadvantages?**

Your wellbeing is a top priority for the researcher and the Irish Men's Sheds association and every consideration will be given to safeguarding it. Besides dedicating some of your time to the research, there are no other foreseen negative consequences for you in taking part.

**Who can I contact if I have any questions or concerns?**

If you do agree to take part in this research study, you are asked to sign the informed consent form overleaf. If you have any further queries or concerns please feel free to contact the researcher (details below)

**Researcher:**

Aisling McGrath,

Postgraduate Researcher,

Department of Sport and Exercise Science, Waterford Institute of Technology

Phone: 0852163077

Email: [aisling.mcgrath@postgrad.wit.ie](mailto:aisling.mcgrath@postgrad.wit.ie)

Kind Regards,

*Aisling McGrath*

14/11/2018

Dear **Sheds for Life partner**,

You are receiving this letter as you have kindly offered to deliver a component of the **Shed's for Life programme** in partnership with the Irish Men's Sheds Association. As you may know, this programme will form the basis of a four year PhD research study. I am writing to you today as I am aware that some of the partner organisations may already be conducting their own evaluation of the component of Sheds for Life that they deliver. If this is not the case for you, then this letter may not be directly relevant to you. However, as part of this research study, elements of your programme delivered under Sheds for Life will be evaluated on your behalf.

If you have previously been evaluating or plan to evaluate your programme under Sheds for Life I would ask that you consider working with me to align your evaluation efforts with the wider study.

This would mean that your organisation would communicate directly with the researcher on what data is collected by your organisation in order to evaluate your component of Sheds for Life. We could then reach a consensus on what data is to be collected by working together in collaboration. The goal here is to develop standard questionnaires and/or topic guides for the wider evaluation that would still inform an evaluation of your organisation's component of the Sheds for Life programme but that would allow more effective and organised collection of data. This approach will also allow both researchers and partners to work together in determining what outcomes to measure.

**This is viewed by the research team as the best method of moving forward with the evaluation for the following reasons:**

Out of interest and fairness to shed members participating in the programme it would be unfair to ask them to fill out duplicate information and/or answer repetitive questions. This would be time consuming for them and would also hinder the quality of data collected.

Due to GDPR regulations the researcher must be responsible for collecting, storing, and accessing any data collected during this research study. This means that any

data collected directly by you would not be usable or accessible by the researcher and therefore could not be used in the evaluation.

In order to move forward with the evaluation design, I would be grateful if you could send me any evaluation criteria such as questionnaires, topic guides, etc. that you have in relation to your programme that you plan to run as part of Sheds for Life. Every effort can then be made to incorporate the relevant elements of these into the larger study.

I look forward to hearing from you. Please be aware that you will also be receiving a follow-up information letter outlining the research along with a consent form to allow you to consent to participating in the research, in due course.

If you have any further queries please do not hesitate to contact me.

Yours Sincerely,

**Aisling McGrath,**

Government of Ireland Postgraduate Scholar,

Postgraduate Researcher,

Department of Sport and Exercise Science, Waterford Institute of Technology

**Email:** aisling.mcgrath@postgrad.wit.ie

## Appendix N: Provider consent form



### Consent form for “Sheds for Life” programme coordinators and partners

#### **“Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme 'Sheds for Life' through the application of implementation science”**

PLEASE NOTE PARTICIPATION IS STRICTLY VOLUNTARY.

**Please tick EACH box and sign your name in the space below**

1. I confirm that I have had the purpose and nature of this study clearly explained to me and have had the opportunity to ask questions ☐

2. I am satisfied that I understand the information provided and have had enough time to digest the information ☐

3. I understand that my participation is voluntary and that I am free to withdraw at any stage throughout the study without reason and without my legal rights being affected ☐

4. I agree to written notes being taken by the researcher and interviews being audio recorded ☐

5. I consent to this data being used in publications ☐

6. I agree to take part in the study entitled “Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme 'Sheds for Life' through the application of implementation science” ☐

Name of organisation: \_\_\_\_\_ (Please use block capitals)

Name: \_\_\_\_\_ (Please use block capitals)

Signature: \_\_\_\_\_

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

## **Appendix O: Participant Topic guides**

### **1: Baseline Semi Structured Topic Guide for Programme Participants Focus Group**

#### **Introductory Script:**

Hello everyone. Thanks for taking the time to join our discussion about the Sheds for Life Programme. My name is Aisling McGrath, I am a postgraduate researcher from Waterford Institute of Technology and conducting research for the Irish Men's Sheds Association. As you know, my role is to evaluate the programme and the purpose of today's discussion is to gather information from the most important source, all of you as participants of the programme. The goal of today's discussion is to simply have a chat about why you signed up for the programme, what you hope to get/ have got from the programme and any concerns or worries you have about being a participant on the programme. As this is our first time running the programme your feedback will help us fine tune the programme for future participants. There are no right or wrong answers to the questions I am about to ask. It is okay and expected that you will have differing points of view. Please feel free to share your point of view even if it differs from what others have said. If you want to follow up on something that someone has said, you want to agree, disagree, or give an example, feel free to do that. Don't feel like you have to respond to me all the time. Feel free to have a conversation with one another about these questions. I am here to ask questions, listen, and make sure everyone has a chance to share. If you do not feel comfortable or are unsure about something, feel free to pass or ask me to clarify. I may take notes during the discussion to help me remember what is said. Is it okay with you that our discussion today is being recorded so that it can be summarised and transcribed at a later date? This is to make sure that I do not miss any valuable information. The name labels (if needed) that you have today are to allow me to address you personally during our conversation, but rest assured that no names will be included in any reports and false names will be used for any quoted material. If you wish you can also request to view any transcripts of this conversation. In an effort to keep the information you share confidential, only I and my supervisors will have access to the recording. The discussion should last around 60 minutes and you are under no obligation to answer anything you are not comfortable with and are free to leave at any time. You have already signed consent to take part in the research but just so I can be sure that everyone has understood can you each give your consent now by saying "Okay" individually. Are there any questions before we begin?

#### **Introduction:**

Tell me your name and where you are from.

#### **Beliefs**

- Why do you think your Shed chose to get involved in the programme?
- What were your initial thoughts about the programme?
- Did you find making the decision to join the programme difficult? Tell me about that.
- In your opinion do you feel there is a need/benefit for a programme like Sheds for Life in the sheds? Probe: Why/why not.



**Needs Assessment**

- What made you decide to chose (various elements) for your Shed?
- Were you all aware of what the programme was about and what choices were available?
- What are your favourite elements of the programme? Why?
- Is there any supplemental piece you didn't chose but wish you did?
- Is there anything else you would like to see/think is needed in Sheds for Life that is missing?

**Attitude/ Motivation**

- What do you hope to gain by participating in this programme?
- What in your opinion do you think this programme is trying to achieve?
- How do you think a programme like this can benefit men like you who participate?
- Are there ways that it may not be a benefit to you? (Probe for examples and ways to facilitate)
- Do you have any worries or concerns about participating in the programme? (If given, ask to explain)
- What motivated you to participate in the programme? ( Probe: Leadership, communication, peer support, text reminders/follow ups/ schedules, fun, wellbeing)

**Perceived Barriers/Facilitators**

- Is there anything at the moment that makes participating in the programme challenging or difficult? How do you think we could overcome that?
- What do you think are some of Sheds for Life's strengths?
- What do you think the greatest barriers would be to other Sheds adopting this programme? (Probe: Suggestions to overcome)
- Do you have any suggestions for ways that would make the programme easier to participate in/encourage men to participate?
- Is there anything you would like to see done differently?
- Would you like to see this programme continue going forward? Why/Why not?

**Community Impact**

- How does your family feel about you participating in the programme? (Probe for any ripple effect) How do they feel about you being involved?

**Sustainability/Fidelity**

- How confident are you that you will be able to adhere to the programme?  
OR How was your adherence, what affected it?
- How confident are you that Sheds for Life will produce lasting benefits for you?

- How to you plan to support and maintain changes that you have made? How confident do you feel that you can maintain these changes?
- Do you have any suggestions for what may support you to maintain positive changes?
- Do you feel that the programme can make any improvements at this point to make it easier/more enjoyable to participate?

### **Content Specific Questions (vary depending on shed choices)**

#### **ALL- Health Screening**

- What was your experience of the health check like?
- How suitable are the health checks for the Sheds? Would you recommend to other sheds?
- Have you changed anything about yourself since receiving your health check results?
- Has your awareness of your health increased as a result of the health check?
- Is there anything you would have liked to have seen done differently?

#### **a. Get Ireland Walking**

- What was your experience of the walking programme like? (Probe length, delivery style, enjoyment, likes/dislikes)
- Was it what you expected?
- How suitable are these classes for the Sheds? Would you recommend to other Sheds?
- Has your view on exercise changed?
- Have you noticed any changes as a result? (benefits, side effects)
- How confident are you that you could continue to do walk?
- Is there anything you would have liked to have seen done differently?

**OR**

#### **b. Siel Bleu**

- What was your experience of the classes like? ( Probe length, delivery style, enjoyment, likes/dislikes)
- Are they what you expected?
- How suitable are these classes for the Sheds? Would you recommend to other Sheds?
- Has your view on exercise changed?
- Have you noticed any changes as a result? (benefits, side effects)
- How confident are you that you could continue to do these exercises?
- Is there anything you would have liked to have seen done differently?

### **ALL- Healthy Food Made Easy**

- What was your experience of HFME like? ( Probe length, delivery style, enjoyment, likes/dislikes, expectations)
- How suitable are these classes for the Sheds? Would you recommend to other Sheds?
- Has your view on cooking/healthy eating changed?
- Have you changed anything about the way you eat, cook or think about food since you started the course?
- How confident are you that you could use the knowledge in practice and continue to do so?
- Is there anything you would have liked to have seen done differently?

#### **Supplementary: (See individual shed listings)**

### **Mental Health Talk, Diabetes Talk, Dental Health Talk, Cancer Talk, Safe Talk, CPR, Online Resource Training**

- What was your experience of the \_\_\_\_\_ like? (Probe: length, delivery style, enjoyment, likes/dislikes)
- Was it what you expected?
- How suitable are these classes for the Sheds? Would you recommend to other Sheds?
- Has anything changed for you as a result of the class? ( Probe: increased awareness, confidence, knowledge, changed behaviour)
- Is there anything you would have liked to have seen done differently?

### **Closing**

- Is there anything you think we should have talked about but didn't?

## **2: Updated Baseline Semi Structured Topic Guide for Programme Participants Focus Group**

### **Introductory Script:**

Hello everyone. Thanks for taking the time to join our discussion about the Sheds for Life Programme. My name is Aisling McGrath, I am a postgraduate researcher from Waterford Institute of Technology and conducting research for the Irish Men's Sheds Association. As you know, my role is to evaluate the programme and the purpose of today's discussion is to gather information from the most important source, all of you as participants of the programme. The goal of today's discussion is to simply have a chat about why you signed up for the programme, what you hope to get/ have got from the programme and any concerns or worries you have about being a participant on the programme. As SFL in a new programme, your feedback will help us fine tune the programme for future participants. There are no right or wrong answers to the questions I am about to ask. It is okay and expected that you will have differing points

of view. Please feel free to share your point of view even if it differs from what others have said. If you want to follow up on something that someone has said, you want to agree, disagree, or give an example, feel free to do that. Don't feel like you have to respond to me all the time. Feel free to have a conversation with one another about these questions. I am here to ask questions, listen, and make sure everyone has a chance to share. If you do not feel comfortable or are unsure about something, feel free to pass or ask me to clarify. I may take notes during the discussion to help me remember what is said. Is it okay with you that our discussion today is being recorded so that it can be summarised and transcribed at a later date? This is to make sure that I do not miss any valuable information. The name labels (if needed) that you have today are to allow me to address you personally during our conversation, but rest assured that no names will be included in any reports and false names will be used for any quoted material. If you wish you can also request to view any transcripts of this conversation. In an effort to keep the information you share confidential, only I and my supervisors will have access to the recording. The discussion should last around 60 minutes and you are under no obligation to answer anything you are not comfortable with and are free to leave at any time. You have already signed consent to take part in the research but just so I can be sure that everyone has understood can you each give your consent now by saying "Okay" individually. Are there any questions before we begin?

**Introduction:**

Tell me your name and where you are from.

**Adoption – Trialability**

- Why do you think your Shed chose to get involved in SFL?
- How willing were you to try SFL?
- What were your initial thoughts about the programme?
- Did you find making the decision to join the programme difficult? Tell me about that.
- What factors contributed to you deciding to take up SFL?
- Why do you think some of you chose to participate and others did not?

**Acceptability – Relative Advantage and complexity-**

- In your opinion what is SFL about?
- Was information about SFL easy/hard to understand? (Information before the programme – expression of interest form etc)
- How easy/difficult did you find the process of SFL? Probe- schedules, participation
- How did you find the content of SFL?
- Was there any aspect of SFL you particularly liked?
- Was there any aspect of SFL that you didn't like?

**Appropriateness and Feasibility – Compatibility and Trialability**

- Do you feel that SFL is a relevant programme for the Sheds? Probe: Why/Why not
- Do you feel that SFL is a practical addition to the Sheds?
- How compatible has SFL been with the normal routine of the Sheds?
- Are there any changes you think we should make to make SFL more compatible with the sheds and its members?
- Is there any supplemental piece you didn't chose but wish you did?
- Is there anything else you would like to see/think is needed in Sheds for Life that is missing?

### **Fidelity**

- Do you feel that SFL was delivered as promised/expected? Probe: In what ways?
- How easy/hard was it to understand the content of SFL?
- How would you rate the quality of delivery of different components of SFL?
- Was there any method of delivery by the tutors that you particularly liked/didn't like?
- How was your adherence to SFL? What affected it?

### **Sustainability - Proctor- Maintenance**

- Has anything changed for you as a result of SFL?
- Has anything outside of SFL contributed to these changes?
- How confident are you that Sheds for Life will produce lasting benefits for you?
- How do you plan to support and maintain changes that you have made? How confident do you feel that you can maintain these changes?
- Do you have any suggestions for what may support you to maintain positive changes?
- Do you feel that the programme can make any improvements at this point to make it easier/more enjoyable to participate?
- Would you like to see SFL continue going forward? Why/Why not?

### **Reach**

- Did you have any worries or concerns about participating in the programme? (If given, ask to explain)
- What factors impacted your participation/ non participation in SFL? How might we overcome some of the barriers? ( Probe: Leadership, communication, peer support, text reminders/follow ups/ schedules, fun, wellbeing)
- What might we do to encourage more men to participate in SFL?
- Is there anything you would like to see done differently?

### **Content Specific Questions (vary depending on shed choices)- Effectiveness and Implementation**

#### **Health Screening**

- What was your experience of the health check like? How well was it implemented?
- How suitable are the health checks for the Sheds? Would you recommend to other Sheds?
- Have you changed anything about yourself since receiving your health check results?
- Has your awareness of your health increased as a result of the health check?
- Is there anything you would have liked to have seen done differently?

**c. Get Ireland Walking**

- What was your experience of the walking programme like? (Probe length, delivery style, enjoyment, likes/dislikes). How well was it implemented?
- Was it what you expected?
- How suitable are these classes for the Sheds? Would you recommend to other Sheds?
- Has your view on exercise changed?
- Have you noticed any changes as a result? (benefits, side effects)
- How confident are you that you could continue to do walk?
- Is there anything you would have liked to have seen done differently?

**OR**

**d. Siel Bleu**

- What was your experience of the classes like? ( Probe length, delivery style, enjoyment, likes/dislikes)
- Are they what you expected?
- How suitable are these classes for the Sheds? Would you recommend to other Sheds?
- Has your view on exercise changed?
- Have you noticed any changes as a result? (benefits, side effects)
- How confident are you that you could continue to do these exercises?
- Is there anything you would have liked to have seen done differently?

**ALL- Healthy Food Made Easy**

- What was your experience of HFME like? ( Probe length, delivery style, enjoyment, likes/dislikes, expectations)
- How suitable are these classes for the Sheds? Would you recommend to other sheds?
- Has your view on cooking/healthy eating changed?

- Have you changed anything about the way you eat, cook or think about food since you started the course?
- How confident are you that you could use the knowledge in practice and continue to do so?
- Is there anything you would have liked to have seen done differently?

**Supplementary: (See individual shed listings)**

**Mental Health Talk, Diabetes Talk, Dental Health Talk, Cancer Talk, Safe Talk, CPR, Online Resource Training**

- What was your experience of the \_\_\_\_\_ like? (Probe: length, delivery style, enjoyment, likes/dislikes)
- Was it what you expected?
- How suitable are these classes for the Sheds? Would you recommend to other Sheds?
- Has anything changed for you as a result of the class? ( Probe: increased awareness, confidence, knowledge, changed behaviour)
- Is there anything you would have liked to have seen done differently?

### **Closing**

- Is there anything you think we should have talked about but didn't?

## **Appendix P: Short interview schedule (participants)**

1. Why do you think your Shed chose to get involved in Sheds for Life?
2. Were there any concerns before commencing the programme?
3. Was there anything you felt went particularly well?
4. Was there anything that didn't go so well?
5. Is there anything you would like to see added or changed?
6. Is there anything else you would like to say?



## **Appendix Q: Provider Interview schedule**

### **Semi-structured interview schedule for programme partners**

#### **Purpose:**

To give Sheds for Life partners an opportunity to share their experience[s] of engaging with the Sheds for Life programme and identify barriers and facilitators towards successful implementation and sustainability of the Sheds for Life programme going forward.

#### **Structure:**

- The context of the research will be explained to the participants of the interview and in particular the value of their experiences to inform future practice in the area of men's health promotion and successful implementation.
- The generosity of participants' in freely giving of their time to share their experiences should be acknowledged.
- Assurances re confidentiality and security of data management in accordance with ethical guidelines should be clearly stated. In addition, the fact that the study has been approved by WIT's ethics committee should be named.
- Participants should be asked to read the information sheet and written informed consent should be completed at this point.
- Ask for permission to record the interview and give an estimation of timing
- When these have been agreed, the interview can begin and the digital recorded switched on.

#### **Introduction:**

- Tell me about yourself and your role in (X organisation). Tell me about the organisation.

#### **Appropriateness**

- What attracted your organisation to be a part of the Sheds for Life programme?
- What role does (your organisation) have in Sheds for Life? (probe: perceived fit)
- What do you envision your role to be with Sheds for Life going forward? (probe: practicability)
- Why do you think this is an important element of Sheds for Life? (probe: relevance/suitability/usefulness)
- What has your experience of working with the IMSA been like to date?
- What has your experience of working with the men in the Sheds been like to date?

#### **Effectiveness:**

- Would you categorise (insert workshop name) as evidence-based or a new innovation?
- Why did you chose (insert workshop name) and its components?

#### **Acceptability and Adoption**

- How do you perceive SFL?

- How has SFL been perceived by your organisation?
- At this point can you tell me how you perceive (insert workshop name) has been perceived by the men in the Sheds?
- Do you feel that (insert workshop name) is meeting its objectives?
- How do you feel the initial implementation of (insert workshop name) is going?
- How confident/capable is (Insert organisation) to offer this programme to different Sheds after initial testing?
- What do you think the greatest barriers would be to other Sheds adopting (insert workshop name)? (Any suggestions to overcome?)

### **Cost**

- Can you tell me a little bit about the cost involved in running (insert workshop name) as part of Sheds for life? Probe: funding sources/requirements, man hours, staff on the ground, volunteer hours, resources required
- Do you feel that (insert workshop name) and how it is currently running is cost-effective in terms of the positive impact it has on participants?
- Are there ways this could be improved going forward?

### **Feasibility/ Fidelity/ Penetration/ Adaptation**

- How confident are you that (insert workshop name) can be consistently delivered as intended? /Has it been?
- Have you made any adaptations to the content/delivery of the programme in Sheds? What was the reason for these?
- What do you think the core elements of the programme are?
- How confident are you that (insert workshop name) can be adapted to suit each Shed while maintaining fidelity to (insert workshop name) design?

### **Implementation**

- What in your opinion are the greatest threats to consistent and successful implementation of (insert workshop name) and have you any suggestions for minimising them?
- What in your opinion are the greatest strengths that facilitates consistent and successful implementation of (insert workshop name)?

### **Sustainability/Scalability**

- How confident are you that (insert workshop name) will provide the participants with lasting benefits?
- Have you any worries or concerns about (insert workshop name) continuing as part of Sheds for Life?
- How confident are you that (insert workshop name) will be sustained within the Sheds?
- What do you see as the greatest challenge to (insert organisation) continuing support of Sheds for Life with (insert workshop name)?

- What are your plans for (insert workshop name) sustainability? Will additional funding be needed?
- Do you have suggestions for ways to support the participants after the programme has been implemented in order to sustain change?
- What do you believe is (insert organisation) capacity to scale up (insert workshop name) under Sheds for Life?
- Do you have commitment from (insert organisation) to continue the programme if successful?

**Closing**

- Is there anything else you would like to talk about?

## **Appendix R: Coordinator Interview Schedule**

### **Baseline semi-structured topic guide for Sheds for Life coordinator**

#### **Purpose:**

To give the Sheds for Life coordinator an opportunity to share their experience[s] of developing and implementing the Sheds for Life programme and identify barriers and facilitators towards successful implementation and sustainability of the Sheds for Life programme going forward.

#### **Structure:**

- The context of the research will be explained to the participants of the interview and in particular the value of their experiences to inform future practice in the area of men's health promotion and successful implementation.
- The generosity of participants' in freely giving of their time to share their experiences should be acknowledged.
- Assurances re confidentiality and security of data management in accordance with ethical guidelines should be clearly stated. In addition, the fact that the study has been approved by WIT's ethics committee should be named.
- Participants should be asked to read the information sheet and written informed consent should be completed at this point.
- Ask for permission to record the interview and give an estimation of timing
- When these have been agreed, the interview can begin and the digital recorded switched on.

#### **Introduction:**

- Tell me about yourself and your role at IMSA.

#### **Development of Sheds for Life:**

- How did Sheds for Life develop?
- How in your opinion is it effective in dealing with the target population (men in the Shed)
- Why do you believe there is a need for a programme like SFL?
- Tell me about the structure of SFL.
- Tell me about the work that went into getting SFL up and running. (Probe: time, manpower, volunteer hours, costs, funding, partnerships, support networks, resources)
- What are your plans/hopes for SFL going forward?

#### **Reach:**

- How confident are you that SFL successfully reaches and attracts all Shed members?
- What are the barriers that limit reach? (Probe: how to overcome)
- How confident are you that IMSA can overcome these barriers? (Probe: what would be required)

**Effectiveness:**

- Would you categorise SFL as evidence-based or a new innovation?
- Why do you choose SFL components?
- What are the strengths of SFL?
- What measures do you think key stakeholders would use to define SFL as being a success?
- Do you foresee any potential unintended consequences that may result from SFL? (probe: positive or negative)
- Are you confident that SFL will achieve effectiveness across the Sheds?

**Adoption:**

- At this point can you tell me how you perceive SFL has been perceived by the men in the Sheds?
- Do you feel that SFL is meeting its objectives?
- How do you feel the initial implementation of SFL is going?
- How confident are you that SFL partners will be willing and able to offer their components of SFL as the initial intervention?
- How confident are you that SFL will be adopted by the organisations and staff that provide elements of SFL? (**service level**) (Probe: experience of working with partners, culture norms etc.)
- What do you think will be the greatest barriers to partners adopting SFL? (probe: ways to overcome)
- How confident are you that SFL will be adopted by the men within the Sheds? (individual level)
- What do you think will be the barriers? (probe: ways to overcome)

**Implementation:**

- How confident are you that SFL can be consistently delivered as intended?
- What in your opinion is the greatest threat to consistent implementation and how do you think it can be minimised?
- What do you think are some of the facilitating factors SFL has for consistent implementation?

**Maintenance:****Individual:**

- How confident are you that SFL will have lasting benefits on Shed members?
- Do you plan to support the initial success to encourage sustainment of positive outcomes? How?
- What resources are available to provide follow up support to Shed members?

**Setting:**

- How confident are you that SFL will be sustained in the Sheds?
- What do you think are the greatest challenges to the partners continuing their support of SFL?
- What do you think can help SFL sustainability? Will additional funding/resources be needed?
- How committed do you feel the key partners are to continue the programme if successful?
- In what ways do you think SFL could be integrated into the regular practice of the Sheds?
- What do you think SFL capacity is to scale-up delivery at the moment?

### **Closing**

- Is there anything else you would like to talk about?

# **Sheds for Life**

## **Data Collection Procedures and Tools**



**Sheds for Life**

An initiative by Irish Men's Sheds Association

## 1. Summary of Data to be Collected from Participants

The following data have been proposed in order to investigate the;

1. Impact of the programme on the physical activity, diet, wellbeing and changes in knowledge of the various components of Sheds for Life on men's shed participants.
2. Economic costs and benefits of Sheds for Life.
3. The implementation of Sheds for Life

**N.B.** Before Recording any data ensure that the participant has signed an informed consent form.



### Consent form for "Sheds for Life" programme participants

"Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme 'Sheds for Life' through the application of implementation science"

PLEASE NOTE PARTICIPATION IS STRICTLY VOLUNTARY.

Please tick EACH box and sign your name in the space below

1. I confirm that I have read the document entitled 'Information form for Sheds for Life programme participants' and have had the opportunity to ask questions ☐

2. I am satisfied that I understand the information provided and have had enough time to digest the information ☐

3. I understand that my participation is voluntary and that I am free to withdraw at any stage throughout the study without reason and without my legal rights being affected ☐

4. I consent to allow my data to be shared for the purpose of the evaluation and for use in publications and I understand that all details shared with the researcher will remain confidential and my name will not be used in any publication. ☐

5. I am willing to share my health and fitness results with the researcher for the purpose of the evaluation. ☐

6. I agree to take part in the study entitled "Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme 'Sheds for Life' through the application of implementation science" ☐

Name: \_\_\_\_\_ (Please use block capitals)

Signature: \_\_\_\_\_

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_



**Baseline measures Week 1:**

Participants will begin by undergoing a health check by the Irish Heart Foundation's nurses in the mobile health check unit.

The nurses will then direct the participants to those administering the questionnaire. The rest of the data will be collected via questionnaire. Where possible the questionnaire will be administered to the men. Where this is not possible, questionnaires should be checked to ensure they are completed before the men leave.

**Attendance:**

Attendance at every session of Sheds for Life must be recorded. Standardised attendance recording sheets must be used to capture participant attendance, topic being delivered, content deliverer, shed location and date. (Instructions are available on the standardised attendance sheet). Please return attendance sheets to Aisling Mcgrath :[aisling.mcgrath@postgrad.wit.ie](mailto:aisling.mcgrath@postgrad.wit.ie) or 0852163077 (Note: All attendance sheets must be kept secure and used only for the purpose of the evaluation).



# Participant Attendance Sheet

Shed Name: \_\_\_\_\_

Topic: \_\_\_\_\_

Week No: \_\_\_\_\_

Facilitator: \_\_\_\_\_

Date: \_\_\_\_\_



Name (Block Capitals)	Present	Absent	Reason for not attending if applicable/known	Taking part in Sheds for Life or attending once off class?	Feedback

## 2. Participant Coding Protocol

The Research Team will be responsible for coding all questionnaires. Coding Sheets will be available, and participant's names should be codified at baseline when administering the questionnaire. At the time of conducting the baseline questionnaire please fill in the table below and assign the participant a code which is also to be noted on the questionnaire. The codes are location specific (eg. Lexlip = Lex). Participants should then be given a number next to their location based on the order on which you meet them. (eg. First participant in Lexlip = Lex 01). All Code Sheets must be kept secure at all times and returned to Aisling McGrath.

	Location Code	Baseline	Post Programme	26 weeks	52 weeks	Participant
Naas	NAAS	B	PO	26P	52P	1-30
Cooleragh and Staplestown	CAS	B	PO	26P	52P	1-30
Na Fianna and Allenwood	NFA	B	PO	26P	52P	1-30
Clane	CLA	B	PO	26P	52P	1-30

Maynooth	MAY	B	PO	26P	52P	1-30
Kildare Town	KT	B	PO	26P	52P	1-30
Kilcock	KILC	B	PO	26P	52P	1-30
Leixlip	LEX	B	PO	26P	52P	1-30
Kill and District	KILL	B	PO	26P	52P	1-30
Dungarvan	DUN	B	PO	26P	52P	1-30
Deise	DEISE	B	PO	26P	52P	1-30
Waterford City	WC	B	PO	26P	52P	1-30
Waterford Estuary	EST	B	PO	26P	52P	1-30

### 3. Proposed Data Collection Procedure – Health Check/ Questionnaire

- The men will be attending their sheds over the course of the day at their scheduled health check appointment
- After the men have undergone their health check, they will be directed to those administering the questionnaire
- Begin by explaining that the questionnaire is part of the evaluation of Sheds for Life.
- The men will have been given an information sheet outlining the evaluation and will have also had it explained to them during shed visits over the previous weeks.
- Ask the men to read and sign the informed consent form and codify their name before administering the questionnaire.

**Note: A photocopier will be available to copy the participants health check results (once written consent has been obtained). Please copy the results and attach them to the consent form and questionnaire with the stapler. The first part of the questionnaire (Irish Heart Foundation Health Check) only needs to be filled in if there is an issue with the photocopier on the day.**

**Note: On health checks days where men's shed members may have travelled from different sheds to complete their health check, please clarify the name of the shed the participant is from before codifying their name.**

- Ensure that the participant fully understands the consent form before signing and reiterate that participation is voluntary, and that confidentiality is guaranteed.
- At this point ask the participant for permission to share his health check results. The participant will have a record card given to them from the IHF nurse. There is space to copy this directly into the questionnaire or where possible a photocopier will be available for you to copy the results and attach it to the questionnaire.
- Explain the process of the questionnaire and remind participants that they don't have to answer anything that might make them uncomfortable.

- If possible, administer the questionnaire to the men and complete it with them to ensure completion and to avoid any literacy issues or misinterpretation of questions.
- Where this is not possible, please check to ensure that the questionnaire has been fully completed before the participant leaves.
- Some of the questions on the questionnaire may be personal to the participants so be mindful of other people and try to find a quiet place to complete the questionnaire and ensure privacy.

**Note: The participants do not have to answer all elements of the questionnaire. Sheds have selected different supplementary workshops. Therefore, for the supplementary elements of the questionnaire (beginning question 31), the participants are only required to answer the questions relating to the workshops their sheds are participating in.**

**Please make the participants aware of this if they are not completing the questionnaire with you.**

**See below for schedule of baseline questionnaires and supplementary elements for each shed.**

<b>Date</b>	<b>Shed</b>	<b>Address</b>	<b>Supplementary Questionnaire components</b>
Monday, 4 <sup>th</sup> March	Naas Men's Shed	Clough, Rathasker Road, Naas, Co. Kildare	CPR, Diabetes, Oral Health, Mental Health and Getting Online
Tuesday, 5 <sup>th</sup> March	Cooleragh/ Staplestown	Cooleragh, Coill Dubh, Co. Kildare (beside church in Cooleragh) Prefabs to the rear of the site.	CPR, Cancer Prevention, Getting Online
Tuesday 5 <sup>th</sup> March	Na Fianna Allenwood	Allenwood middle	CPR, Cancer Prevention, Getting Online
Wednesday, 6 <sup>th</sup> March	Clane	Unit 11, Thompson Enterprise Centre, Clane Business Park, Co. Kildare	CPR, Cancer Prevention, Oral Health, Getting online
Thursday, 7 <sup>th</sup> March	Maynooth	Meadow Lodge Fisheries Dunboyne Road Maynooth Co. Kildare	CPR, Cancer Prevention, Getting online
Friday, 8 <sup>th</sup> March	Kildare Town	1223 Campion Crescent Kildare Town Co. Kildare	CPR, Oral Health, Mental Health, Getting online

Monday, 11 <sup>th</sup> March	Kilcock	Church Street Kilcock Co. Kildare	CPR, Diabetes Talk, Safe Talk, Mental Health and Getting Online
Tuesday, 12 <sup>th</sup> March	Waterford Estuary	The Quay Passage East Co. Waterford (Beside community centre)	Mental Health, Getting Online , Diabetes
Wednesday, 13 <sup>th</sup> March	Deise Men's Shed	Unit19e, Six Crossroads Business Park Waterford Co. Waterford	CPR, Cancer Prevention, Safe Talk, Diabetes, Mental Health
Wednesday, 13 <sup>th</sup> March	Waterford City Men's Shed	Waterford	CPR, Diabetes, Mental Health
Thursday, 14 <sup>th</sup> March	Dungarvan	Adult Education Centre Wolfe Tone Road Dungarvan Co. Waterford	CPR, Cancer Prevention
Tuesday, 19 <sup>th</sup> March	Leixlip	Leixlip Amenity Centre, Collinstown (opposite Intel)	CPR. Oral Health, Mental Health
Friday, 22 <sup>nd</sup> March	Kill & District	Saplings Special School, Main Street, Kill East, Co. Kildare	CPR, TBC

For comparison locations;

- The participants will not be receiving a health check so if possible, set up a station where the men can come and complete the questionnaire with you following the same procedures as above.

**Please keep all questionnaires secure and return to Aisling McGrath.**

4. **Information letter for Sheds for Life participants (see template)**
5. **Baseline Questionnaire (see template)**

**Follow up – 10 Weeks (Post programme)**

**Note:– No major amendments will be found on the follow up questionnaire.**

**The following changes will be made to follow up :**

- Participants will be asked if they attended their GP if recommended to do so at the point of health screening.
- No screening data will be required for the purpose of the ten-week follow up.

- Questions will be added to assess attendance at each component of the programme
- At the point of follow-up the principal researcher will ask some key questions (below) before completing the questionnaire with a selection of participants in order to gain some qualitative feedback. This will be recorded via an audio recording device for transcription at a later date.
- There will also be a space on the questionnaire to note any feedback/recommendations offered by the participants.

#### **Follow up Questions:**

1. What made you chose to get involved in SFL? Prompt: Did you chose or did the shed chose for you?
2. Is there anything you liked/didn't like?
3. Is there anything you would like to see added/changed in the SFL programme?
4. If you had to pick one key learning or insight you have gained from SFL what would it be?
5. Is there anything else you want to add?

#### **6. Qualitative data to be collected from participants – Focus groups, site visits and workshops.**

The following data have been proposed in order to investigate in a participatory approach;

1. Feedback on the various components of Sheds for Life
  2. Attitudes and experiences of Sheds for Life
  3. Implementation of Sheds; adoption, appropriateness, feasibility
- Topic guides and facilitation handbooks will be circulated in advance of the

focus groups.

#### **7. Data to be Collected from Partners**

The following data have been proposed in order to investigate the;

1. Process of delivering the Sheds for Life programme with a view to understanding[[ implementation barriers and facilitators and developing a 'model of good practice' for adaptation for further programmes
2. Economic costs and benefits of Sheds for Life.
3. Capacity of partner organisations to sustain/scale up Sheds for Life.
4. Capturing attendance and fidelity of Sheds for Life.

Interviews – Summer 2019

Interviews will be at provider and organisation levels. Topic guides will be circulated in advance of the interviews.

Attendance-

Attendance sheets will be circulated in order for deliverers on the ground to capture programme attendance.

#### COSTING GUIDE- RESOURCE INPUT TEMPLATE

This template will capture the following;

- Rough time inputs of health professionals and volunteers [all key stakeholders].  
Staff time input at sessions above.
- Estimated salary costs against professionals time
- Training costs
- Rental costs
- Insurance
- Marketing
- Delivery costs

A TEMPLATE WILL BE CIRCULATED IN ADVANCE OF THE INTERVIEW  
AND WILL BE GIVEN TO THE RESEARCHER AT INTERVIEW.

**Note: Additions/Edits to these data collection procedures will be ongoing and updates will be circulated as required.**

**Appendix T: Memorandum of understanding template between IMSA and programme partners**



Memorandum of Understanding  
*for 'Sheds for Life' Intervention*

Between

**Irish Men's Sheds Association**

and

**Siel Bleu Ireland**



## **1. Scope**

This document is designed as a Memorandum of Understanding (MoU) for the strategy and protocol actions to be taken between the Irish Men's Sheds Association (IMSA) and any identified third-party organisations that have similar values in promoting the health and wellbeing of men or an active interest in the development and operations of Men's Sheds facilities. The document identifies the basis of any alignment and collaboration between IMSA and our strategic partners in relation to, inter alia:

- Goals of the agreement
- Project delivery
- Partnership programmes
- Distribution of Information

### **Definition (Men's Shed)**

The Irish Men's Sheds Association recognises as a Men's Shed any community-based, non-profit, non-commercial organisation that is accessible to all men and whose primary activity is the provision of a safe, and friendly environment where men are able to work on meaningful projects at their own pace in their own time in the company of other men. A major objective is to advance the well-being and health of their male members.

## **2. Parties**

### **Irish Men's Sheds Association CLG (IMSA)**

1<sup>st</sup> Floor,  
Ballymun Civic Centre,  
Ballymun,  
Dublin 9.

The Irish Men's Sheds Association CLG is registered with the Companies Registration Office as a company limited by guarantee under company number 493940 and is registered with and regulated by the Charities Regulatory Authority under registered number 20078591. The Irish Men's Sheds Association CLG is registered with the Irish Revenue Commissioners as a tax-exempt charitable organisation under CHY number 19928.

IMSA oversees Ireland's extensive, country-wide network of men's sheds, operating under the simple ethos of facilitating communication and skill-sharing between sheds as they fulfil their mission of providing men with a safe, supportive and enjoyable environment that might otherwise be unavailable to them.

Through the application of various public health initiatives, organisations have realised the capabilities of Men's Sheds as an inclusive model in the prevention of social isolation, similarly these organisations have also appreciated the ability of IMSA as a means of disseminating health information and a platform from which to

launch Men's Health programmes aimed at directly accessing men in the community.

With a validated membership of over 422 Sheds (2018) IMSA aims at embracing and developing future relationships with the overarching objective of improving the health and wellbeing of all men through the provision of practical support to Men's Sheds in addressing the issues faced by these facilities on daily and long-term basis.

And

**The Partner Organisation** is Siel Bleu Ireland

### **Our Vision & Mission**

Siel Bleu Ireland improves the quality of life of older adults, through fun and interactive, tailored exercise programmes. We are all aware of the importance of physical activity but its benefits for older adults can often be underestimated.

At Siel Bleu Ireland we believe in challenging mind sets to transform the lives of Ireland's older population in the long-term, insuring each person has the ability and confidence to live as full, independent and happy lives as possible.

Once adapted to the needs and goals of participants we have found physical activity can have a tremendous impact on not just physical wellbeing but social and psychological as well. Our trainers use their skills and knowledge base to create a fantastic atmosphere that encourages participants to join in. They use their expertise to adapt a programme to suit the group's needs, e.g. whether for a dementia specific class or for those who would like to improve their confidence in their own ability to walk with our fall prevention programmes.

With a continuous focus on prevention, Siel Bleu Ireland aims to add life to years and years to life!

### **3. Purpose**

The Irish Men's Sheds Association in conjunction with Waterford Institute of Technology and the Institute of Technology Carlow are commencing a 4-year PhD research project in collaboration with the Irish Research Council. The proposed area of research entitled "Shedding light on men's health: Evaluating the scalability of a community-based men's health promotion programme 'Sheds for Life' through the application of implementation science", is explicitly orientated towards delivering impact-focused research activity that forges strong links between research and practice. The findings will have a significant role to play in determining the effectiveness, sustainability, and potential scale-up of the Irish Men's Sheds

Association's Shed for Life (SFL) initiative and, more broadly, in terms of the wider rollout of community-based programmes targeted at men.

As part of this research a 10-week Sheds for Life intervention will be delivered across four counties with a core pillar of a physical activity intervention and a suite of other health and life skill related talks and workshops selected by each individual shed. The intervention will include a health check (measurement of blood pressure, cholesterol, BMI) and a follow up health check at 12-months.

This MoU outlines that Siel Bleu Ireland agrees to the provision and delivery of their 'Exercise for Shedders' classes subject to selection by individual sheds to participate.

#### **4. Goals of the MOU**

Through this MoU the Irish Men's Sheds Association and the Siel Bleu Ireland agree to collaborate under the Sheds for Life intervention in support of the health and wellbeing of men's sheds members and identifies Siel Bleu Ireland role in the delivery of the Sheds for Life intervention.

#### **5. Project delivery**

This agreement is for a 2-year period from the date of signing, with both parties having an option to extend the agreement for a further specified term. The Irish Men's Sheds Association and the designated lead in Siel Bleu Ireland will maintain regular contact with each other and manage implementation of the partnership.

#### **6. Terms of Understanding**

##### **Communication**

The Irish Men's Sheds Association and Siel Bleu Ireland commits to effectively communicating at all levels within the partnership. This should include the sharing and accessing of knowledge, learning, information and research.

##### **Consent to Publication**

Siel Bleu Ireland is an agreement that the Irish Men's Sheds Association consent must be sought before the publication of any information or graphics pertaining to the intervention in the public realm.

### **Data protection and GDPR**

All data relating to the research associated with this intervention will be handled in line with Waterford Institute of Technology ethics and GDPR regulations. Siel Bleu Ireland are required to liaise with the designated WIT Researcher with regard to GDPR requirements and the alignment of data collection for the purposes of the evaluation component of this intervention.

### **Acknowledgement of Partner Organisations & Public Relations**

Full credit will be acknowledged by Irish Men's Sheds Association on all print and online promotional materials as well as publications relating to Siel Bleu Ireland's support and delivery of the 'Exercise for Shedders' component of this intervention.

### **Evaluation**

Siel Bleu Ireland commits to participating and fully supporting any evaluation requirements associated with the Sheds for Life intervention and will liaise directly with the designated WIT Researcher with regard to same.

### **Review of partnership**

Siel Bleu Ireland commits to a midterm review to assess key objectives and progress of this project.

### **Commitment to Safeguarding Vulnerable Persons**

Siel Bleu Ireland commits to safe guarding vulnerable persons and will comply with relevant legislation and recommended best practice in recruitment and selection procedures for both employees and volunteers.

By the below endorsement with their respective signatures, both Parties acknowledge agreement with this 'Memorandum of Understanding'.

### **Irish Men's Sheds Association**

Charity No. CHY 19928

Signature 

Full Name – Edel Byrne

Position – Health & Wellbeing Manager

Date 19<sup>th</sup> November 2018

**and**

**Siel Bleu Ireland**

Charity No. \_\_\_\_\_

Signature \_\_\_\_\_

Full Name \_\_\_\_\_

Position \_\_\_\_\_

Date \_\_\_\_/\_\_\_\_/\_\_\_\_

## Appendix U: Expression of interest form for SFL participants



# SHEDS FOR LIFE AUTUMN PROGRAMME 2020

*BETTER HEALTH STARTS RIGHT HERE*



Irish Men's Sheds Association | CHY19928

| [www.menssheds.ie](http://www.menssheds.ie) | Ph: 01-8916510 | E: [wellbeing@menssheds.ie](mailto:wellbeing@menssheds.ie) |

Sláintecare



Riadas na hÉireann  
Government of Ireland



### *An Exclusive Opportunity for Your Men's Shed:*

**H**ey there Shedders! The Irish Men's Sheds Association have an exciting new initiative to offer to only a select number of sheds and your shed is lucky enough to have the option to get involved. We have been working hard over the last few years to hear from sheds about what they would like and more importantly what they need in terms of supporting themselves and their fellow Shedders in maintaining their wellness so they can have the best quality of life possible and continue to visit the shed. We have now packaged that into a programme called "Sheds for Life" which has been designed especially for the sheds by shed members. Other sheds across Ireland have been taking part and have really found the experience worthwhile (See their testimonials on page 8).

Applications are now open for sheds in Counties Roscommon & Leitrim. Sheds for life is a 10-week programme commencing in September 2020, which aims to support you in your physical & mental wellbeing while also providing some important information and advice and an opportunity to learn new skills. The most exciting things about Sheds for Life is that we bring everything directly to you so that it runs directly in the shed or nearby community facility. Sheds for Life encourages everyone in the shed to get involved and is inclusive of all shed members.

We have teamed up with lots of different partners who understand what works best in the sheds and how to deliver Sheds for Life in a way that is informal and enjoyable for Shedders. Together we recognise how vital you are to our communities so together we want to cover the cost of Sheds for Life for you. We know you have been working tirelessly to support your communities and give back and in light of everything that's been happening recently we think you deserve some time to invest in yourselves for a change. So why not give Sheds for Life a go for yourself and for all those you care about in your shed? All you have to do is read the following information carefully and discuss it with your shed members, if you are all in agreement and happy to sign up fill in the expression of interest form and we'll be in touch to confirm if you have a place.

**IMPORTANT:** Please fill in the expression of interest form and return to Edel Byrne by the closing date of 15th of May 2020 by post to Irish Men's Sheds Association, Irish Farm Centre, Bluebell, Dublin 12. Scanned applications forms can be sent to [wellbeing@menssheds.ie](mailto:wellbeing@menssheds.ie)



## Sheds for Life: What's Involved for Your Shed

Sheds for life runs for 10 weeks but rest assured we know your shed is a busy place that's why we will aim to schedule Sheds for Life so that your shed will only be participating in activities once a week across the 10 weeks. We certainly do not want to upset the important routine of the sheds. It may be useful for you to start to think about a day of the week (Monday to Friday) together that would suit your shed to participate in Sheds for Life. The programmes and workshops will run where possible around the sheds timetable, but some flexibility may be required to receive your preferred session or workshop

Only three counties in Ireland have been selected to participate in this programme in 2020 including your shed. If you choose to participate in this exciting new adventure with us we will take your views and experiences seriously to shape the programme going forward. Our aim is to be able to offer this programme to all sheds and for that reason it is being evaluated by Waterford Institute of Technology and Carlow Institute of Technology in collaboration with the Irish Research Council. This means we have an opportunity to show how important Sheds for Life is so that we can deliver it to all sheds. You can help us achieve this by becoming pioneers of Sheds for Life, partners and researchers that help us to understand how to strengthen the initiative for Men's Sheds across Ireland. This means that if you sign up to participate that you all agree to take part for the full ten weeks. We understand that life gets in the way sometimes but in order to provide Sheds for Life free of charge and justify our costs we need you to try your best to attend as much as possible.

As we want you to have your say in what suits your shed the best, we are offering Sheds for Life with 4 main mandatory components of the programme (listed below) which each shed will complete. The others are optional components that you can select. You can choose which optional components you like but be careful not to take on too much, perhaps two components to accompany the main four would be doable.

Mandatory Components	Optional Components
-Mini Heart Health Check	-CPR Training      - Dementia Awareness
-Healthy Food Made Easy (Cooking & Nutrition)	-Diabetes Awareness talk      - safeTALK
-Mental Health & Wellbeing workshop	-Oral Health talk      -Getting Online Training
-Siel Bleu exercise classes <u>or</u> Get Ireland walking Sheds ag Siúl programme	-Cancer Awareness talk

**Please Note:** If you sign up to Sheds for Life IMSA will personally visit your shed prior to Sheds for Life commencing to provide a more comprehensive overview, address any concerns you may have and assess the sheds readiness to participate in Sheds for Life (dates to be confirmed).



### Mini Heart Health Check:



On week one the Irish Heart Foundation will deliver mini heart health checks. What will a mini health check involve:

- Blood pressure check
- Pulse check
- Weight measurement: includes Waist Measurement and Body Mass Index
- Carbon monoxide for smokers (optional)

This health check is carried out in private where you will have the opportunity to talk to a nurse one-to-one about any health concerns you may have.

Please note: if you regularly have a health check conducted by your local GP please still avail of this opportunity for the check as part of this Sheds for Life programme. Your participation will contribute to an important evidence base for promoting health in the men's shed setting. Please note this check is a health promotion measure & not to be considered as a replacement appointment for a regular check up with your GP.

Don't worry about trying to keep track of everything, your appointment time will be allocated by the Irish Men's Sheds Association and each member will receive an appointment card and text message reminder.

### Activity Programme Option A

Siel Bleu Ireland are a non-profit organisation who are improving the quality of life of Ireland's adults through interactive and tailored exercise programmes. Participants will be assessed before and after the programme in order to determine improvements in their physical and overall wellbeing. One class a week for 10 weeks will be delivered under this physical activity programme. Classes – 1-hour x 10 weeks. These classes are inclusive, fun and cater for all abilities.



### Physical Activity Programme Option B

Get Ireland walking is a national initiative of Sport Ireland.



This 10-week walking programme begins with a 1.5 hour "Walk the Walk" workshop delivered in your shed. A walking facilitator will then work with the shed to deliver 5 key walking sessions within this 10-week programme including novel activities such as nature walks, Nordic pole walking or walking football.

## Healthy Food Made Easy



The Healthy Food Made Easy (HFME) Programme is a basic nutrition and cookery course that helps encourage a healthy diet, plan meals on a budget and make easy to cook meals. It is a mixture of practical and theory and shed members will be hands on in the kitchen and get to eat those delicious meals they make. A dietitian will be available at one session to answer any nutritional queries. This programme will last 6 weeks, and each session is 2.5 hours.

Participants can expect to:

- Get an understanding of the key different nutrients in your food
- Understand the information on the food pyramid
- Understand how to read food labels
- Plan shopping on a budget
- Learn how to cook simple, delicious meals
- Get a handbook with the information and recipes used on the course

Please note: Access to kitchen facilities within your shed is ideally required but alternative arrangements may be made with local community centres for access to kitchen facilities. Portable cooking devices and utensils can be delivered to your shed for participation in the programme.

## Mental Health and Wellbeing Workshop



Mental Health Ireland is a national voluntary organisation. The Mental Health and Wellbeing Workshop is: A 4-hour interactive Workshop designed to provide participants with the knowledge and understanding necessary to nurture and enhance their mental health and wellbeing and to explore and challenge perceptions that can surround mental health. The objectives of this are to explore with participants their understanding of mental health and wellbeing and to support them to have conversations about mental health and to provide practical guidance to foster and enhance mental wellbeing.

Some Sheddors get a little apprehensive when they hear "mental health" but don't worry this workshop is catered especially for you, it is informal and an opportunity to discuss ways to look after your whole self, after all, everyone has mental health.

## Supplementary Components

### Oral Health Talk



The Dental Health Foundation is a charitable trust whose main goal is to promote oral health and highlight health benefits through oral health. Topics covered in this talk include, what oral health is and how poor oral health is associated with cardiovascular diseases, cancer, chronic respiratory diseases and diabetes through unhealthy diet, tobacco use, excessive alcohol consumption and poor oral hygiene. And most importantly it covers how to look after your oral health.

This session is interactive and has something for everyone whether you wear dentures or have your own teeth.

### 'Diabetes Awareness Talk



Diabetes Ireland is the national charity dedicated to helping people with diabetes. The session is 2 hours in duration and will cover an informal, interactive session where a Diabetes Ireland health professional will identify the differences between type 1 and Type 2 diabetes, the risks associated with diabetes and how to manage them, and advice for a healthier lifestyle.

This session is delivered in an informal way and is applicable to all Sheddors whether you have diabetes or want to look at ways to prevent it.

### safeTALK Workshop by National Office for Suicide Prevention



safeTALK is a 4-hour training programme that prepares you to identify people with thoughts of suicide and connect them to suicide first aid resources. safeTALK-trained helpers can recognise behaviours and take action by connecting them with life-saving intervention resources.

You can expect to feel challenged, empowered, and hopeful. Your safeTALK trainer will demonstrate the importance of suicide alertness and help you identify ways people invite help when they're at risk. safeTALK's steps provide a simple yet effective method to engage with people at risk and connect them with resources that can carry out a full-scale intervention. At the end of the training, you'll have a chance to practice these skills first-hand and will become a certified safeTALK.

Please note: You are required to have a designated person in attendance to offer comfort and support should an attendee need to leave the training.

### Community CPR Training



CPR are three little letters that can mean so much - the difference between life and death in fact. They stand for Cardiopulmonary Resuscitation. CPR is something we should all be able to do because it can save a life in the event of sudden cardiac arrest. If those around you know how to do it, it could save yours. You can triple a person's chance of survival.

This is a 1-hour training session and the training is also open to family of shedders and the local community.

### 'Getting Started Online' digital literacy Training



As part of our fight against digital exclusion, Age Action's Getting Started Computer Training programme delivers training on computers, tablets and smartphones to people over the age of 55. The training takes place in small groups of 10 for 2 hours per week for 5 weeks. Broadband and tablet devices will be supplied to sheds for the 10-week period. Some topics that are covered are using social media and skype, online banking and viewing websites. This programme caters mainly for those beginning to use computers.



### Dementia Awareness Workshop

1 in 2 Irish people know or have known someone with dementia. Despite this, only 1 in 4 people feel they have a good understanding of what dementia is and what it isn't. This workshop is designed especially for men's sheds and aims to address what dementia is, how to recognise it and simple ways to support fellow shedders with dementia, tips on communication and supporting carers, ways to include men with dementia in your shed, helping your shed committee to make the best decisions for all concerned and looking after your brain health.



### Cancer Awareness Workshop

## Testimonials and Feedback 2019

*"I think the bottom line is when people get together like they have in this programme and start supporting each other, we feel better in ourselves, mentally we feel better, and physically we feel better. Then we don't have to go to our GPs and hospitals we can come here so we are saving money there. That's the bottom line the way I look at it".*

Vincent Men's Shed Member

*"We were always doing things and building things for different people and this and that but this (Sheds for Life) gave us a chance to invest in ourselves for a change and it was a nice break and put a bit of life back into us and the shed"*

George Men's Shed Member

*"It (Sheds for Life) brought us close together and interacting together and we became more outgoing about speaking in a group because of our group sessions. And that interaction and that facility to share our thoughts is better and makes life better"*

Neil Men's Shed Member

*"The facilitators gave us confidence. I didn't see one person who was intimidated not to ask a question. We men normally wouldn't be great for that. In other things you find there may be only two or three that would ask a question but at the end of the session everyone had the confidence to get involved and I can see the improvement in the mental wellbeing of the shed for that."*

Matt Men's Shed Member



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## EXPRESSION OF INTEREST FORM

### Sheds for Life 10 Week Programme



Name of Shed: \_\_\_\_\_

Shed Address: \_\_\_\_\_

Key Contact (to act as representative for shed participating in this programme): \_\_\_\_\_

Key Contact Number: \_\_\_\_\_

Key Email Address: \_\_\_\_\_

Number of men committed to participating in this programme: \_\_\_\_\_

Please note: Sheds can team up with neighbouring sheds to reach the required numbers necessary to participate. Please state the name of the shed you intend to team up with: \_\_\_\_\_

Please select one physical activity programme below your shed wants to participate in.:

Siel Bleu Ireland Exercise for Shedders Classes ☐

Get Ireland Walking 'Sheds ag Siúl' Programme ☐

Does your shed have kitchen facilities to participate in the Healthy Food Made Easy programme?

YES ☐ NO ☐

If No, is your shed willing to use kitchen facilities at a nearby facility where available to participate in the Healthy Food Made Easy programme:

YES ☐ NO ☐

#### Supplementary Workshops

Please select two further supplementary once off workshops. Please number your workshops in preference from 1 to 7. Number 1 being your 1<sup>st</sup> preference, 2 being your second, 3 being your third preference and so on. We will try to facilitate your first two preference where at all possible subject to availability.

CPR Training

☐

Cancer Awareness

☐

Diabetes Awareness

☐

SafeTALK Suicide Prevention

☐

Dental Health for Men

☐

Getting Started Online Training

☐

Dementia Awareness

☐

What days and time of the week is your shed open?

---

What day(s) of the week would suit your shed best for participation in this programme:

(Please choose a day(s) of the week that will not interfere with other scheduled shed activities)

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Signed 

---

On behalf of 

---

 Men's ShedDate: 

---

This form can be scanned and emailed to [wellbeing@menssheds.ie](mailto:wellbeing@menssheds.ie) or posted directly to the Irish Men's Sheds Association





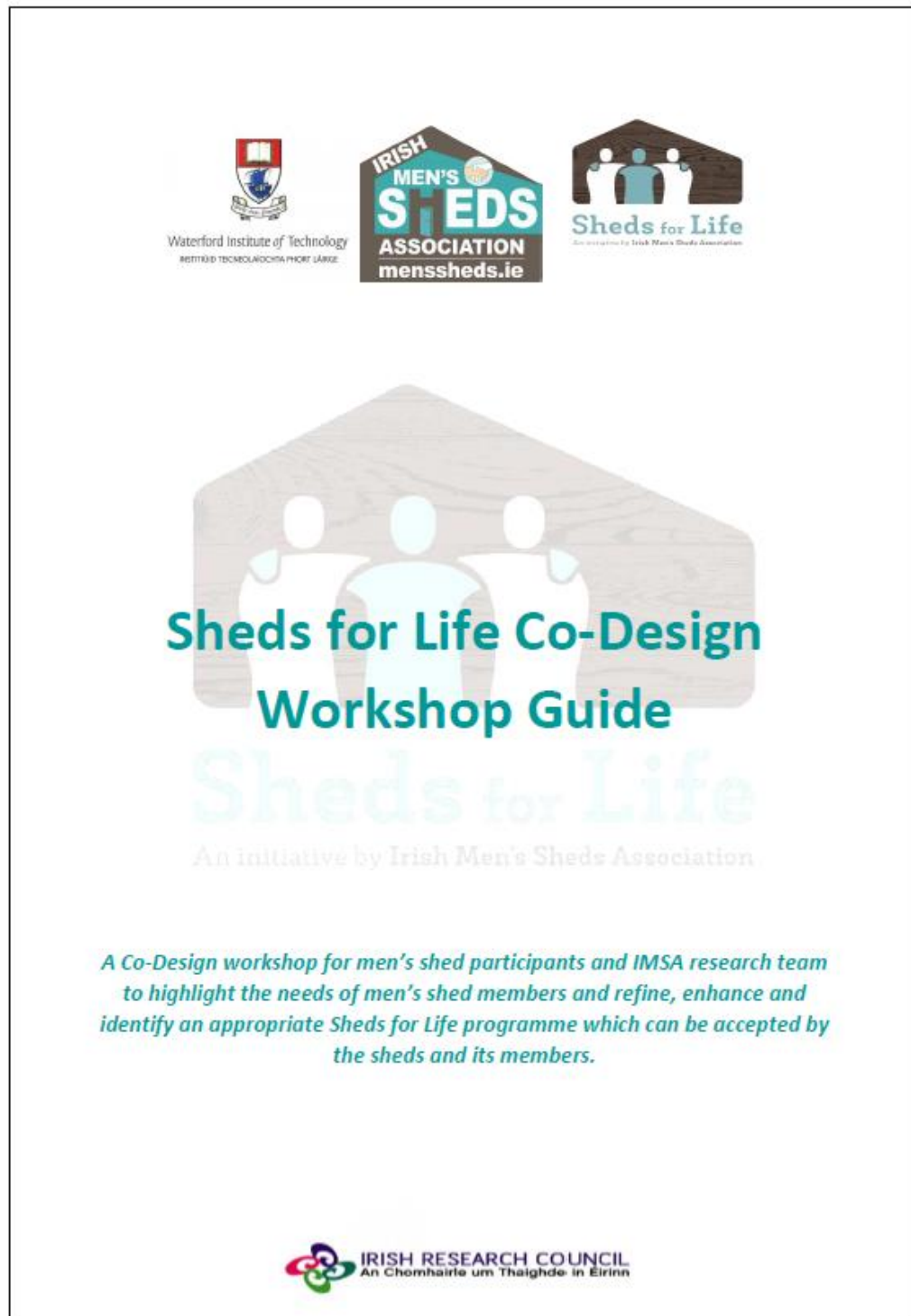
Irish Men's Sheds Association Irish Farm Centre Bluebell Dublin 12 D12 YXW5

W: [www.menssheds.ie](http://www.menssheds.ie) | [www.malehealth.ie](http://www.malehealth.ie) | E: [wellbeing@menssheds.ie](mailto:wellbeing@menssheds.ie) | PH: 01-8916510

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## Appendix V: Sheds for Life Co-design workshop guide



## Sheds for Life Co Design Work Shop - Men's Shed Members

### Purpose:

- To address implementation outcomes: Appropriateness, Adoption, Acceptability, Sustainability, Effectiveness
- To enable Sheds for Life past participants to have an active role in the on-going co-design process of the programme with the aim to ensure that Sheds for Life is an appropriate fit within the sheds' setting and for shed members
- To increase acceptability and adoption of the programme among shed members
- To identify the needs of shed members and facilitate buy-in and sense of ownership of Sheds for Life for shed members and service providers
- To encourage sustained behaviour change among shed members
- To identify implementation barriers and facilitators towards successful and sustained implementation of Sheds for Life
- To assist with an informed consultation process with Sheds for Life partners to adapt and refine Sheds for Life to improve implementation and effectiveness of the programme within sheds with a view towards further scale up
- To assist in understanding the unique contextual factors of the sheds that makes them conducive to health and wellbeing
- To assist with the design of an "Assessment Readiness Checklist for sheds participating in Sheds for Life" to identify suitable sheds for the programme.
- To design a motto for Sheds for Life that captures the programme design as being for the men by the men
- To inform a Sheds for Life wellbeing charter

### Contents:

- About this workshop
- About the Men's Sheds
- About the research and participants.
- Why choose a Co Design Format
- Workshop outline
  - Introductions
  - Aim of the Workshop- 5 Minutes
  - Ice Breaker- 5 Minutes
  - Establishing Ground Rules-5 Minutes
  - Reflection on personal wellbeing- what's important for maintaining wellbeing – 10 Minutes
  - Reflection- What makes a shed – 10 Minutes
  - Reflection on Sheds for Life- Identifying barriers and facilitators- 15 Minutes
  - Needs assessment- group brainstorm – 15 Minutes
  - Sheds for Life format design by shed members – 20 Minutes

- Group discussion and closing- 10 Minutes

**Suggested time:** 2.5-3 hours

### About this workshop:

Sheds for Life is the health and wellbeing initiative designed and implemented by the Irish Men's Sheds Association to deliver targeted health promotion to its men's shed members in a way that enhances the routine activities of the sheds. This workshop is specifically for the structured ten-week Sheds for Life programme that is delivered to sheds across Ireland in conjunction with partner organisations.



The aim of this co-design workshop is in line with a community-based participatory research approach and it's goal is to allow the men to be active participants in designing and adapting the Sheds for Life programme so that men's shed members have a sense of ownership about the programme and to ensure that all Sheds for Life components are an appropriate fit within the sheds setting.

### An Initiative by the Irish Men's Sheds Association

#### What is a Men's Shed?

A Men's Shed is a community-based organisation open to all men regardless of age or background. Men's sheds are grassroots, member-focused spaces which offer men a pressure-free environment in which to share skills, make new friends and connect with their communities. The company of other like-minded men, comradery and banter are placed at the heart of every men's shed. One of the primary objectives of Men's sheds is to advance the health and wellbeing of the participating men. Members of men's shed work on many different projects, from woodwork to vegetable-

growing to singing in choirs. However, each member is free to participate in his own way and at his own pace – even if all he wants to do is have a chat and a cup of tea. All men are welcome.

#### What a Men's Shed is not

- It is not a health service or programme, but men's health and wellbeing may improve
- It is not a formal training programme, but men may gain new knowledge and skills
- It is not a service for men, but activities organised by men
- It is not a sports club, but men could play sports
- It is not an information service, but men can ask for information they need
- It is not a referral service, but men can be recommended to attend

#### About the research and participants

This co-design workshop is a part of wider evaluation of Sheds for Life entitled "Shedding light on men's health- evaluating the scalability of a community-based men's health promotion programme "Sheds for Life" through the application of implementation science". Using an implementation science approach, the aim of this research is to evaluate the effectiveness of the Sheds for Life programme at individual level, but to also identify key facilitators and barriers that lead to effective implementation of the programme. A key success factor in implementation science is the use of participatory research approaches. This evaluation engages all key stakeholders at individual, provider and organisational level to understand how to effectively implement Sheds for Life within the sheds setting with a view to maintaining its sustainability and future scale-up. For this reason shed members are active participants in not only the Sheds for Life programme but also the research process. A critical success factor of Sheds for Life is understanding what format the programme should take so that it is an acceptable and appropriate fit within the sheds environment, in balance with capacity of the partner organisations and the IMSA to deliver it. Following initial testing of the Sheds for Life programme this co-design workshop has been designed to engage the men as active participants in the research process and give them a voice, sense of ownership and active role in how they would like Sheds for Life to look going forward.

#### Why Chose a Co-Design Format



The co-design method allows the research team and the IMSA to gather data in an engaging and interactive way. This method will facilitate the gathering of feedback from shed members but will also engage them in the design process of Sheds for Life. The men's shed members as participants in Sheds for Life are experts of their own experience and therefore are central tenet to the design process. This approach will enable the Men's Shed members to make a creative contribution towards Shed for Life that aims to foster a sense of respect and ownership. Following on from this the workshop findings will be used to guide providers of Sheds for Life to adapt the programme with shed members' views at the heart of the decision making, ultimately allowing a wide range of people at individual, provider and organisational level to make a creative contribution to Sheds for Life.

### Note for the facilitator: Effective Communicating with Sheds

Below are some points that may help you engage with men's shed members. When delivering a workshop within a shed be mindful of the variability that exists between sheds. No two men's sheds are the same in terms of its members, its setting or the facilities available. Shed members also come from an array of backgrounds so be mindful of different levels of ability in terms of their literacy skills as well as their cognitive and physical abilities. For this reason it is best to keep all activities inclusive. Be mindful also of vulnerabilities within the sheds and past experiences which may be sensitive to shed members such as mental health problems or bereavement. It is important that you enter a shed with an open mind and a non-judgemental nature. Above all else, don't underestimate men's shed members they have a wealth of wisdom and life experience to share and their insights are key to understanding what works best in sheds.

- Create open lines of communication through use of simple language and the use of an encouraging and nurturing tone
- Establish rapport, familiarity and trust by visiting a shed to facilitate one to one and group discussions with men's shed members.
- Use strong, positive messages that encourage men to engage with the workshop and without amplifying shame or blame
- Use case studies to highlight men's experiences, stories, successes, and challenges in addressing their physical and mental wellbeing
- Tailor your messages and content to be male specific and friendly while being cognisant of the way men's sheds members interact

- Explore other ways of communicating with men's sheds. IT skillset as well as access to computers and wifi may vary from shed to shed
- Give due regard to health literacy when using written materials. More than one in three men with low literacy need help understanding written information

### Workshop Outline

#### Step 1: Introduction and set up – Timing 10 Minutes

The workshop should be delivered in a circle format with no desks to encourage openness and sharing of opinions and ideas.

The session should be opened by welcoming participants and thanking them for their participation and inviting the facilitators into their shed. Begin with introducing yourself and explaining the purpose of the workshop. Attend to any housekeeping matters here. Ensure that all participants understand the purpose of the research and have signed an informed consent form to participate (Many of the shed members will have done this previously but there may be some participants who did not). The session should be audio recorded and it is important to remind all participants of this and ensure they consent to having the session recorded. Remind all participants that their participation is voluntary and they are not required to participate in anything that may make them feel uncomfortable.

#### Tips for Introduction:

- Remind participants they are experts in all things Sheds for Life by virtue of being a shed member and having participated in the pilot programme
- Explain that they now have a role of researchers themselves and their feedback is vital in helping to understand how to make Sheds for Life better and enhance the experience for their shed and sheds across Ireland
- Explain that the purpose of this workshop is to work together to identify ways to improve Sheds for Life going forward and to truly understand and respect the needs of shed members when adapting the programme

#### Aim of the workshop:

- To get participants to reflect on what is important for their wellbeing and what works in the context of the shed in relation to wellbeing
- Identify key areas of health and wellbeing that should be prioritised in Sheds for Life as determined by the participants

- Identify barriers and facilitators within the Sheds that impact Sheds for Life
- Design a format for Sheds for Life as determined by Shed members

## Step 2: Ice Breaker – Timing 5 Minutes

Ice breakers are a useful way of helping participants to buy-in and focus on the purpose of the workshop leaving other thoughts that may be preoccupying them outside. It is also a useful way to set the tone of the workshop, allowing a space to warm up to the conversation and feel at ease.

Be mindful of the shed cohort when delivering an ice breaker and ensure that it is age appropriate and respectful but also light hearted and fun.

### Suggested Ice Breakers

Depending on the group in the shed you may like to choose either of the following:

Deliver icebreakers with all participants sitting in a circle.

#### Mindfulness Icebreaker

**Equipment needed:** Paper, Pens and Plastic Bowl

- Start the ice breaker by allowing three minutes silent contemplation guided by the facilitator where participants sit comfortably in their chairs with their eyes closed and reflect on what might be making them feel stressed today.
- Afterwards, invite all participants to write their source of stress on a piece of paper.
- Once all participants have written down their stressful thought, get them to rip it up and put it in a bowl in the centre of the room.

OR

#### The Name Game

- The facilitator should begin this icebreaker by introducing themselves but with an adjective at the beginning of their name that starts with the same letter as their name (eg. My name is Ambitious Anna).
- The next person must introduce themselves in the same fashion, and then introduce the person/ people that came before them (eg. My name is Chatty Cathy, and this is Ambitious Anna).

- Continue around the circle, with the last person (First person repeated) having to repeat all the names in order and adding their own.

### Step 3: Establishing Ground Rules- Timing 5 Minutes

**Equipment needed:** Large sheet of paper/Flip Chart and Marker

Establishing Ground Rules are important to reinforce the feeling of group safety. It also reassures participants that confidentiality will be upheld and facilitates the development of trust within the group.

- The ground rules should be established by the participants first, guided by the facilitator.
- Write all ground rules on a large sheet of paper and have it displayed throughout the workshop.
- The following list of ground rules can be suggested by the facilitator if needed:
  1. Maintain Confidentiality
  2. If someone is speaking do not speak over them
  3. Do not interrupt or dominate the conversation
  4. All phones should be turned off or put on silent
  5. Respect all opinions
  6. Listen with an open mind and positive attitude
  7. Ask questions or seek clarification
  8. Encourage participation and be supportive
  9. The right to pass
  10. Be punctual after breaks

*An initiative by Irish Men's Sheds Association*

### Step 4: Reflection on personal wellbeing- what's important to Shedders for maintaining wellbeing – 10 Minutes

**Step 4 aims to:**

- Encourage shedders to think about what is important to their own personal wellbeing to assist in framing the Sheds for Life programme

**Equipment needed:** Flip chart/ whiteboard and worksheet 1

1. Highlight the importance of self-care to the shedders and how it's useful to understand what's important to enhance and maintain their individual wellbeing



2. Highlight the holistic health model and how health can be subjective and different to each individual
3. On a whiteboard/flipchart- outline different areas of health i.e.: Physical, psychological, emotional, and spiritual, relationships, workplace/shed. Allow the men to also suggest areas that may be applicable to them in a group discussion.
4. Give each participant a work sheet (appendix 1) to fill out individually, and ask them to take some time to think about what's important to them to maintain the above areas of their wellbeing and also what might get in the way of this.
5. Encourage the men in groups of 2-3 to discuss what they feel is important to them for their wellbeing
6. Asking each small group to share what they feel is important for their wellbeing and offer a space to discuss why.
7. Note key points on a flip chart.

### Step 5- How does the shed contribute to the wellbeing of Shedders-

Sheds for Life video

Timing: 20 Minutes

**Equipment needed:** Answer Sheets for group work and flip chart for some small group prompts and group sharing/discussion, medium on which to play Sheds for Life video

#### Step 4 aims to:

- o Explore & identify benefits of participating in health programmes within the shed setting
- o Identify some of the key benefits of participating in Sheds for Life or other activities for health & wellbeing
- o Explored/identify the contributing factors that make the shed a good place to promote health and wellbeing

An initiative by Irish Men's Sheds Association

1. Discuss with Shedders how the shed contributes to their wellbeing in a group brainstorming session- note answers on a flip chart

Some prompts and suggestions can be used from following list:

- o Social Support
- o Safe Environment
- o Comradery
- o Sense of purpose
- o Likeminded members
- o Trust and friendship
- o Place to feel at ease
- o Place to share experiences and have conversations

- Place to have fun and learn new skills

2. Next ask the participants why they think that the shed may be a good environment to promote wellbeing in a more structured way that enhances the above the benefits. Allow a discussion on whether they agree with this and why a note answers on a flip chart.
3. Discuss with the shedders the benefits of offering the Sheds for Life programme to the Sheds and how it may enhance the environment of the sheds and the wellbeing of its members

#### Sheds for Life video

4. Next show the Sheds for Life video to the participants. Highlight the reason for showing the video and what participants should mindful of while viewing the video. Display the breakout questions below on whiteboard/flip chart.
  - What reasons might a shedder participate in a health programme?
  - What was the key positive feelings or thoughts left with you after watching the video?
  - What reasons might stop a shedder from participating in a health programme?
  - What words of encouragement could you offer a fellow shedder to overcome these barriers and take the first step to participating?
  - Why do you think the shed is a good place to promote health?
5. Next, have participants gather in groups of two or three and discuss their views, exploring the key positives/benefits highlighted in the video from participating in Sheds for Life and how best a shedder can be supported to participate in Sheds for Life or other health and wellbeing related activity.
6. Ask the shedders to come back to the wider group and share their views while highlighting additional benefits of the programme.

### Step 6 – Needs Assessment

Timing – 15 Minutes

Equipment needed: Post-its and flip chart

Individual and group brainstorm

**Aim of Step 6:** To allow Sheddors to identify their own needs in terms of their health and wellbeing and what they would like to see offered on the Sheds for Life programme

1. Give the participants a space to identify what they liked most about the Sheds for Life programme by putting the question to them “What stood out the most for me in Sheds for Life was” and get them to write their answer on a post-it.
2. Beyond the aforementioned, highlight what is already available in terms of the content of the current Sheds for Life programme i.e. Physical Activity- Siel Bleu and Get Ireland Walking, Healthy Food Made Easy, Cancer prevention and awareness, Diabetes prevention

and management, Oral Health, Digital Literacy, CPR, Health Screening, Mental Health workshop and Safe Talk. Write these on a flip chart for the participants to view

3. Encourage the participants to think about other areas of their wellbeing that they feel need to be addressed on the programme. Some participants may be reserved in sharing these so firstly, give the participants space to write down their ideas individually on a post-its/sticky notes and return them to the centre of the room so that their suggestions can be anonymous.
4. The facilitator can then display these on the board for discussion.
5. As a group, also brainstorm other ideas.

**Note:** At this point some suggestions may have already been offered during previous discussion during the workshop. Refer back to these. Other prompts, as suggested by men's shed members at this point in the evaluation may also be useful to highlight and discuss from the list below:

- o More emphasis on mental health
- o Bereavement counselling
- o Sexual health
- o Citizens advice and entitlements

## Step 7- Identifying Barriers and Facilitators towards participation in Sheds for Life

Timing- 15 Minutes

**Equipment needed:** Post-its and flip chart

Individual and group brainstorm.

**Aim of Step 7:**

- o Identify possible challenges and barriers to shedders getting involved in Sheds for Life or other activities for health & wellbeing
  - o Explore/ identify possible solutions for supporting men to engage in Sheds for Life as well as other health & wellbeing related activities
1. Encourage participants to brainstorm in a group what made it easy to participate in Sheds for Life and note the answers.
  2. Then, encourage the participants to think of any obvious barriers that might affect participation in Sheds for Life. Allow them the space to note these individually on sticky notes so that they have the safety of anonymity.
  3. At this point there may be plenty of barriers and facilitators that the participants come up with themselves but it may be useful to probe further and ask participants what helped/didn't help them to engage in the programme under the suggested headings:
    - o Format
    - o Content

- Length
  - Delivery
  - Other Commitments
4. Group the identified barriers and facilitators sticky notes under headings, and in a third section have the heading "Solutions". As a group, encourage the participants to come up with ways to overcome the barriers or ways to encourage other shedders to participate despite perceived barriers, and take time to discuss. Note: Some identified "barriers" towards participation may be unavoidable such as family commitments, illness etc

### Step 8- Sheds for Life format design by shed members

Timing: 20 Minutes

Equipment needed: Flip Chart

Aim of Step 8:

- The aim of step 8 is to summarise what has previously been discussed into an adapted Sheds for Life structured format.
  - Allows participants to determine what they would like Sheds for Life to look like
1. Based on the steps above encourage the group to determine what they would like the Sheds for Life programme to look.
  2. This should be done as a group where a reasonable consensus can be reached.
  3. Use the sticky notes over the course of the workshop to discuss expressed needs, what they liked about the programme and solutions generated to overcome barriers. All of these suggestions should support the design of the Sheds for Life programme.
  4. As a guide, encourage the participants to design Sheds for Life under the following headings

Format

Content *an initiative by Irish Men's Sheds Association*

Timing

Structure

Delivery Style and mode

Type of tutor

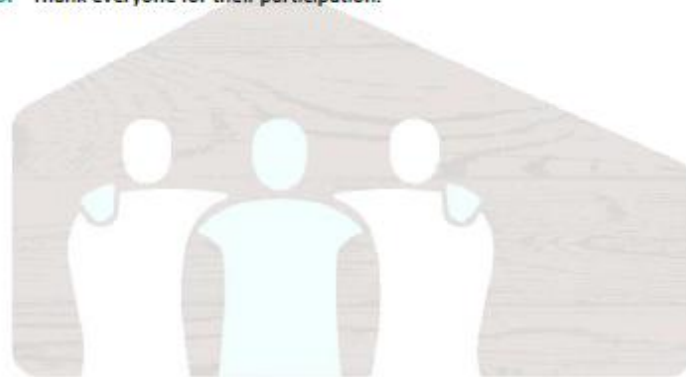
5. Allow the participants to suggest their own headings also. If a lot of suggestions are made, it may be worth considering ranking the suggestions to reach an overall consensus.
6. Record the adapted programme designed by the participants on flip chart paper.

### Step 9- Group discussion and closing

Timing: 10 Minutes

**Aim of Step 9:**

- To conclude the workshop and ensure that all participants have had the opportunity to share their views.
  1. Remind the participants what the goal of the workshop was and the importance of the co-design process and their role as researchers.
  2. Give the participants a space here to address any unfinished business or concerns they feel they may have.
  3. Congratulate them on designing their own Sheds for Life programme.
  4. Close the session by encouraging each participant to say one key insight they have gained from the workshop.
  5. Thank everyone for their participation.



**Sheds for Life**

An initiative by Irish Men's Sheds Association

## **Appendix W: Online Files**

To view the Sheds for Life handbook:

<https://drive.google.com/file/d/14j4-dnReejzEXlqVqWrMP7WtpGTqRyiN/view?usp=sharing>

To view the Guidance for Effective Engagement with Men's Sheds Manual:

[https://drive.google.com/file/d/13eveMd9GIMqp\\_jH-TXhJZ97mIH1bHXEh/view?usp=sharing](https://drive.google.com/file/d/13eveMd9GIMqp_jH-TXhJZ97mIH1bHXEh/view?usp=sharing)

To view the Sheds for Life impact report:

<https://menssheds.ie/wp-content/uploads/2021/04/SFL-impact-report.pdf>