

**An Examination of the Effectiveness of a Social
Marketing Campaign Using Digital Marketing
Techniques to Promote Walking Amongst 25-45-year-
old Male and Females**

by

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**A thesis submitted in fulfilment of the requirements for the
Degree of Master of Arts by Research**

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Submitted to Waterford Institute of Technology, December 2020.

Declaration

I declare that the writing of this thesis is my own work and that it contains no work previously published or unpublished by another person.

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Acknowledgements

There are a number of people I would like to thank, without whom I would not have been able to complete this research masters.

Firstly, I would like to thank my supervisor Dr. Patrick Delaney. I genuinely cannot put into words how grateful I am to have you as a supervisor for both undergrad and postgrad. Thank you for your endless amount of time, help, encouragement, kindness, and for always believing in me. I would not have made it this far without you.

My sincere gratitude to Dr. Noel Connors and Dr. Mary Cowman, thank you for your time, support and guidance. Thank you for reading multiple drafts of my thesis and for your extensive feedback.

To Jason King, representative of Get Ireland Walking and Ruth Whelan, representative of Mountaineering Ireland, thank you for being a part of this research and for providing funding for phase two of this study. You were extremely helpful and I hope I get to work alongside you again someday.

A special thanks to my mother Lily. Your continuous love and encouragement has been second to none. Thank you for everything you have done for me.

To my two brothers, Ciaran and Cormac, it is hard to believe I have made it this far, I wouldn't have been able to do it without your help. Thanks for always being there for me. Forever grateful for ye both.

To Sarah, Jamie and Casey, thanks for supporting me and for helping me get through it all.

Finally, I would like to thank anyone that has helped me along the way, be it big or small. Thank you.

Abstract

Purpose: The purpose of this study is to examine the effectiveness of a social marketing campaign using digital marketing techniques to promote walking amongst 25-45-year-old male and females living in County Waterford.

Methods: This research was conducted in three phases. In phase one, an adapted questionnaire (n = 400) was used to investigate the current walking levels and the factors affecting walking participation. In the next phase, two social marketing campaigns (using Facebook and Instagram advertising) were implemented to promote walking events. Campaign one promoted walking as a healthy use of family time. Campaign two aimed to promote hillwalking as safe and accessible. Finally, in phase three, a self-designed questionnaire (n = 17) was conducted to evaluate the effectiveness of the social marketing campaigns.

Findings: Results indicated that there was an array of factors that had a positive and negative impact on walking participation. Some factors identified were work commitments, gender, pet ownership, awareness of local walking routes, interest in hillwalking, and not enough knowledge about nearby hillwalking trails. The results from the social marketing campaigns and associated walking events had varied success. For campaign one, 16 families attended the family walk day and for campaign two, only one individual attended the guided walk.

Conclusion: Few campaigns and National Governing Bodies have used advanced digital marketing to promote walking in Ireland. Findings from this research contribute to the existing body of literature on the factors affecting Irish adult's physical activity participation, thus, supporting the design and implementation of a successful social marketing campaign. This research also provides scope into the potential uses of digital marketing for walking campaigns. Both Irish National Governing Bodies and marketers seeking to design more effective physical activity campaigns can also replicate this methodology.

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Acronyms

ACSM	American College of Sports Medicine
AIDA	Attention, Interest, Desire, Action Model
ANOVA	Analysis of Variance
BMI	Body Mass Index
CARDIA	Coronary Artery Risk Development in Young Adults
CPC	Cost Per Link Click
CSO	Central Statistics Office
CSV	Comma-Separated Values
CTR	Click-Through Rate
FB	Facebook
FBM	Facebook Business Manager
GAA	Gaelic Athletic Association
GDPR	General Data Protection Regulation
GIW	Get Ireland Walking
HAPA	Health Action Process Approach
HEM	Hierarchy of Effects Model
IPAQ	International Physical Activity Questionnaire
METs	Metabolic Equivalent of Task
MI	Mountaineering Ireland
NSMC	National Social Marketing Centre
PA	Physical Activity
SEM	Socio-Ecological Model
SNS	Social Networking Sites
SPSS	Statistical Product and Service Solutions
TTM	Transtheoretical Model
WHO	World Health Organisation

Chapter One: Introduction

1.1 Chapter Overview

This opening chapter outlines the rationale for this research. A brief background of the existing literature in social marketing is introduced. Following this, the researcher will justify how this study will help bridge the research gap identified in the literature. The latter part of the chapter will focus on the research aim and the corresponding research questions that have been formulated for this study. Lastly, the structure of this thesis and what is to follow in the subsequent chapters is outlined.

1.2 Background and Rationale for Research

1.2.1 Physical Activity

In the past two decades, physical inactivity has become a global burden and public health challenge. The rising figures on physical inactivity are closely linked to the increased risk of developing many non-communicable diseases like diabetes, cancers, heart disease and early mortality (Morris, 1953; Paffenbarger et al., 1971; Paffenbarger et al., 1983; Hallal et al., 2012; Lee et al., 2012; Larsson et al., 2014; O'Donovan et al., 2017; Nakanishi et al., 2019). As a result, there is extensive literature providing empirical evidence that engaging in physical activity (PA) can lead to optimal health (Reiner et al., 2013; Samitz et al., 2011; Shiroma & Lee, 2010; Shook et al., 2015; Soares et al., 2015; Warburton et al., 2010; Woodcock et al., 2010; Warburton & Bredin, 2016). Participating in regular physical activity has been shown to reduce the risk of early mortality and the non-communicable diseases noted above (McKinney et al., 2016). It has also been found that physical activity is positively associated with one's psychological well-being, helping to reduce the symptoms of depression, anxiety and improves self-esteem, optimism, and happiness (Paluska & Schwenk, 2000; Goodwin, 2003; Strohle, 2008; Rethorst et al., 2009; Wolff et al., 2011; Cekin 2015).

To reap the benefits, one must engage in regular physical activity and meet the national physical activity recommendations. In Ireland, the national physical activity guidelines recommend at least 150 minutes of moderate-intensity activity per week or 75 minutes of vigorous-intensity per week¹ (Healthy Ireland, 2016). However, despite the efforts put in place to increase physical activity levels and the well-documented guidelines, physical activity rates in Ireland remain low (World Health Organisation, 2018).

¹ Moderate intensity requires a moderate amount of effort and noticeably accelerates the heart rate. For example, brisk walking. Vigorous intensity requires a large amount of effort and causes rapid breathing and a substantial increase in heart rate. For instance, running.

The HSE (2018) highlighted that there is still a major concern about Irish people not meeting the physical activity guidelines which in turn is leading to higher rates of obesity and diabetes. In 2018, The World Health Organisation monitored the physical activity prevalence rates in several countries. In Ireland, the figure for physical activity levels rose by only 1% in the last five years, and now 33% of Irish adults are meeting the PA guidelines (WHO, 2018). More recent findings showed an increase in recreational walking for Irish adults during the national pandemic in March 2020. This figure rose from 64% of adults walking in March 2019 to 78% of adults walking in March 2020 (Sport Ireland, 2020). Further findings showed that prior to the restrictions being implemented in Ireland, 61% of men and 70% of females went walking for recreation. An increase in walking occurred in the 'stay at home' stage where figures rose to 75% of males and 81% of females now walking for recreational purposes (Sport Ireland, 2020). Despite the rising figures in 2020, over half of the adult population are deemed inactive and not meeting the national physical activity recommendations.

1.2.2 Walking

In Ireland's national physical activity plan (2016), there is a focus on increasing opportunities for people to be active, remove barriers to overcome inactivity, promote a supportive environment and encourage co-operation at a national, local and community level. Furthermore, the plan involves creating awareness, educating and communicating to people the health benefits of physical activity (Healthy Ireland, 2016). Walking as a form of exercise and recreation is deemed an appropriate mode of activity to increase overall physical activity levels (Brannan, et al., 2019). According to Lee and Buchner (2008), walking can have a large public health impact due to its well-known health benefits and its easy access. For example, walking has been found to help with maintaining a healthy weight (Gordon-Larson, et al., 2009), it reduces the risk of diabetes, heart attack and stroke, it improves blood pressure, decreases stress, helps improve moods and strengthens bones, muscles and joints (Nelson & Folta, 2008). Furthermore, walking is cheaper and easier compared to other forms of physical activity such as joining a gym (Moor, 2013) and is, therefore, an appropriate form of activity to both promote and increase population physical activity levels. The Irish Sports Monitor annual reports show an increase in walking levels among Irish people (Irish Sports Monitor, 2015; 2017). More initiatives in Ireland that aim to promote physical activity amongst adults should focus on walking activities as it is considered the most popular form of physical activity

in Ireland across all genders and age groups (Get Ireland Walking, 2017). Despite how accessible and affordable walking activities are, many adults may experience barriers to participation (Hoare et al., 2018).

Bauman and Bull (2007) state that individuals experience many barriers to walking participation, and therefore stress the importance of understanding the factors that influence walking behaviours before attempting to implement a strategy to increase walking levels. For example, not having enough time to go walking, no transport, no equipment, too self-conscious, or no suitable location that is convenient. Individuals may also find incentives to go walking such as enjoyment, improved health, socialisation or to maintain a healthy weight. Therefore, it is important to gather an understanding of the factors that influence and discourage walking participation before executing a campaign to increase participation levels in different population groups. To overcome the complex and multifaceted phenomenon of behavioural change, interventions need to be developed with the use of an effective theory-based framework (Lefebvre, 2000; Kelly et al., 2007; Glanz & Bishop, 2010) while incorporating the principles of social marketing (Stead, Gordon, Angus, & McDermott, 2007).

1.2.3 Social Marketing

Since the 1950s, social marketing campaigns have been utilised to enhance social good and influence problem behaviours like inactivity (Andreasen, 2002). It is the amalgamation of commercial marketing techniques and the study of social science in order to influence human behaviours (Andreasen, 1994; Smith, 2000). For example, market research is an essential tool for commercial marketing as it allows firms to gather information on consumer needs and wants. However, this can be used in the context of social marketing. When implementing a social marketing campaign, there is a need to conduct market research to identify the behaviours, habits, and issues of a target audience, then developing the campaign around these results. These marketing techniques work in conjunction with the social marketing benchmark criteria that acts as a framework to achieve successful behavioural change interventions.

As noted, social marketing campaigns involve influencing human behaviours for the good of society (Kotler & Lee, 2011). These campaigns have addressed issues of drug use, alcohol consumption, smoking and inactivity (Perry et al., 2002; MacAskill et al., 2002; Reger, 2002; Huhman et al., 2004). What is more, successful social marketing campaigns

aimed at decreasing smoking (Allen et al., 2009), and increasing physical activity levels (Huhman et al., 2004; Scarapicchia, et al., 2015) have heavily relied on traditional forms of marketing (Wakefield et al., 2010). Nonetheless, there have been recent social marketing campaigns and studies that have made use of digital mediums, social media and digital technologies. These campaigns have used digital technologies from an array of perspectives, focusing on social media online engagement, attitudes towards advertising, improving physical health of people living with mental illnesses and social support for physical activity from peers (Rote et al., 2015; Zhang et al., 2015; Wilson et al., 2016; Hamelin et al., 2017; Wakefield., 2017; Mehmet, Roberts, & Nayeem, 2020; Blair, 2020).

The World Health Organisation Global action plan on physical activity 2018-2030 highlighted the need for more research on the effectiveness of social media interventions aiming to increase activity levels. Amalgamating the use of digital technologies and social marketing for the purpose of physical activity promotion deserves more research attention according to the World Health Organisation. After comprehensively reviewing literature in this area, there is little evidence to show that Irish health promotion and social marketing studies have made use of the AIDA Model in a social media marketing campaign in the context of increasing physical activity levels. This limitation is also in existence in National Governing Bodies in Ireland. There has been no other Irish study that has incorporated digital marketing retargeting strategies into a social marketing campaign encouraging 25-40-year-old male and females to attend walking events.

This gap in literature has led the development of the research questions for this study. The author aims to present a study and methodology that allows marketers to implement social media marketing campaigns, in a social marketing context, aimed at increasing walking levels. Therefore, the author of this thesis aims to bridge the gap identified in the literature by implementing the following study. The next section will offer the reader more detail on the overall aim and objectives of this research.

1.3 Aim and Research Questions

1.3.1 Research Aim

The purpose of this study was to examine the effectiveness of a social marketing campaign using digital marketing techniques to promote walking amongst 25-45-year-old male and females living in County Waterford.

1.3.2 Research Question

It is important to note that before the methodology of any study is developed, the researcher must first outline and design the aims and focus (Sarantakos, 2013). Thus, developing the research questions of this study.

For this study, the research questions are as follows:

1. What are the current walking levels of 25-45-year-old male and females in Waterford?
2. What factors are influencing 25-45-year-old male and female walking levels in Waterford?
3. How effective is a social marketing campaign, using the AIDA Model, on encouraging 25-45-year-old male and females in Waterford to attend walking events?

1.4 Scope of Research

This study will shed light on key issues related to social marketing campaigns aimed at promoting physical activity. The current study attempts to bridge the gap between correctly using digital re-targeting strategies in a social marketing context to influence human behaviour and increase walking participation. While a review of literature reveals that the use of the AIDA Model is used from a business perspective, it has been neglected in the context of a social marketing campaign aimed at increasing walking levels in Ireland. This limitation is also in existence in National Governing Bodies that aim to promote physical activity in Ireland. Furthermore, the World Health Organisation Global action plan on physical activity 2018-2030 highlighted the need for more research on the effectiveness of social media interventions aiming to increase activity levels.

The first unique impact of this work is the contribution to the existing body of literature on the factors affecting Irish adult's physical activity participation, thus, supporting the design and implementation of a successful social marketing campaign. These correlates should be taken into consideration for future research promoting physical activity in Ireland. What is more, the core academic contribution of this research is the scope it provides into the potential uses of digital marketing and re-targeting strategies for walking campaigns. It is clear from this study that the AIDA model can be used as a foundational structure for social marketing campaigns aimed at promoting walking. It is viable for National Governing Bodies to replicate the methodology employed in this study on a

national scale to promote and increase walking participation in Ireland. This particular methodology will aid in the promotion of walking and physical activity which may increase the number of adults meeting the national physical activity guidelines. Whilst these findings can be of benefit to Irish National Governing Bodies, marketers seeking to design more effective physical activity campaigns can also reproduce these methodologies. The findings of this study address the literature gap in an Irish context by providing robust information in the area of digital technologies in social marketing behavioural change campaigns.

1.5 The Role of Affiliated Organisations

Given the literature gap outlined above and the need for further research in this area, there were two organisations from National Governing Bodies of Ireland that supported this work. The first organisation that supported this study was Get Ireland Walking, an initiative of Sport Ireland and Healthy Ireland². This organisation aims to maximise the number of people participating in walking for health, wellbeing and fitness throughout Ireland. The second organisation supporting this research was Mountaineering Ireland, a National Governing Body for mountaineering, hill walking, rambling and climbing and recognised by both Sport Ireland and Sport Northern Ireland. They aim to represent and support hill walking and climbing in Ireland.

Get Ireland Walking and Mountaineering Ireland were deemed suitable organisations to work with as they already focus on promoting walking in Ireland. Both the researcher and supervisors approached the representatives from each organisation with the aim and objectives of the study. In the initial process of this research, several meetings took place between the researcher, supervisors and representatives from each organisation to outline the specific focus of the study. The two representatives agreed to come on board and to fund phase two social media marketing campaigns.

In relation to the social media marketing campaigns, both organisations gave permission and access to the organisation's Facebook accounts and Facebook Business Manager accounts. This agreement was identified through a Memorandum of Understanding (see Appendix A – Memorandum of Understanding, page 310). Having access to Facebook accounts allowed the researcher to deliver the social media marketing campaign and

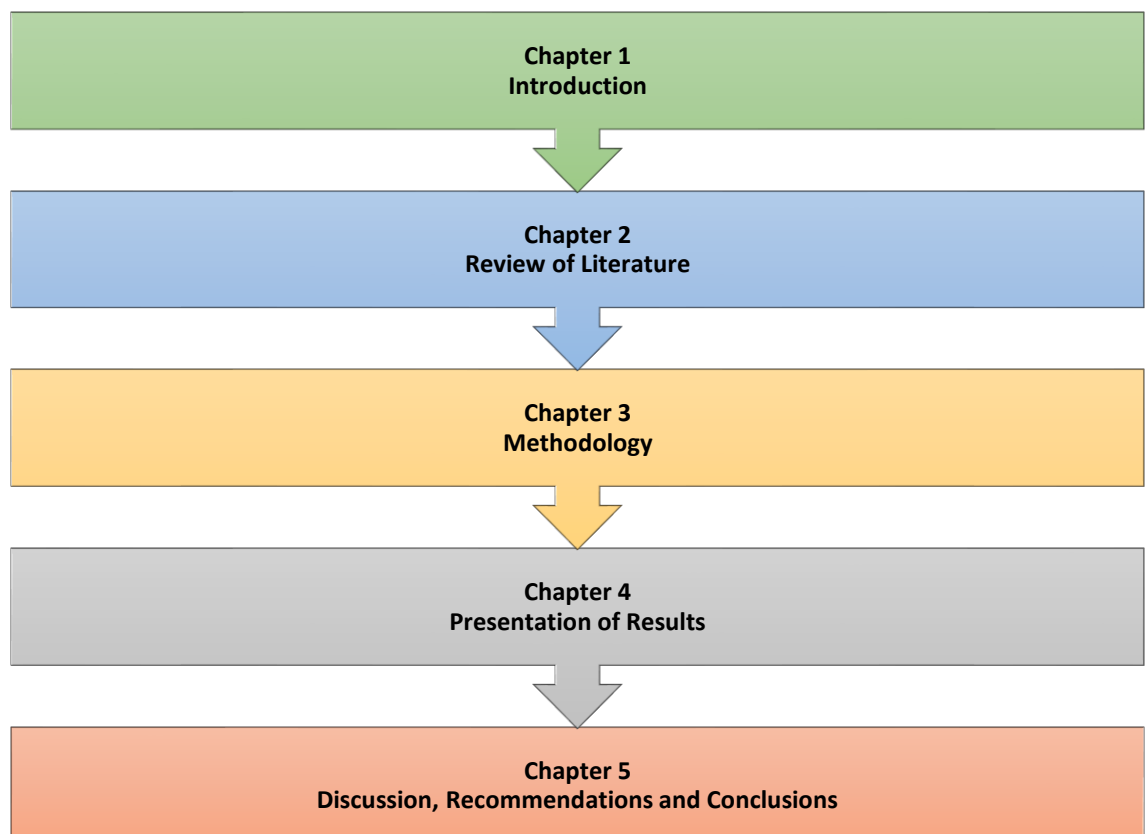
² Healthy Ireland is a government initiative aimed at improving health and wellbeing of every age in Ireland.

advertisements. It was also agreed and achieved that both organisations funded the cost associated with the online advertisements in the social media marketing campaign. Any cost was handled through both Facebook Business Manager accounts. Both representatives had to approve the content of the online advertisements before they were published. The following section will now outline the structure of the thesis and what each chapter entails.

1.6 Format of Thesis

This thesis is made up of five chapters. As discussed, the first chapter introduces a brief background to the existing literature in this field of study. Chapter one also outlines the research aim and the corresponding research questions. Following this, chapter two reviews previous literature related to physical activity, marketing, and social marketing. This is followed by the methodology chapter (chapter three) which describes the data collection methods utilised in this research. Chapter four focuses on the research findings. Finally, this thesis concludes with a discussion chapter which will include limitations to the study and recommendations for future research. An overview of the structure of this thesis can be seen in Figure 1.

Figure 1 - Structure of the Thesis



1.6.1 Chapter One – Introduction

The introductory chapter provided a glimpse of the existing literature and research gaps around physical activity and social marketing, both of which influenced the current study. The rationale, scope of the research, research aim, and research questions have also been outlined.

1.6.2 Chapter Two – Literature Review

This chapter will explore the most relevant literature related to physical activity, and the area of marketing and how it transcends into social marketing. The chapter starts by reviewing research related to physical activity and the correlates of physical activity. Following this, the chapter focuses on the underpinning models and theories utilised in physical activity behavioural change interventions. The researcher will also provide a comprehensive background into existing literature related to digital marketing, online advertising, and social media. Upon outlining the underpinning models and theories utilised in digital marketing and advertising studies, the Literature Review concludes on a comprehensive overview of the evolution of social marketing and health-related interventions aimed at increasing physical activity.

1.6.3 Chapter Three – Methodology

This chapter aims to outline and explain the research design and data collections methods utilised in this study. Firstly, the research approach is discussed, where the author of this thesis will draw attention to theoretical perspectives and the research paradigm used, more specifically, a positivistic approach. Following this, the methodologies, models, and theories that underpinned the research design are described. This involves the use of digital marketing and the AIDA model. Subsequently, the research design is discussed in detail where the instrument design and structure of phase one, two and three explained. In relation to each data collection method used, the merits and limitations are justified. Lastly, the procedures used to statistically analyse the data is summarised.

1.6.4 Chapter Four – Presentation of Results

The key findings from the study are analysed and outlined in this chapter. The findings are presented sequentially based on the research questions. Section 4.6 investigates the results from research question one, where the current walking levels of the chosen cohort are addressed. Following this, section 4.7 analyses the factors that influence 25-45-year-old male and female walking levels. Lastly, section 4.8 summarises the results on how

effective a social marketing campaign using the AIDA model is on encouraging 25–45-year-old male and females in Waterford to attend walking events. This section considers the online data gathered from the social media marketing campaigns and the results from the evaluation questionnaire on the social media marketing campaigns. All results are produced quantitatively.

1.6.5 Chapter Five – Discussion

The final chapter will discuss and compare previous literature with the results found in the current thesis. Firstly, research question one is addressed. This section will focus on the overall walking levels, self-reported walking levels and the influence of sports participation. Secondly, research question two is reported on. This section is divided into walking levels in demographic sub-groups and factors influencing walking levels. Following this, research question three is discussed. The researcher describes how effective a social marketing campaign using the AIDA model is on encouraging 25-45-year-old male and females to attend walking events. The effectiveness of the online advertisements is also explored. Lastly, the researcher will determine any recommendations for future research and conclusions of the study.

1.6.6 Conclusion

This chapter will describe the research gap in previous literature and the need for further research in the area of digital marketing and social marketing aimed at promoting walking. What is put forward is the aim and research questions used to bridge this existing gap. The author gives a brief insight into the contribution of this study to the body of knowledge and its impact it has on future research. Lastly, a brief description of the chapters included in this thesis was given. The following section will now outline and describe in detail a review of previous literature in this field of study.

Chapter Two: Literature Review

2.1 Introduction

To date, there has been extensive research conducted on social marketing and behavioural change. The vast majority of social marketing work has focused on promoting health-related behaviours such as smoking addiction, alcohol abuse, drug abuse, healthy eating, safe driving, and rail safety (Allen et al., 2009; Jepson et al., 2010; Bala et al., 2013; Krishen & Bui, 2015). Whilst this work is important, and indeed adds to the conversation, some of these studies have largely overlooked the role of digital technologies and digital media in the area of social marketing. It is important to note that previous studies in the area of social marketing have also focused on increasing physical activity (PA), relying primarily on the use of traditional marketing methods (Reger-Nash et al., 2006; Huhman et al., 2007; Reger-Nash et al., 2008; Abioye et al., 2013; Scarapicchia et al., 2015). However, a review of literature reveals a number of more recent social marketing studies that use digital mediums and social media in their campaigns (Rote et al., 2015; Zhang et al., 2015; Wilson et al., 2016; Hamelin et al., 2017; Wakefield., 2017; Mehmet, Roberts, & Nayeem, 2020; Blair, 2020). To the knowledge of the researcher, what has not been specifically utilised in an Irish social marketing context, is the use of the AIDA Model in a social media marketing campaign aimed at increasing walking participation. This drawback is also in existence in National Governing Bodies and organisations that aim to promote physical activity in Ireland.

The purpose of this chapter is to explore the most relevant literature related to physical activity interventions, social marketing, and the marketing industry as a whole. The first section will examine research related to physical activity and health. In addition to this, reference are made to the existing physical activity guidelines, and the prevalence of non-communicable diseases as a result of inactivity. The researcher will tie this section together by evaluating the correlates of physical activity in detail. A discussion will then be put forward to describe the underpinning models and theories utilised in physical activity behavioural change interventions. Following this, the researcher gives a comprehensive background into existing literature related to digital marketing, online advertising, and social media. The underpinning models and theories utilised in digital marketing and advertising studies are also acknowledged. To conclude, the evolution of social marketing and health-related interventions aimed at health-related behaviours, including physical activity are discussed.

2.2 The Definition and Classification of Physical Activity

The terms ‘Physical Activity’ and ‘Exercise’ are often used interchangeably, however, they are not synonymous. Physical activity can be defined as any bodily movement produced by the contractions of skeletal muscles that results in an increase in caloric expenditure from resting expenditure (Caspersen et al., 1985), whereas exercise can be referred to as a planned or structured form of physical activity in an attempt to improve or maintain one’s physical fitness (American College of Sports Medicine, 2018). Physical activity can be classified into two types: aerobic and anaerobic. Aerobic PA, like running, increases oxygen levels which improve the body’s cardiovascular function. Anaerobic PA increases the body’s muscle mass and strength. Both types have been proven to show significant benefits on a person’s optimal health. Physical activity can also be classified into intensities; light, moderate or vigorous. The intensity of PA can be categorised by a person’s energy expenditure (metabolic equivalent - MET) (Duclos et al., 2013). For instance, vigorous physical activity like running or cycling (≤ 6 METs), moderate like brisk walking (3 to 5.9 METs) and light physical activity like walking at a slow pace (< 3 METs) (Cristi-Montero, 2017). Combining the intensity, duration, frequency and type of physical activity will determine the total volume of physical activity. The more volume, the greater the benefits one receives and the decreased risk of developing non-communicable chronic diseases (Centers for Disease Control and Prevention, 2011). Engaging in physical activity contributes to the immediate and long-term benefits for both physical and mental well-being (Kruk, 2009). It also improves optimal health and quality of life, reduces stress, boosts self-confidence by enhancing body image and appearance, improves brain power, and increases muscles and bone strength (Elmagd, 2016). With all this in mind, the following section will examine; in more detail, the benefits of engaging in physical activity.

2.2.1 The Link Between Physical Activity and Health

Regular physical activity has consistently been associated with a reduced risk of mortality and a wide range of chronic diseases (McKinney et al., 2016). The national physical activity guidelines recommend at least 150 minutes of moderate-intensity activity per week or 75 minutes of vigorous-intensity per week³ (Healthy Ireland, 2016). They further

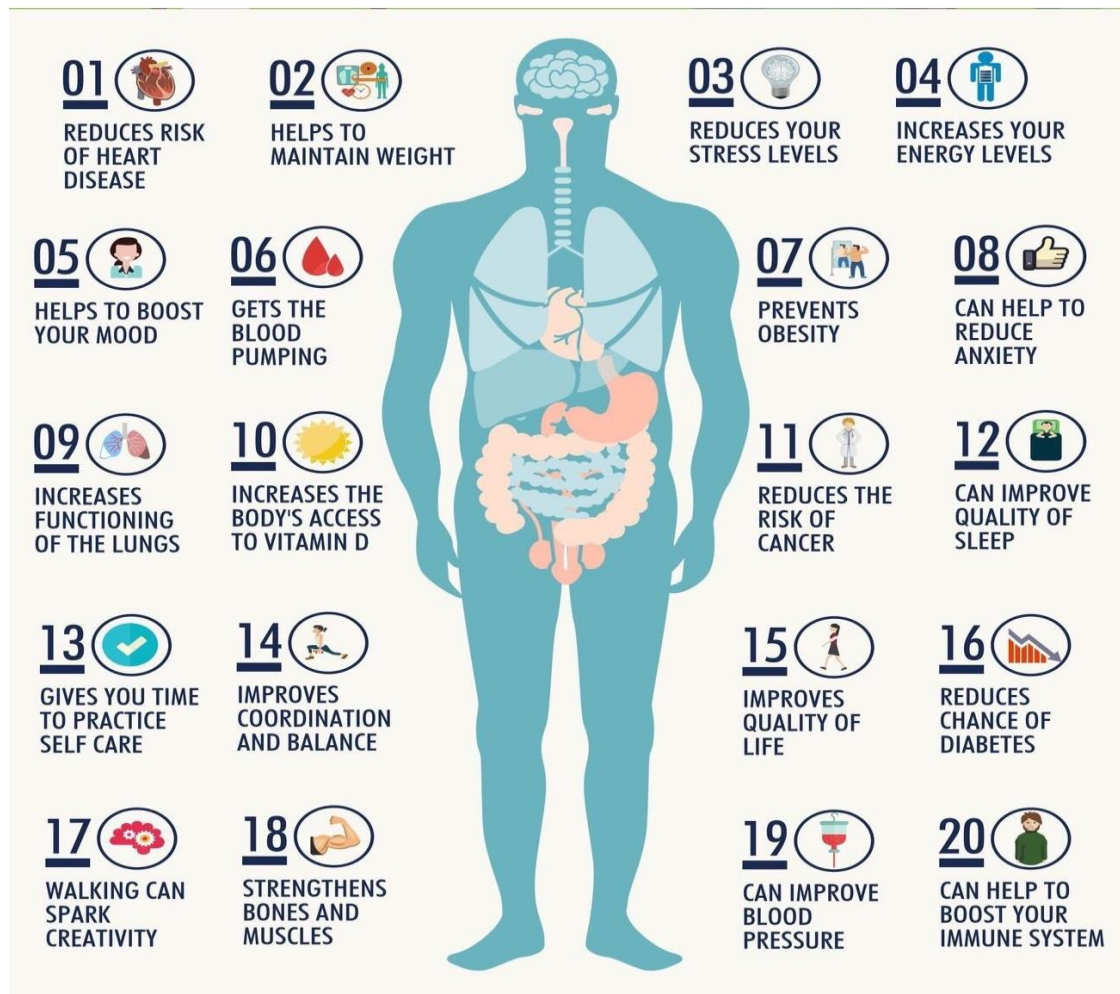
³ Moderate intensity requires a moderate amount of effort and noticeably accelerates the heart rate. For example, brisk walking. Vigorous intensity requires a large amount of effort and causes rapid breathing and a substantial increase in heart rate. For instance, running.

specify a dose-response relationship (increasing levels of exposure to PA, are associated with increasing benefits), indicating that extra health benefits are obtained from participating in high-intensity PA for 300 minutes per week (Geidl et al., 2019). However, too much physical activity is known to have adverse effects which outweigh the benefits (Lee, 2007). A systematic review undertaken by Warburton et al. (2010) identified a clear dose-response relationship between physical activity and premature mortality and seven chronic diseases⁴. Many studies have outlined evidence that describes the plausible effects physical activity on the human body and mind (Reiner et al., 2013; Samitz et al., 2011; Shiroma & Lee, 2010; Shook et al., 2015; Soares et al., 2015; Warburton et al., 2010; Woodcock et al., 2010; Warburton & Bredin, 2016).

Physical activity has also been positively associated with one's psychological well-being. The study of PA and mental health dates back to the 1980s where Taylor et al. (1985) claimed that vigorous PA levels had positive effects on an individual's psychological health such as depression. It also has positive effects on reducing levels of anxiety, stress, and obsessive-compulsive disorders (Paluska & Schwenk, 2000; Strohle, 2008; Wolff et al., 2011) and increasing self-esteem, optimism and happiness (Goodwin, 2003; Cekin, 2015). Rethorst et al. (2009) found in their meta-analysis that individuals in the exercise treatments had lower depressive symptoms in comparison to those in the control treatments. Figure 2 (Believe Perform, 2020) portrays the wide range of benefits and the importance of engaging in regular physical activity.

⁴ Including Cardiovascular disease, stroke, hypertension, colon cancer, breast cancer, type 2 diabetes and osteoporosis

Figure 2 - Benefits of Physical Activity



2.2.2 Non-Communicable Diseases

The study of physical activity began in the 1950s when researcher Jerry Morris observed the rates of coronary heart disease between 31,000 London conductors and bus drivers. Findings indicated that the annual rate for coronary heart disease for drivers was 2.7 per 1,000 in comparison to 1.9 per 1,000 per conductors. As most of the conductors worked on double-decker buses, their daily intake of PA was higher compared to sitting bus drivers, thus reducing the risk of developing such disease. This finding is consistent with the later work of Paffenbarger et al. (1971), who conducted an 18-year follow-up study on 3,263 San Francisco Longshoremen who had undergone several health screenings in 1951. A total of 1,969 deaths were identified by the follow up in 1969. Results showed that 350 deaths were caused by coronary heart disease and 93 deaths were caused by stroke. Men who were employed in low activity jobs sustained coronary death rates one-

quarter higher than the cargo handlers who represented the more physically active longshoremen.

Subsequently, Paffenbarger et al. (1983) illustrated the correlation between PA and high blood pressure (hypertension). This research observed a study population of 14,998 males who attended Harvard College between the years of 1916 and 1950. Physical examination and health data of the males were recorded when they first entered college. A follow up physical activity questionnaire was administered in the years 1962 to 1972. Results from this research showed that the 59% of men who did not engage in vigorous physical activity had a 35% greater risk of hypertension compared to those men (41%) who did participate in physical activity. This relationship is held at all ages (35-74 years). Additional research by Larsson et al. (2014) demonstrated an inverse variation between developing the risk of a stroke and having a low-risk lifestyle⁵. In a sample population of 31,696 Swedish women, a 10 year follow up identified 1,554 cases of stroke. The risk of stroke would decrease with increasing numbers of low-risk lifestyle factors.

Physical inactivity is also associated with a higher risk of developing many cancers. The World Cancer Research Fund and the American Institute for Cancer Research conducted the Third Expert Report in 2018 and presented evidence that being physically active would significantly decrease the risk of developing many cancers like lung, liver, colon and breast cancer. Furthermore, previous systematic reviews (Brown et al., 2012; Kruk & Czerniak, 2013) and studies (Paffenbarger et al., 1987; Brownson et al., 1991; Cannioto et al., 2019) have supported the previous premise. Gelaw (2018) also acknowledges that the magnitude of diabetes is significantly increasing, with over 225,840 individuals living with diabetes in Ireland (Diabetes Ireland, 2020). Engaging in physical activity helps to reduce diabetes (Nakanishi et al., 2019) and plays an important role in the management of blood sugar levels (Canadian Diabetes Association, 2018), and blood glucose control (Duclos et al., 2013; Turksoy et al., 2015; American Diabetes Association, 2016). Umpierre et al. (2011) and Redondo et al. (2018) recognised the importance of structured exercise training⁶ on positively contributing to the reduction of glycated haemoglobin (glucose sugars) in individuals with type 2 diabetes. Many studies have also made the link between diabetes and those who engaged in PA and a reduced risk of developing

⁵ A low risk lifestyle was identified as someone who had a healthy diet, consumed moderate alcohol, never smoked, and engaged in regular physical activity.

⁶ Including 150 minutes of aerobic and/or resistance training

further cardiovascular diseases and early mortality (Hu et al., 2001; Gregg et al., 2003; Hu et al., 2005; Tikkanen-Dolenc et al., 2017).

Obesity is also regarded as a modifiable risk factor for developing the non-communicable diseases mentioned above (Webber et al., 2012; Gray et al., 2018; Nyberg et al., 2018). Obesity resulting from inactivity negatively impacts individual optimal health (Di Pietro et al., 2004; Reiner et al., 2013; Centers for Disease Control and Prevention, 2015). Statistics from the World Health Organisation 2017 report highlighted that 60.6% of Irish adults were deemed overweight and a total of 25.3% were considered obese. Lee et al. (2016) found that individuals of a low prevalence of obesity, low body mass index and low waist to height ratio were significantly associated with higher levels of physical activity. The CARDIA⁷ study examined the link between walking and weight gain in a sample of 4,995 women and men aged between 18 to 30 years. All PA levels were examined at baseline and included a 15 year follow up. Findings of this study illustrated that the total weight gain for inactive women after 15 years was 13kg in comparison to active women which was 5kg (Gordon-Larson et al., 2009). The same results emerged from a study by Hankinson et al. (2010), where they examined the PA levels from a sample population of 1,561 men and women. Findings showed that after a 20 year follow up, those who had higher physical activity levels had a lower BMI, smaller waist circumference and lower weight gain per year.

2.2.3 The Prevalence of Non-Communicable Diseases and Physical Activity Levels

As noted in the previous section, there is a clear correlation between physical inactivity and an increased risk of developing non-communicable diseases (Hallal et al., 2012; Lee et al., 2012). A total of 31% of adults in the world do not meet the physical activity recommendations. In 2009, insufficient physical activity was the fourth leading cause of global mortality (World Health Organisation, 2009). A report presented by The World Health Organisation (2018) observed that non-communicable⁸ diseases are the leading cause of death worldwide. It has become one of the biggest health challenges to date. In the 2004 World Health Organisation report, it was noted that a total of six out of 10 deaths were related to non-communicable diseases. Approximately, 3.2 million people die each

⁷ Coronary Artery Risk Development in Young Adults

⁸ A non-communicable disease is not directly transmitted from one person to another, they are developed within the person themselves.

year from a non-communicable disease due to being physically inactive. Furthermore, inactive people have a 20-30% greater risk of early mortality. In 2016, there was a total of 57 million deaths worldwide, 71% of those deaths (41 million) were associated with non-communicable diseases. Out of those, 41 million deaths, 15 million were pre-mature deaths. It would appear that physical inactivity is adding to the increasing magnitude of non-communicable diseases and early mortality.

The burden of these diseases and early mortality are continuously rising and continue to be a vital public health challenge on a global level. The World Health Organisation (2017) conducted a report to present information on each country's non-communicable diseases rates. The report identified European countries with a higher rate of deaths from non-communicable diseases in comparison to African countries like Uganda, Kenya and Zambia. It can be suggested that deaths from non-communicable diseases are higher in European countries due to the prevalence of physical inactivity. In 2018, The World Health Organisation monitored the physical activity prevalence rates in several countries. In Ireland, the figure for physical activity levels rose by only 1% in the last five years, and now 33% of Irish adults are meeting the PA guidelines (WHO, 2018).

The Irish Sports Monitor report (2019)⁹ highlighted that 46% of all adults in Ireland took part in sport at least once a week in comparison to 43% in 2017. Further findings demonstrated that the gender gap has again decreased from 4.9% in 2017 to 3.9% in 2019, meaning more gender equality participation in sports. The prevalence of physical activity levels in Irish adults remains low despite the efforts to increase physical activity and promote the national physical activity guidelines. It is important to note that physical activity levels tend to decrease with age. Indeed, as Irish adults get older, they are less likely to engage in high levels of physical activity. For instance, a total of 42% of men and 59% of women over the ages of 75 years report low levels of physical activity (O'Donogue et al., 2016).

2.2.4 Physical Activity Guidelines

The first set of recommended physical activity guidelines were developed in 1988 by the American College of Sports Medicine (ACSM). Once the guidelines were identified and benefits for physical activity became more apparent in the 1990s, many authors began to support the hypothesis that engaging in any amount or type of physical activity was more

⁹ This report provides information for the first six months of 2019 (January to June).

beneficial in comparison to being completely sedentary¹⁰. Furthermore, these authors also presented the health benefits that were associated with engaging in physical activity, for both moderate and vigorous physical activity (Bijnen et al., 1994; Paffenbarger et al., 1983; Paffenbarger et al., 1993; Berlin & Colditz, 1990; Haapanen et al., 1996).

In 1995, both the American College of Sports Medicine (ACSM) and the Centres for Disease Control and Prevention stated that the recommendations for physical activity for adults were to engage in at least 30 minutes of moderate PA on most days of the week (Pate et al., 1995; Blair et al., 2004). However, what was presented as the national PA guidelines was not clarified enough and gave no recommendations for vigorous exercise. Due to the misinterpretation of the 1995 guidelines, the ACSM and the American Heart Association purposed new guidelines for physical activity in 2007. The new guidelines explained that all adults should participate in moderate-intensity aerobic PA for a minimum of 30 minutes for five days per week or to engage in vigorous-intensity aerobic PA for 20 minutes for three days per week. Haskell et al. (2007) also clarified that adults should engage in exercise on five days of the week as opposed to 'most days'. In 2008, the U.S. Department of Health and Human Services adopted the guidelines and presented that all Americans should engage in physical activity equivalent to 150 minutes of moderate-intensity per week or 75 minutes of vigorous-intensity per week. Physical activity guidelines were also promoted by the World Health Organisation for children, teens, adults and older adults (WHO, 2009).

The most recent guidelines promoted in Ireland was in 2016 when the national physical activity plan was launched by Healthy Ireland. This plan focused on increasing opportunities for people to be active, remove barriers to overcome inactivity, promote supportive environments and encourage co-operation at a national, local and community level. The overall goal of this plan was to get at least half a million more Irish people taking regular physical activity within a ten-year timeframe¹¹. To aid in the achievement of this goal, the recommendations for PA set in 2016 were promoted. The guidelines are

¹⁰ Sedentary behaviour means not meeting the physical activity or the absence of physical activity, both moderate and vigorous (Pate, O'Neill, & Lobelo, The Evolving Definition of 'Sedentary', 2008).

¹¹ This plan aimed at promoting physical activity in the following eight key action areas: (1) public awareness, education and communication, (2) children and young people, (3) health, (4) environment, (5) workplaces, (6) sports and physical activity in the community (7) research, monitoring and evaluation, and (8) implementation through partnerships.

still the same today. For adults, the guidelines are set at 30 minutes of moderate physical activity, five days per week or an accumulation of 150 minutes a week (Healthy Ireland, 2016).

Despite the efforts put in place to increase physical activity levels and the well-documented guidelines, physical activity rates in Ireland remain low. What lacks in the national physical activity guidelines is the recognition to acknowledge factors affecting participation levels and the situations and environment surrounding everyday lives. Furthermore, the guidelines do not take into consideration family, work or care commitments that adults face daily. It can be suggested that perhaps adults find it difficult to incorporate physical activity into their weekly routine due to time constraints and other commitments. The guidelines are presumptuous that all adults can participate in physical activity. Nevertheless, it is necessary to acknowledge the wide variety of influential factors that affect Irish adult's participant levels. The following section will outline and discuss these factors.

2.2.5 Factors Influencing Physical Activity Levels

Despite the extensive benefits of physical activity and the well-documented physical activity guidelines, there is still high levels of inactivity in adults worldwide. Therefore, it is important to recognise the factors that influence physical activity participation as this contributes to evidence-based public health interventions (Pan et al., 2009). Furthermore, motivating adults to participate in physical activity by understanding why some are active and some are inactive will aid to mitigate the global burden of non-communicable diseases as a result of inactivity.

The term 'determinants' was used in research in the early 2000s to describe the factors that influence physical activity (Martin et al., 2000). However, the word determinant refers to a causal or cause-effect relationship. Changes to the terminology used to describe the factors were made by Bauman et al. (2002). Introducing the term 'correlates', allowed the researcher to identify factors that affect or are associated with physical activity, rather than causal equivalents. The correlates and factors influencing physical activity can be determined by using the socio-ecological model (SEM) (Zhang et al., 2011). This model consists of the following four categories: individual factors, social factors, environmental factors and political factors. The socio-ecological model is discussed further in section 2.2.7.1 in relation to how it is used as a framework for physical activity interventions.

However, the following section focuses solely on the social-ecological model and how it relates to the correlates of physical activity.

2.2.5.1 Individual Factors

The individual level of the social-ecological model consists of personal factors that may increase the levels of physical activity participation in adults (Eyler et al., 2002; Trost et al., 2002; Kirk & Rhodes, 2011; Bauman et al., 2012; Choi et al., 2017). These personal factors are broken down into three categories. The first category being demographic and biological factors, the second is psychological influences and the third and final category are behavioural factors. These factors are outlined and examined in the subsequent sections.

2.2.5.1.1 Demographic and Biological Factors

According to a systematic review conducted by Choi et al. (2017), the two most consistent demographic correlates are age and gender. Some studies found that males participated in physical activity more than women (ibid). Age was inversely associated with physical activity. As adults got older, their physical activity levels decreased. Additionally, mixed findings were associated with educational attainment. While some studies highlighted a positive association between educational status and physical activity participation (Elyer et al., 2002; Trost et al., 2002), others reported none (Prince et al., 2016; Kaewthummanukul et al., 2006). Elyer (2002) and Trost (2002) found the link between occupational status and physical activity to be inconclusive. However, Kirk and Rhodes (2011) found concrete evidence that supports the premise that those who work for long hours in demanding jobs are at risk of increased inactivity. Furthermore, Morrissey (2013) also stated that commitments to study or occupations can negatively impact on exercise behaviour where people do not have enough time to engage in physical activity.

2.2.5.1.2 Psychological Factors

The most prominent psychological variable to be a direct correlate of PA was self-efficacy¹². Higher levels of self-efficacy reported higher levels of PA (Elyer et al., 2002; Trost et al., 2002; Plonczynski et al., 2003; Keating et al., 2005; Kaewthummanukul et al., 2006; Van Stralen et al., 2009; Prince et al., 2016). Perceived behavioural control was also identified as a positive correlate of physical activity (Armitage, 2005; Allan et al., 2007; Rhodes et al., 2012). Perceived behavioural control refers to an individual's

¹² Self-efficacy is a person's confidence in their ability to be physically active on a regular basis (Alemdag, 2018).

perception that they are able to achieve a given task (Yzer, 2012; Ajzen, 2012). The greater the perceived behavioural control, the higher levels of physical activity one will perform. High levels of motivation were also positively associated with an individual's decision to participate in physical activity. (Sherwood & Jeffery, 2000; Trost et al., 2002; Keating et al., 2005; D'Angelo et al., 2014). However, in older adults, it was noted that there was no association between regular PA and levels of motivation (Koeneman et al., 2011). Other positive psychological factors included outcome expectancy, perceived fitness, intention to exercise and the stages in the transtheoretical model (Bauman et al., 2012), while the negative factors included lack of time, mood disturbance and fatigue (Trost et al., 2002; Van Stralen et al., 2009; Prince et al., 2016).

2.2.5.1.3 Behavioural Factors

It has been highlighted that obesity acts as a negative influence on PA levels (Sherwood & Jeffery, 2000; Speck & Harrell, 2003). However, more recent studies found obesity to be an inconclusive factor (Koeneman et al., 2011; Liangruenrom et al., 2019). The Aerobics Centre Longitudinal Study conducted between 1970 and 1998 examined the relationship between PA and weight gain in a sample of 2,501 men aged 22 to 55 years old. Findings demonstrated that individuals who engaged in higher levels of daily PA were less likely to be overweight when compared to those who did not engage in PA (Di Pietro et al., 2004). It is also expected that PA during childhood will predict levels of physical activity into adulthood (Trost et al., 2002; Van Stralen et al., 2009). Furthermore, Telama (2009) found that the stability of physical activity was more significant in men through all transitions in life in comparison to women. Smoking was identified as being inconclusive to affecting participation in physical activity (Koeneman et al., 2011; Rhodes & Quinlan, 2015). However, other studies have shown that individuals who engaged in regular physical activity were less likely to smoke in comparison to those who did not exercise (Boutelle, 2004; Panagiotakos et al., 2008).

2.2.5.2 Social Factors

Previous research on the association between social support and physical activity is primarily based on children or older adults. In the systematic reviews conducted by Choi et al. (2017) and Bauman and Bull (2007), it is noted that social factors are occasionally not measured for the adult population. However, studies that have measured the impact of social support on physical activity behaviours show a strong correlation. Bauman and Bull (2007) report that social support is directly associated with physical activity

behaviour amongst adults. This is particularly in the case of women. It was noted by Wendel Vos et al. (2007) that social support was a consistent correlate of physical activity, specifically in walking. It was also highlighted that having a companion or someone to walk with was consistently associated with walking behaviours. Morrissey (2013) discovered that social support from friends and peers played a huge role in individuals taking up exercise or a particular activity; for example, taking up sport because your friends play it. Shelton et al. (2012) illustrated that individuals with a lower social network took 1,500 fewer daily steps in comparison to individuals who have a large social network and social support.

Eyler et al. (2002) and Prince et al. (2016) found that changes in family structure negatively impacted the participation in physical activity. Hull et al. (2010) for example, examined the effects parenthood had on physical activity. Findings from this study demonstrated that physical activity levels were lower in individuals who had one or more children in the home and was negatively associated with levels of physical activity. Prince et al. (2016) undertook a systematic review aimed at identifying the factors that influence physical activity participation in women. This research showed that social support from a spouse had a positive association on women's physical activity levels. Social norms were also measured in this systematic review where they found no association with physical activity levels. However, Solomon et al. (2013) did note that social norms were a correlate of physical activity for individuals living in rural settings.

2.2.5.3 Physical Environmental Factor

The physical environment is referred to as the built environment, man-made structures, facilities, or a place where an individual can spend time engaging in PA, for example, gyms, parks and green space (Edwards & Tsouros, 2006; Frost et al., 2010). Perceived safety, quality of the built environment, accessibility, and convenience of facilities were all noted as major influences of PA participation (Humpel et al., 2004; Bauman and Bull, 2007; Choi et al., 2017). Presence of sidewalks was found to be a positive factor in increasing recreation and utilitarian¹³ walking by providing people with an opportunity to walk on well-established footpaths (Duncan, 2005). Owen et al. (2004) and Panter, (2010) allude to the point that an aesthetically pleasing¹⁴ environment was highly associated with

¹³ Utilitarian walking can be defined as a type of walking for transport, walking from a to b, walking in work or walking for daily jobs (Hekler, Castro, Bauman, & King, 2012).

¹⁴ Aesthetically pleasing refers to the environment as being 'beautiful' or 'visually good'.

an increased likelihood of leisure walking participation. Mix-land use was also found to be positively correlated with levels of PA (Saelens & Handy, 2008; Prince, 2016)¹⁵. Whereas Duncan (2005) illustrated in their meta-analysis that neighbour crime and heavy traffic both had a negative association with leisure-time PA.

Public parks act as a venue for physical activity and the proximity to residents in communities determines the use for them (Cohen et al., 2007). Many people use parks that are located within their neighbourhood for physical activity (Cohen, Sturm, Han, & Marsh, 2014). The Centres for Disease Control and Prevention (2014) suggests that an individual will be more encouraged to engage in PA if they have access to a place or resource. Findings of a study conducted in Chicago reported that 59% of 2,873 users of trails stated that they made use of local trails to participate in PA (Troped et al., 2011). Krizek et al. (2007) note that distance matters when it comes to users travelling to trails. The results from this study showed that users would only travel 1.5 miles or less to access a trail. Any further saw a decline in trail usage. Further findings demonstrated that cyclists would travel on average, a total of 2.6 miles to reach a trail or walkway for cycling. In another study conducted by Goodman et al. (2014), individuals who live 0.6 miles away from a bikeway were getting 45 minutes more of walking and exercise biking compared to individuals who lived 2.5 miles away.

2.2.5.4 Policy Factors

Policies put in place in the physical activity field are typically legislative or regulatory actions taken by Governmental or non-Governmental organisations aimed at increasing PA levels (Bauman & Bull, 2007). Typically, organisations or partnerships outside the health sector are involved in the implementation of the policies in relation to support services and the built environment¹⁶. In Ireland, the National Transport Authority runs active transport policies and programmes to encourage people to walk and cycle instead of using a car. An example of this would be the Smarter Travel Workplaces and Smarter Travel Campus programs (World Health Organisation, 2016). Smarter travel workplace involves large employers such as DELL, ESB, AIB, Vodafone, and Eir, encouraging a more sustainable travel choice among their employees. Employers who have participated

¹⁵ Mixed land-use supports sustainable transport for physical activity. For example, walking or cycling.

¹⁶ For example, resources and investments come from external sources to build cycle lanes, recreational parks, and foot paths.

in the programme noted that there was a 10-30% drop in the use of car travel in their workplace (National Transport Authority, 2020).

There are many National Governing Bodies, Government departments, public sector organisations and initiatives in Ireland that aim to increase PA levels and sports participation across the country by implementing policies and programmes¹⁷. The national physical activity plan developed in Ireland in 2016 aimed to increase PA levels and worked in accordance with the Toronto Charter for physical activity and the EU physical activity guidelines, identifying eight sectors for action, outlined above in section 2.2.4. This plan also aimed to promote further the existing policies that are aimed at increasing PA levels¹⁸. It is necessary to note that the national physical activity plan worked in conjunction with the HSE digital roadmap, which was a policy implemented to support and meet the needs of online users. The HSE digital team also provides organisations with a ‘Social Media Toolkit’ and a ‘Quick Guides’ service to support organisations in using social media to communicate and promote health concerns like physical activity (HSE, 2017; HSE, 2018). However, it is unknown whether any other organisations utilise these services. It has not been made clear in existing plans that digital technologies or social media will be implemented into the strategy, despite the need for effective communication and promotion of physical activity.

An evaluation report of the national physical activity plan was published in 2018 to identify the success of the plan. The overall aim of the national physical activity plan was to increase physical activity levels across the country by 1% per annum. Research and monitoring of physical activity levels of children, adolescents and adults have been progressing each year by a number of organisations implementing physical activity surveys; for example, the Irish Sports Monitor, Healthy Ireland Survey, and the Irish Longitudinal Study on Ageing. In 2017, the Irish Sports Monitor reported that there was an increase in physical activity levels in the population regarded as already ‘highly active’. This increase went from 30% in 2015 to 32.6% in 2017, demonstrating a 2% increase in levels. Of the participants that were involved in this report, there was an

¹⁷ For instance, Sport Ireland, Healthy Ireland, Get Ireland Active, the Gaelic Games Association, Ireland Active, Failte Ireland, the Health Service Executive, the Department of Transport, Tourism and Sport, Get Ireland Walking, Mountaineering Ireland, Swim Ireland, Basketball Ireland, Cycling Ireland, and Athletics Ireland.

¹⁸ For example, transport and environmental infrastructure, maintenance and development of recreational facilities and public parks, physical education for school and active travel for workplaces.

increase in recreational walking levels from 63.6% in 2015 to 66.2% in 2017. In 2019, the Irish Sports Monitor highlighted that 46% of all adults in Ireland took part in sport at least once a week.

Since the 2016 national physical activity plan was released, the new National Sports Policy 2018-2027 was established. This policy seeks to increase the proportion of Irish children and adults regularly involved in sport. Another goal of this plan is to reduce levels of adults sedentarism and increase the number of children regularly playing sport (Department of Transport, Tourism and Sport, 2018). This will contribute to the existing national physical activity plan presented by Healthy Ireland. However, as previously noted, there is little evidence to suggest that this particular plan seeks to utilise digital media or social media for communication or promotional purposes. What lacks in the health promotion sector is the use of modern marketing techniques to promote physical activity.

2.2.6 Initiatives Promoting Walking as a form of Physical Activity

Walking for recreation is deemed an appropriate mode of activity to increase overall physical activity levels. Lee and Buchner (2008) allude to the point that the first example of moderate-intensity activity was in 1995 when the ACSM physical activity guidelines were established. The example given was brisk walking at 3-4 mph. It was noted that walking can have a positive public health impact due to its well-known health benefits (Grant et al., 2017) and its easy access (Lee & Buchner, 2008). In addition to this, walking is cheaper and easier compared to other forms of physical activity such as joining a gym or club (Moor, 2013) and is, therefore, an appropriate form of activity to both promote and increase physical activity levels.

Get Ireland Walking, an initiative of Sport Ireland, promotes recreational walking as it contributes to meeting the national physical activity guidelines. Get Ireland Walking works in conjunction with Local Sports Partnerships to deliver walking programmes on a national level. The first three-year plan developed by Get Ireland Walking was established in 2017 and promoted walking as a fun, free and flexible form of physical activity (Get Ireland Walking, 2017). This strategic plan identified seven key areas to promote physical activity: public awareness, education and communication, health, environment, communities, children and young people, partnership, and research, monitoring and evaluation. Get Ireland Walking identified walking as the most popular

recreational activity in Ireland across all genders and age groups (Get Ireland Walking, 2017).

Another National Governing Body that promotes physical activity initiatives is Mountaineering Ireland. This organisation represents and supports hillwalking and climbing. A strategic action plan was developed in 2018-2021 to promote hillwalking and climbing as a safe, accessible, and adventurous form of physical activity in Ireland. This plan also aimed at promoting responsible participation in all aspects of mountaineering, facilitate information between clubs, and encourage new members and young people to participate in all forms of mountaineering (Mountaineering Ireland, 2018).

The importance of promoting physical activity, particularly recreational walking and hillwalking needs to be recognised. More initiatives in Ireland that aim to promote physical activity amongst adults should focus on walking activities. Despite how accessible and affordable walking activities are, many factors may affect physical activity participation for adults. The factors that were previously discussed consisted of individual, social, environmental and policy factors. Bauman and Bull (2007) highlight that there are many factors that affect walking participation and therefore stress the importance of understanding the correlates of walking before attempting to implement a strategy or execute a social marketing campaign to increase walking levels. While recognising these factors, it is also important to consider underpinning models and theories utilised in behavioural change campaigns for physical activity as they act as a theoretical framework. The following section therefore examines these underpinning models and theories utilised for physical activity. These models were developed to understand human behaviour and how humans act.

2.2.7 Theories and Model for Physical Activity Interventions

In order for a behavioural change intervention to be successful, it must be underpinned by a model, theory or concept that understands human behaviours (Webb, 2010). Manikam and Russell-Bennett (2016) acknowledge the importance of models and theories utilised in health-related campaigns as they provide evidence-based frameworks for the interventions and campaigns to be designed. More specifically, the models and theories were developed to understand human behaviour and the way in which humans act. For this current research, a number of models and theories were reviewed in the review of literature chapter. For instance, the Transtheoretical Model (Stages of

Behaviour Change) and the Health Action Process Approach (HAPA Model) were evaluated. However, after reviewing these models, neither were deemed applicable to the current study.

The Transtheoretical Model aims to understand human behaviour and assesses a person's readiness to act on a new behaviour (Prochaska et al., 2015). The empirical support of the TTM has been questioned in Cahill et al. (2010) systematic review findings. A fundamental flaw of the model is it only focuses on the individual as a whole. It does not take into consideration the surrounding environment of the individual, such as environmental and social factors that influence one's behaviour. Therefore, this model was discounted for the use of this study.

Additionally, the health action process approach is a theoretical framework to understand and explain human behaviour change. More specifically, it is a set of psychological constructs that intend to explain what motivates people to change their behaviour. However, this current study did not aim to investigate motivations of behaviour change but to explore the factors that affect and influence walking levels. Therefore, for the purpose of this study, only the model most appropriate and relevant is discussed in the review of literature chapter. For more literature of the theoretical frameworks utilised in physical activity interventions, view Appendix B – Theories and Models for Physical Activity Interventions, page 312, where the Transtheoretical Model (TTM) and the Health Action Process Approach (HAPA) are discussed.

The Socio-Ecological Model (SEM) was deemed the most appropriate for this research. The SEM is a framework used to determine the factors that may influence physical activity participation.

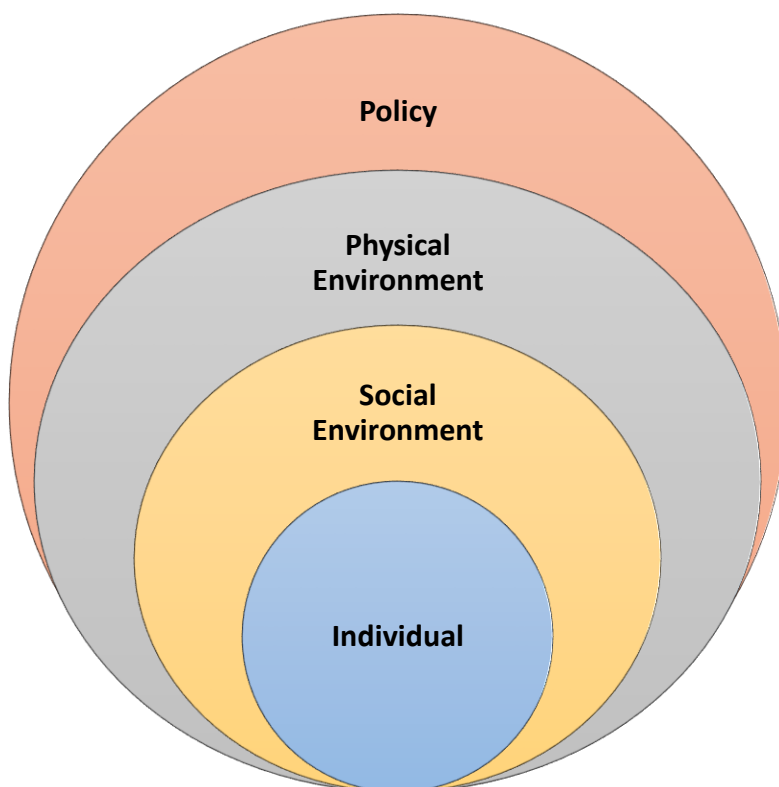
2.2.7.1 Socio-Ecological Model

The Socio-Ecological Model (SEM) is a framework used to determine the factors that may influence physical activity participation (Zhang et al., 2011). The SEM is made up of four categories of factors that influence physical activity levels, as seen in Figure 3. The first one being individual factors, where a person's physical activity levels are affected by demographic and biological (age, gender, education, occupation), psychological (self-efficacy, outcome expectancy, stress), and behavioural factors (dietary habits, obesity, overweight) (Sallis et al., 2008). The second category is related to social factors where individuals are influenced by social support from their family and

peers (Brochado et al., 2010). The third category is environmental factors such as the built environment, facilities, neighbours, safety, crime, traffic, home environment, and climate all affecting physical activity participation (Golden et al., 2015). Finally, policies put in place can have an impact on physical activity. For instance, transportation policies, national physical activity plans, legislations, urban planning, active travel and educational policies in schools.

These levels have derived from the Ottawa Charter for Health Promotion established in 1986. This charter was developed by the World Health Organisation and was the first to identify the factors or correlates that influence health and well-being. A second charter was developed in Toronto in 2010 to provide countries with a framework on how to promote and implement plans, policies, initiatives and strategies aimed at increasing physical activity. This charter identifies several areas for actions and relevant sectors that need to be involved in the building blocks of increasing physical activity levels.

Figure 3 - Socio-Ecological Model



2.2.7.2 Socio-Ecological Model Interventions

Engaging in regular physical activity has consistently been associated with a reduced risk of a wide range of chronic diseases and early mortality (McKinney et al., 2016). However, due to a number of factors, individuals are now increasingly heading towards sedentary lifestyles where they do not engage in regular physical activity. These factors are further outlined in section 2.2.5, where the correlates of physical activity are discussed. To battle physical inactivity and generate behavioural change, appropriate interventions and programs are designed and implemented. The socio-ecological model has been utilised in many studies to overcome the health issues of physical activity.

Research by Tehrani et al. (2016) concluded that educational interventions based on the socio-ecological model can positively affect women's regular physical activity participation. This randomised control trial consisted of 360 participants (experimental n = 180, control = 180). Initial data collection was assessed by the IPAQ and a self-design survey based on the socio-ecological model levels, which measured personal status, social support, physical support and political support of the participants. The intervention as a whole was made up of multimedia content based on the Ministry of Health and Medical Education, a website designed to educate the participants on the benefits of physical activity, an online chatroom created where participants could share views and personal experience on physical activity, and a SMS (short message service) created which involved unique messages being sent to participants. At baseline, both groups were similar in demographics, except for weight. The average weight in the control group was 63.022kg and an average of 67.28kg in the intervention group. Following the intervention, the mean weight in the control group increased to 63.07kg and reduced to 66.38kg in the intervention group. Despite only utilising a short follow up of six months, this study provides evidence that interventions based on the socio-ecological model can positively affect women's physical activity.

Similarly, Gargari et al. (2018) examined the effectiveness of an intervention underpinned by the socio-ecological model, which promoted physical activity to female employees. This study conducted a quasi-experimental design including 80 participants in the intervention group and 80 participants in the control group. The intervention involved an educational program based around the socio-ecological model. This included one general and four group discussions on the benefits of physical activity, the training program, how to use the pedometer, how to record the number of steps and record them. Self-efficacy,

social support, and the barriers of the physical environment were also discussed thoroughly. The intervention also involved daily walking for 30 minutes within eight weeks. Results from the intervention demonstrated that the number of steps in walking increased from an average of 4204 to 7882 steps per day. However, there was no increase in the control group.

A large number of prior studies in the literature have examined the correlates and factors that influence physical activity in adults. This has been explored in studies by Trost et al. (2002), Eyster (2002), Bauman and Bull (2007), Bauman et al. (2008), Bauman et al. (2012), Prince et al. (2016) and Choi et al. (2017). Certainly, it is important to note the factors that influence physical activity levels as this contributes to evidence-based public health interventions (Pan et al., 2009). In addition to this, there has been extensive literature on how the socio-ecological model can be utilised in physical activity interventions and programs. However, as discussed in this section any interventions aimed at adults typically target women and women's physical activity patterns. There is insufficient evidence that reports physical activity interventions based on the socio-ecological model designed for men. Furthermore, the majority of prior research has applied the socio-ecological model to interventions for children, adolescents and students (Casey et al., 2009; Mehtala, Saakslähti, & Inkinen, 2014; Simon et al., 2014; Essiet, Baharom, Shahrar, & Uzochuwu, 2017). If the current thesis was to revisit these population samples, this would perhaps provide little conversation to academia. Therefore the purpose of this thesis is to examine a more defined sample group that lacked in literature.

2.2.8 Summary

This section sought to outline research conducted on physical activity and the positive contribution it has on an individual's physical and mental health. Despite the benefits of physical activity and the well documented national physical activity guidelines, there are still low levels of PA in Ireland. Lacking in the national physical activity guidelines is the acknowledgement of factors affecting physical activity levels. For instance, the guidelines do not take into consideration family, work or care commitments that adults face on a daily basis. It is important to understand the factors that affect participation levels as it identifies why these specific populations do not engage in physical activity and understand why certain individuals are more active than others. This supports the attempt to increase physical activity through behavioural change interventions. What was also put

forward in this section is the evidence that changing behaviours like physical activity, is a complex and multifaceted phenomenon with a wide range of internal and external influences. Therefore, to overcome the concept of behavioural change, social marketing interventions need to be developed with the use of an effective theory-based framework. Glanz and Bishop (2010) state that health-related campaigns that are based on theoretical frameworks are more effective than atheoretical¹⁹ studies. The following section will not only describe how marketing can be used to promote physical activity in a social marketing context but to draw attention to the theoretical frameworks that can be used to successfully implement a campaign, for instance, the AIDA model. The subsequent section will also describe the various digital marketing techniques that can be incorporated into physical activity campaigns.

¹⁹ Intervention that are lacking a theoretical basis

2.3 Adopting the use of Marketing into Health-Promotion Activities

The marketing industry typically involves the use of commercial marketing methods used by businesses to promote their brand, products and services. From a business perspective, it also acts as the primary communication tool between companies and consumers. However, commercial marketing is not solely applicable to just a business context. According to Donovan (2011), marketing principles and practices that are used in everyday business can also be adopted into the health-promotion sector to promote health-related behaviours. The health-promotion industry is typically made up of active recreation, fitness, and sports (Cavanah, 2020).

Adopting the use of marketing into the health-promotion sector is also referred to as social marketing. Health campaigns and interventions aim to enhance society as a whole, while the term ‘marketing’ is the process of a business promoting and selling products and services. While it may be questioned if the two concepts fit together, they both share the same primary concern (French, Blair-Stevens, McVey, & Merritt, 2010). For instance, they both aim to seek the best possible way of influencing and changing one’s behaviour. Therefore, it is appropriate to employ the use of marketing methods to achieve human behavioural change. This is discussed in greater detail in section 2.4. A lot of social marketing campaigns discussed in section 2.4.3 would not have been possible to implement without commercial marketing techniques. Purcarea (2019) alludes to the point that marketing plays a vital role in helping health-care professionals design, implement and effectively communicate valuable health messages to their target audience. However, Purcarea (2019) highlights that many health-related marketers use traditional methods of marketing and need to be modernised with new technologies to attract consumers through promotional messages and offers; for example, using digital marketing, social networking sites and online advertising (ibid).

The following sections will outline and discuss what marketing entails and the purpose and scope of marketing from a business perspective. The subsequent sections will also describe the transformation marketing has gone through over the past number of years, that is, the shift from traditional marketing to digital marketing. The different forms of marketing, more specifically social media marketing is reviewed. It is imperative to focus on the use of social media marketing as this topic is most relevant to the current study. It is perhaps important to keep in mind that these digital mediums can be employed in health-related behavioural change campaigns too.

2.3.1 Definition of Marketing

Many definitions of the term marketing have been put forward by several researchers (Ringold & Weitz, 2007; American Marketing Association, 2008; Gundlach & Wilkie, 2009). In 2015, the UK's Chartered Institute of Marketing defined marketing as the management process which was responsible for identifying, anticipating and satisfying customer needs and wants. The classification of marketing however put forward by the American Marketing Association (2013) is the most widely cited. They describe marketing as an activity, set of institutions and processes for creating, communicating, delivering and exchanging offerings that have value for customers, clients, partners and society at large (American Marketing Association, 2013). These definitions highlight the existing relationship between the marketer, producer and consumer where exchanges are made (Baker & Hart, 2008). Kotler (2000) advocates that marketing is a mutual process where people exchange products and services centred on their specific needs and wants. Therefore, when the exchange occurs, this leads to both individuals and organisational goals being satisfied (Ringold & Weitz, 2007). Typically, a company will create a marketing plan that allows them to achieve a marketing aim, strategy, tactics, and promotional strategies like advertising and distribution. Having a marketing plan is an essential aspect of marketing functions for a business (Dikcius & Urbonavicius, 2008). As well as utilising marketing to sell products and services, commercial marketing principles and techniques can be used to influence human behavioural change (Dann, 2010; Andreasen, 2012). As previously noted, this is discussed in greater detail in section 2.4.

2.3.2 Purpose and Scope of Marketing

While the marketing industry fluctuates and the shift from traditional marketing to digital marketing occurs, the overall purpose of marketing continues to be the same. The heart of a business or organisations overall success lies within the work they put into marketing their products, services, organisation, and brand. Marketing is regarded as the most important component of a business, as without it, firms may struggle to create long-lasting relationships with potential consumers (Conley & Fishman, 2006). There are several purposes of marketing that help marketers achieve their goals in the commercial marketing industry. Creating brand awareness is noted as the most important element of a company's marketing plan as it helps to attract new customers, retain existing ones, and outcompete competitors (Latif et al., 2014; Isoraite, 2016). Typically, an increase in brand

awareness occurs from the use of social media platforms, creating content online, improving search engine optimization²⁰, through word of mouth, podcasts, and advertising on the TV, radio and online. In an Irish context, there are many firms that have built extensive brand awareness and continue to provide consumers with a strong trademark; for instance, Ryanair, Guinness, Kerrygold, Tayto, and AIB bank. The same marketing tools can be applied in the health promotion sector (Ekiyor & Altan, 2020).

Marketing can also act as a communication channel between the organisation and consumers, providing individuals with the opportunity to stay connected and stay informed. As previously noted, both traditional and digital forms of marketing are potent resources that need to be considered when aiming to promote behaviours like physical activity. However, given the rise in digital technologies, having a strong online presence can be extremely important for health organisations and businesses when engaging with consumers (Kotler et al., 2015). Nonetheless, the use of traditional marketing can still benefit health marketers and advertisers²¹. Marketing is also used to capture the attention of individuals and persuade people to adopt new health behaviours like quitting smoking or improving diets. While the purpose of marketing has not changed, the way in which marketers promote health behaviours has. These changes are due to the shift from traditional marketing to digital marketing. These changes are examined in the following section.

2.3.3 The Shift from Traditional Marketing to Digital Marketing

Since the concept of marketing first began, the different eras, forms, principles, and practices of marketing have undergone a phenomenal transformation. One of the biggest changes that marketers had to adapt to is the shift from traditional marketing to digital marketing (Winer, 2009). Traditional marketing dates back to prehistoric times in the Iron Age (Shaw & Jones, 2005), where Greek potters used trademarks to distinguish their brands from other competitors (Beard, 2017). However, the Industrial Revolution caused a major breakthrough for marketing and so began the start of the production era in the 1860s (Baker, 2010). This era was the beginning of machine manufacturing and the mass production of products, making it much easier to generate large quantities of products for

²⁰ This involves getting your content seen by search engines like Google and placed on search results pages.

²¹ In 2016, it was reported that 29% of people in Ireland use traditional ways of consuming news, such as the radio, print, and TV (Statista Research Department, 2016).

companies with little or no competition (Hollander et al., 2005; Jones & Richardson, 2007; Xu et al., 2018). Soon after, the marketing industry became saturated with increased businesses and competition. This production era was then replaced by the sales era, which began in the 1920s until the 1950s.

As the sales era began, the great depression and world war II were major driving forces that weakened the economy (Durmaz & Efendioglu, 2016). These two driving forces sent a capitalist system into crisis²² (Henry, 2011). Companies were competing for consumers (Benhabib & Bisin, 2002) and had to reduce the mass production of products, leading to increased unemployment. Marketers took an aggressive sales approach (also known as 'hard sell') to try and persuade consumers to buy products they might not want or need (Jones & Richardson, 2007). Once the growth and wealth of economies began to rise again, the emergence of the television was introduced, with the first advertisement airing in the United States in 1941 for the watch company Bulova (Newman, 2016). This was the beginning of the marketing concept era where customer orientation was the main focus for companies (Keelson, 2012). General Electric²³ was the first to recognise consumer needs in 1952. Their marketing philosophy was to make businesses do what suited the interests of the consumers (Mitchell, 2003). Subsequently, the creation of Customer Relationship Management (CRM)²⁴, but not limited to, shifted the marketing concept era into the relationship marketing era in the 1990s and continued until 2010 (Christopher et al., 2002). As marketers were producing products based on consumer needs and wants, they began to realise that holding onto these customers long-term was more critical than a once-off purchase (Ndubisi, 2007; Palmatier, 2008; Ibidunni, 2012; Aka et al., 2016). Following the relationship era, the use of digital technologies drastically heightened. This is where the social media marketing era commenced.

Kotler (2019) refers to the changes in the marketing eras as Marketing 1.0 (product-orientated marketing), Marketing 2.0 (customer orientated marketing), Marketing 3.0 (marketing orientated towards people), and most currently, Marketing 4.0 (human-

²² A capitalist system can be defined as the country's economic system where trading and industries are controlled by private owners as opposed to the Government (Scott, 2006). For example, a National Governing Body like the GAA is owned by the Government whereas a substitution for sport may be gym in Ireland that are privately owned.

²³ An industry composed of energy, oil, gas and electric companies

²⁴ Also identified as customer relationship management (Hubspot, 2020). CRM allows marketers to manage and analyse their customer interactions and create long-lasting relationships (Gummesson, 2012).

centred marketing deepened by the client's 'journey' in the shopping process). Marketing 4.0 has evolved from the previous marketing eras and has become more human-centric, paying specific attention to the consumer's journey, be it online or offline. Kotler (2019) alludes to the point that creating long-lasting relationships with customers can be difficult in the marketing 4.0 era.

As consumers needs are constantly changing, they rely heavily on digital mediums, and they are being more involved in product making. Marketers must be able to keep up with the role of guiding consumers through a journey from the stage of awareness about products and service to the final stage of action and purchase. As consumers in the marketing 4.0 era are involved in a digital world, it is important to focus attention on what digital marketing entails. The following section will briefly outline the definition of digital marketing and the different forms of digital marketing are reviewed, along with their functionality and benefits they provide to marketers.

2.3.4 Digital Marketing

Digital marketing is an umbrella term for the act of marketing and promoting products and services using digital technologies (Garcia et al., 2019; Rihan, 2019). Since the introduction of information technologies, the revolution of digital marketing has rapidly increased (Akanksha, 2018). Digital marketing mediums include social media platforms, social networking sites, mobile phones, the internet, search engines, email and websites that connect you to existing and future consumers (Cardwell, 2013; Alexander, 2020). These mediums have revolutionised marketing where real-life firms have shifted towards a virtual world of buying and selling (Moriuchi, 2016), along with creating a new communication channel for businesses and consumers. This has given businesses more opportunities to market, advertise, reach, inform and connect with customers. Shirisha (2018) supports the notion that digital marketing is the fastest way for marketers and consumers to engage in e-commerce²⁵ and online engagement (Tiago & Verissimo, 2014). The next section will now outline the different forms of digital marketing that marketers can use.

²⁵ E-commerce is the activity of electronically buying or selling of products on online service like the internet

2.3.4.1 Forms of Digital Marketing

There is a multitude of digital marketing techniques as seen in Figure 4. Each form is used by firms in a different way and serves a different purpose. Not all forms of marketing are applicable to every business. Therefore, companies choose the digital marketing form that they think is best suited to their business and their target audience. However, it is necessary to acknowledge that these forms of digital marketing do not solely apply to a business context. These types of marketing can be utilised in the health promotion sector in an attempt to change human behaviours.

Figure 4 - Forms of Digital Marketing Methods



For the purpose of this study, it is not necessary to explain each form of marketing in detail but to allude to the functionality of these forms. The reason being, there is a need to focus on how these forms can benefit marketers and perhaps be used in a health-promotion context. The main forms of digital marketing are affiliate, e-mail, social media, content, viral, influencer, search engine marketing and search engine optimization. These forms of marketing help companies towards achieving their goals and objectives. They offer marketers an array of opportunities to grow a business and reach a desired target audience. What is more, by utilising these forms of marketing, companies can increase sales, website traffic, leads and brand recognition. Employing these forms of digital marketing will help amplify brand awareness and add credibility to the brand. Moreover, the multitude of marketing types helps businesses to build relationships with consumers, keep existing ones and build trust between consumers and the brand. However, if a

company is relatively new, they must first become visible to consumers. This can be accomplished in many ways but primarily using search engine results on Google (Khraim, 2015) and online advertising (Fariborzi & Zahedifard, 2012; Machado & Davim, 2016). Many of the digital marketing methods outlined above facilitate the use of display advertising²⁶, through either Google or Facebook. Adopting this technique means displaying advertisements on a vast network of websites across the internet, resulting in an increased reach of a target audience. Facebook offers similar display ads such as video, image, collection, carousel, instant experience ad, lead generation ad, and offers (Facebook, 2020), all explained in section 2.3.4.2.

In the past two decades, marketers have become increasingly interested in the use of social media platforms as a means of marketing their products and services. Indeed, in recent years, social media marketing has become the most common form of digital marketing. There are many online marketing activities, social media platforms and targeting strategies that companies can take advantage of, which are outlined in the following section. The subsequent section is devoted to emphasising the use of social media marketing, as this was utilised within the current study.

2.3.4.2 Social Media Marketing

Social media can be defined as a tool for online communication and interaction between individuals (Cann et al., 2011). Some of the most popular social media platforms and social networking sites are Facebook, Instagram, Twitter, Snapchat, Pinterest and LinkedIn. The evolution of social media became one of the most impactful information technologies to emerge as it allowed individuals to connect with others who share similar interests, construct personal profiles, post blogs, engage in online discussions and consume and share information (Boyd & Ellison, 2008; Dewing, 2012; Manning, 2014). Moreover, social media began playing an immense role in personal communication and social relations (Weinberg, 2009). There is extensive literature on social media marketing from an array of perspectives (Vinerean et al., 2013; Momani, 2016; Stephen, 2016; Prasath and Arachchana, 2018; Cheung et al., 2020; Vithayathil et al. 2020). The general consensus suggests that social media marketing offers many benefits to both the company and consumers: creating awareness, offering targeted advertising, connecting and

²⁶ Display advertising can be seen across several social media platforms, websites, email services, blogs, and YouTube, in the form of visual commercial messages using pictures, logos, animations, videos, and graphics.

communicating with customers and keeping people informed of product and brands (Godey, 2016; Deshwal, 2016; Zollo et al., 2020).

Today, there are thousands of different social media applications. Each application serves its own purpose and function for different businesses. A company may choose to use a specific social media platform based on their business goals and their target audience. Whilst there is a vast array of social media applications available in the market, for the purpose of this research, both Facebook and Instagram are the key social media platforms of interest. Therefore, direct attention is given to these platforms.

Facebook and Instagram have several functions that businesses can take advantage of and utilise for marketing activities. Both platforms allow marketers to create business pages which helps companies identify themselves to potential consumers through images, posts, likes, shares and advertisements. Facebook and Instagram provide advertising opportunities where companies can create online advertising campaigns to promote their brand and products, share content, photos, videos, and basic information about the business. An advantage of using Facebook and Instagram advertising is it allows businesses to target specific groups and unique audiences with minimal geographical limitations (Marzan & Gonzales, 2014). There are several types of advertising formats on Facebook that advertisers can make use of. These include an image, video, carousel, collection ads, instant experience ads and offer ads (Facebook, 2020). The Facebook advertising format most relevant to this thesis is image, video and carousel. Carousel advertisements allow companies to show up to ten images or videos within a single advertisement, each with its own unique link. The unique link that is attached to the adverts will redirect consumers to destinations on or off Facebook. This may be a link to the company's website. An advantage to using a carousel ad would be cost-effectiveness. It shows more products and information which increases the opportunity to reach more people. When using these ad formats, marketers can potentially reach any target audience they want with no geographical restrictions. This is achieved through targeted advertising. Employing the use of targeted advertising allows companies to concentrate on a specific group of people that are more likely to have an interest in the products, services or brand. There are several targeting techniques that marketers utilise to deliver online advertisements to their audience. The following section will discuss those most relevant to this research.

2.3.5 Targeting

Many marketers use an aggressive sales or marketing approach to influence consumers into purchasing products and services. Also known as the ‘hard sell’ approach that involves a more direct and firm way of marketing and selling a product (Okazaki et al., 2010). In terms of advertising, a ‘cold advertisement’ can have the same concept as a hard-sell approach. When a company uses a cold advertisement, they are essentially delivering generic advertisements to a broad target audience, which makes it difficult for a company to successfully reach the right consumers. Furthermore, no ‘one offering’ will attract all customers (Wind & Bell, 2007). Therefore, employing the use of targeted advertising will allow companies to concentrate on a specific group of people that are more likely to have an interest in the products, services or brand.

Targeting in marketing can be very important for a business that wants to reach a specific and unique target audience (Farahat & Bailey, 2012). Typically, targeted advertising is involved in market segmentation. Market segmentation is the process of categorising an entire market into smaller groups and segments. It enables marketers to segment the market into different audiences where they can deliver ads to the most relevant, and appropriate group. There are four main types of market segmentation: demographic (age, gender, education), psychographic (values, interests, beliefs), behavioural (online activity, purchases, habits) and geographical (country, city, Eircode). Once consumers are viewing advertisements that are relevant to them and their interests, then this increases the probability that they will make a purchase (Kox, Straathof, & Zwart, 2014). In all, there are a number of different targeting techniques used in advertising; demographic targeting, behavioural targeting, contextual targeting, re-targeting, location-based targeting and predictive targeting (Hemdev, 2019; Google, 2020; Hootsuite, 2020).

2.3.5.1 Demographic Advertising

Demographic targeting is a form of online advertising that is tailored to a defined target audience based on individual information (Rodgers & Thorson, 2017). For example, age, gender, education, income, and marital status. This information can be found on social media profiles, along with an individual’s interests or internet behaviour such as their search history (Kox, Straathof, & Zwart, 2014). Marketers use this information to deliver more useful and relevant advertisements to their target audience (Aguirre et al., 2015). For example, a male-dominated brand selling clothing and footwear may only be inclined to target people based on their gender, they can therefore target males only. Moreover,

within demographic targeting, marketers use persuasive communication in their marketing messages to change consumers behaviour. Such advertisements are more effective in changing behaviour when the messages are tailored to the individual's characteristics, for instance, their age or gender (Noar, Harrington, & Aldrich, 2009). However, what convinces one individual to behave in a desired way might not be the same for another as the marketing message may not be tailored to their demographic profile. In a study by Hirsh et al. (2012), it was discovered that participants were more likely to purchase a mobile phone when the marketing messages were custom-tailored to the demographics, interests, concerns and personalities of their target audience. However, it is important to acknowledge that consumers may be wary of firms being able to trace personal identifiable information (Conti et al., 2012; Hoffmann et al., 2012; Ur et al., 2012) For more literature on studies that have employed the use of tailored advertising, see Appendix C - Tailored Advertising Studies, page 320. As discussed, while marketers can target individuals based on their demographic characteristics, it is also possible to target based on location and geographical regions.

2.3.5.2 Location-Based/Geographical Advertising

Due to the advancement in digital technologies, marketers can now target individuals based on their location and geographical region. This is due to the existence of GPS (Global Positioning System), Google map location, and innovated targeting techniques. Moreover, marketers can deliver an advertisement to an individual with information and offers on places that are in proximity to their location (Bruner & Kumar, 2007). For example, if you are in area A and are looking for a place to eat then businesses can target you with information about their restaurant while also offering deals too. Furthermore, locational based advertising can be facilitated through the use of Google or Facebook. These online platforms allow marketers to choose a broad geographical location like a country or more specific location like a radius around a city and therefore only targeting the people within that region.

The best and most salient example of location-based and geographical advertising is Pokemon Go. This mobile application used augmented reality²⁷ and GPS services to detect where people were in real life while playing the Pokemon Go game on their phones. While there were no advertisements on the app, Niantic (developers of Pokemon) allowed

²⁷ Augmented reality is a form of experience in which the real world is enhanced by computer generated content. This is tied to specific locations or activities (Yuen, Yuen, & Yaoyuneyong, 2011)

other brands to advertise based on the location people were in. While Pokemon Go incorporated the use of location-based advertising, it most importantly increased physical activity levels (American Heart Association, 2016; Althoff et al., 2016; Nigg et al., 2017). A more simplistic example of how this type of advertising can be used in the health-promotion sector is to deliver advertisements based on local walking routes. Physical activity organisations promoting walking can deliver these advertisements to inform people of trails within their area and proximity. Once people are aware of local walking routes, then perhaps this will increase the likelihood of them engaging in physical activity. Furthermore, according to the Centres for Disease Control and Prevention (2014), individuals are more encouraged to engage in physical activity if they have access to a walking location nearby. This example is important for Irish National Governing Bodies to become aware of. While marketers can target individuals based on their location, it is also essential for these advertisements to be relevant and of interest to the specific target audience. This is also known as tailored advertising, discussed in the next section.

2.3.5.3 Tailored Advertising

Marketers can target individuals based on the user's digital footprints and Facebook likes. A digital footprint is a 'trail' of your data and history while using the internet. It can include your online activity (Micheli, Lutz, & Buchi, 2018), such as your web searches, emails you have sent and information you have submitted to online services. An individual can express their interests online by liking Facebook pages, pictures and posts. With this information, marketers can segment their target audience and tailor advertisements to suit their interests. For example, if 1,000 males in Ireland each 'like' the Facebook pages 'Liverpool FC', 'Premiership scores', 'Soccer Facts' and 'Joe.ie', then these males could all be identified as having the same or similar digital footprint. In this instance, marketers selling weekend match day trips to Liverpool games can now target this group of similar profiled males, as opposed to targeting every male. Gironda and Korgaonkar (2018) note that the largest online platforms like Facebook have integrated tailored advertising into their marketing strategy as well as online businesses like Amazon and T-Mobile (Gironda & Korgaonkar, 2018). As tailored advertising offers many benefits to firms, it may not be applicable to all as every company has different marketing goals and objectives. Therefore, a different targeting technique must be used. The subsequent section explains an alternative targeting method known as re-targeting.

2.3.5.4 Retargeted Advertising

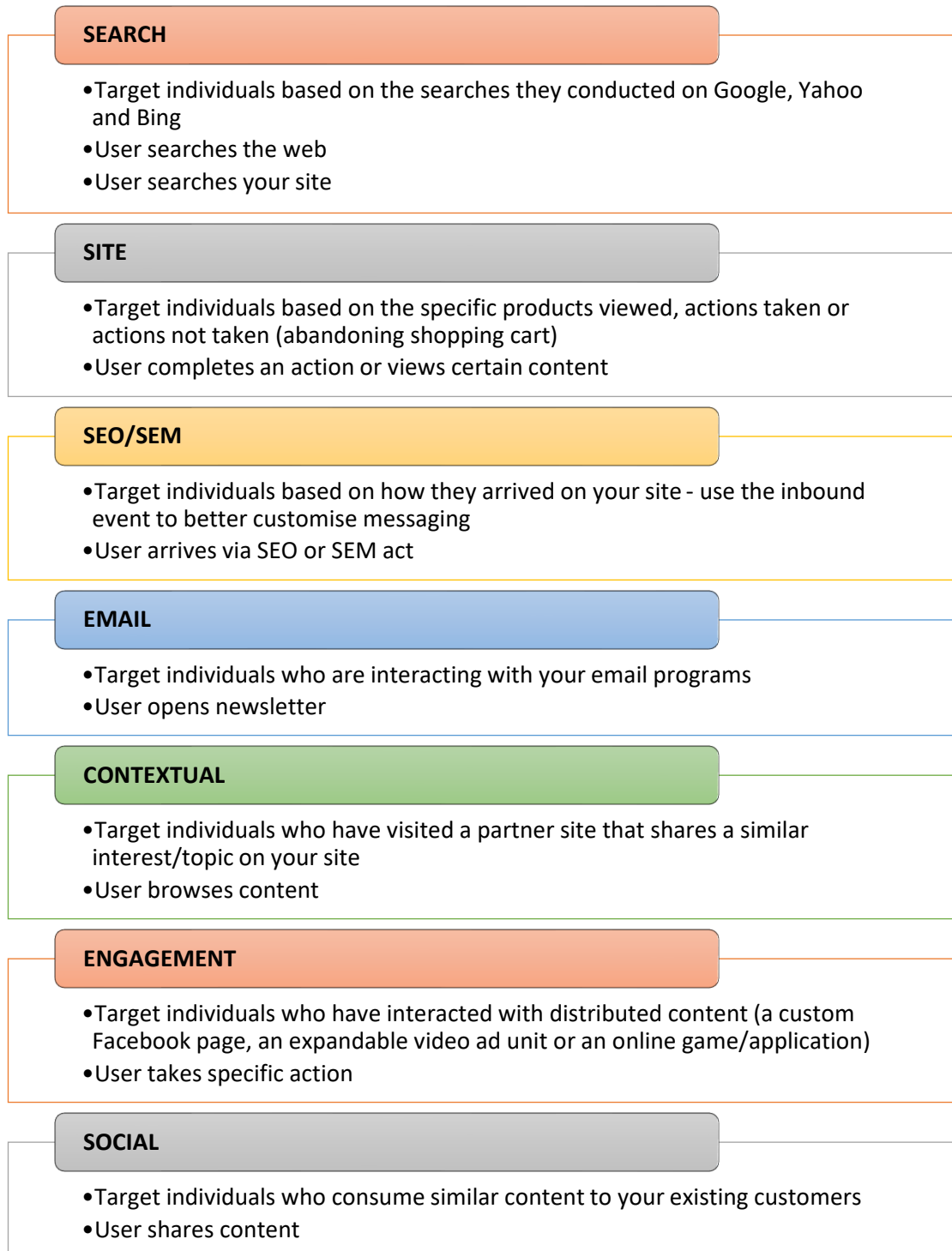
Many consumers research the products and services they are interested in before purchasing by either viewing websites, online stores or engaging with advertisements (Hootsuite, 2018). Once consumers make these actions, marketers are able to use that information to advertise specific products to them (Tupamaki, 2017). This is known as retargeting (Bleier & Eisenbeiss, 2015), but can often be referred to as remarketing. The purpose of retargeting is to target individuals who are already aware of your products, services and brand (HubSpot, 2019). This should be less time consuming for marketers to convert the individual into a customer in comparison to someone who is unaware of your products. However, HubSpot (2015) noted that a total of 98% of consumers that visit a website do not convert to a purchase. It is suggested that a conversion requires numerous steps before purchase. Moreover, a consumer may go through several steps or see numerous retargeting ads before making a purchase. This also refers to the AIDA model outlined in section 2.3.6.1.

Figure 5 illustrates the many ways a marketer can retarget consumers (Soames, 2012). Facebook as a platform facilitates the use of retargeting. The most commonly used form of retargeting on Facebook is known as the custom audience (Hootsuite, 2020). This involves creating a list of people that have, for example, engaged with your websites, ads, videos, or clicked on links. To retarget consumers who have visited your website, a Facebook pixel²⁸ is placed on the website which tracks all traffic. It is then possible to deliver ads to these specific people. Custom audiences can also be used to track consumers who engaged with content on Facebook (Facebook, 2020). A lookalike audience is a further form of retargeting and segmentation offered by Facebook. Firstly, an audience is created on Facebook. For example, females between the age of 40-50 and living in Ireland. Facebook's algorithm identifies the qualities, characteristics and demographic features of this specific target group. From these characteristics and demographic data, you can then create (via Facebook Business Manager) another audience, the lookalike audience. This is a way of reaching new people who have similar interests and characteristics to the target audience (Hootsuite, 2018). An example of a company that utilised Facebook lookalike audiences was Little Passports, a children's educational multimedia firm. Incorporating the lookalike audience into their marketing

²⁸ A Facebook pixel involves inputting JavaScript code into your website that allows you to track visitors activity.

strategy resulted in the customer base tripling in six months and a 60% rise in cost per acquisition²⁹ (Facebook, 2018). Appendix D – Studies Utilising Re-targeting Techniques outlines future studies that have incorporated the use of retargeting techniques.

Figure 5 - Process of Retargeting



²⁹ CPA is a marketing metric that measures the cost to acquire one customer

In the Social Marketing Strategy 2017-2020 by Public Health England, there is much emphasis on the use of digital technologies in this plan. Public Health England (2017) shows how retargeting strategies can be used in online advertising campaigns (Public Health England, 2017). In November 2018, the first ‘Amazing Things Happen’ (ATH) online advertising campaign was launched to target 25-40-year-old London smokers. This campaign ran until March 2019 and predominantly used Facebook and Instagram, whilst also utilising YouTube. Involved in the campaign was also the use of traditional marketing methods like posters and postcards. Following this, in October 2019, the London Smoking Cessation Transformation Programme launched the second ‘Amazing Things Happen’ (ATH) campaign, which worked alongside the ‘Stoptober’ campaign, all aiming to decrease the consumption of smoking (London Smoking Cessation Transformation Programme, 2019). The second campaign ran until March 2020 and was mobile and digital orientated. This campaign retargeted a total of 4,000 smokers who had engaged with the first ATH campaign. They received further campaign promotional messages. Findings from this campaign demonstrated that this methodology was the most effective strategy that they had used to date, with 88% of Facebook impressions delivered to a smoking audience. Further results showed that the response rate to the retargeting activity was nearly four times more effective than promoting the ‘Stop Smoking London’ website to the general public and a broader audience³⁰ (ibid). Whilst this campaign does not provide enough evidence on the conversion of smokers to non-smokers, it is imperative to acknowledge the methodology of this campaign for the purpose of this current thesis. The ATH campaign provides empirical evidence that retargeting strategies can be utilised in health promotion campaigns. It also shows the potential it has for future studies to replicate the methodology in order to effectively deliver a behavioural change campaign.

This section emphasised how marketers can use online advertising to target their desired consumer audience. The targeting methods outlined above enable marketers to deliver ads to the most relevant and appropriate consumers. If consumers are receiving ads that are relevant to them, this increases the probability of them purchasing products or services or influencing human behavioural change in health promotion campaigns. Whilst these campaigns can incorporate targeting strategies to reach a desired target audience, it is important to consider the underpinning theory or model that acts as a theoretical

³⁰ The ‘Stop Smoking London’ website is used by smokers who are on their journey to quitting smoking.

framework towards the design of the campaign. The following section will therefore discuss the underpinning theories and models used by marketers to frame their marketing strategy, which can be also used within the context of health promotion.

2.3.6 Behavioural change Models and Theories for Marketing

In the preceding section, specific attention was given to how marketers can benefit from the different forms of marketing, particularly from social media marketing. Employing the use of social media marketing and online advertising can help businesses communicate with consumers more effectively and reach their specific target audience through several different targeting methods. However, what was not discussed in the previous section was the understanding of consumer behaviour. Being able to recognise the ‘what, when, where and how’ of consumer purchasing behaviours will inevitably increase the overall success of a business (Barmola & Srivastava, 2010). They must identify their specific target audience and understand what attracts these consumers to their products, services and brands (ibid).

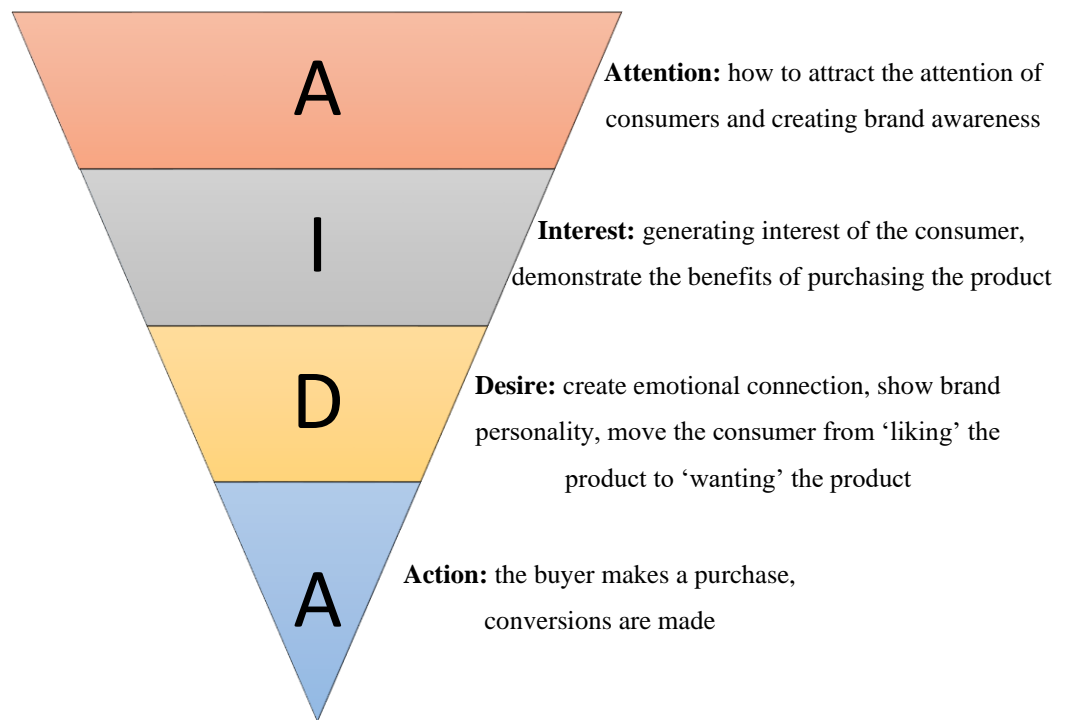
For this current research, the Hierarchy of Effects Models (HEM) was evaluated in the review of literature chapter. However, after reviewing this model, it was not deemed applicable to the current study. The HEM is a series of steps that affect a consumer’s decision to purchase a product or service. Marketers must influence consumers to go through a six-step process whilst encouraging them to purchase a product. These steps are awareness, knowledge, liking, preference, conviction and purchase. However, the aim of using a digital marketing model was to focus on attracting the customers attention, creating interest and desire which would lead to action. The stages in the HEM were deemed too long and advanced for consumers. Therefore, the AIDA Model was more suited. The AIDA model refers to a series of steps that affect a consumer’s decision to purchase a product or service. This is the Attention, Interest, Desire, Action Model (AIDA). This theoretical model helps marketers and advertisers understand the stages a typical consumer goes through before purchasing a product. This model was most applicable to the aim and objectives of the current study and therefore is discussed in greater detail. However, the reader can gain an insight into the HEM in Appendix E – Models used in Digital Marketing Studies, page 323.

2.3.6.1 AIDA Model

The AIDA model was developed in 1890 by Elmo Lewis, an insurance salesman (Ferrier, 2014). This model was initially created for marketers and advertisers. Many companies use this model to measure the health of their brands, advertisements, products and services. The AIDA model stands for Attention, Interest, Desire and Action (Hadiyati, 2016), but can also be referred to as a sales funnel (see Figure 6). This model describes the four individual steps in which a customer goes through in the process of purchasing a product or service (Gharibi et al., 2012). Typically, a business would use this model to guide consumers through the sales funnels from the first stage to the final stage where a purchase is usually made (Ferrier, 2014).

The first step of the model is attention where brand awareness of a product or service is most likely established (Baca et al., 2005). It is difficult for a business to sell their product or service if their desired target market does not know the product or service exists. Therefore, creating brand awareness in the initial stage is vital for the business (Kotler & Keller, 2006). This can be done by producing an advertisement that will attract individuals to company products. However, if a firm is not providing adequate brand awareness and promotional advertisements then this may potentially affect sales of the business (Jensen & Jepsen, 2007). After the advertisement has gained attention, consumers may become interested in the products or services. This leads to the second stage of the model. This is where the business seeks to improve consumers interests in their products or services. This can be difficult to achieve if the products or services are not already inherently interesting. Therefore, the business must focus on promoting the benefits, advantages and features of the product (Gharibi et al., 2012). The third stage consists of desire. The aim of this stage is to persuade or influence the customer that the interest of a product or service can fulfil their consumer needs. Desire can be created by providing consumers with the exact information to fulfil customer's needs. It is the motivation where feelings compel to an individual to act, for instance, to make a purchase (Rehman et al., 2014). Lastly, the final stage of the AIDA model and the buying process is action. This involves a consumer taking action and making the decision to purchase a product or service. This may be achieved using effective advertising in the previous stages (Hadiyati, 2016).

Figure 6 - The AIDA Model



2.3.6.1.1 Studies Underpinned by the AIDA Model

The AIDA model is widely cited in academic journals from an array of perspectives focused on marketing, social media and online advertising (Evcı & Sharma, 2020). Table 1 presents some studies that have utilised the AIDA model from a business and social media viewpoint. It is necessary to note however, that there is little evidence that confirms the use of the AIDA model in a social media advertising campaign in the context of health promotion and social marketing, aimed at increasing walking levels. That is to the knowledge of the researcher. Whilst lacking in academic literature, the AIDA model is still fundamentally utilised by many businesses in everyday life. Every day, marketers and advertisers attempt to influence individuals to become customers, and to persuade people to make purchases through advertising. While there is also existing literature on the history and development of the AIDA model in books and academic journals, there is potent information to be found in blogs written by the world's top marketing professionals like Phillip Kotler and Seth Godin. These blogs share additional information on how the AIDA is constructed and demonstrates the journey that prospects go through to become a customer.

Table 1 - Research Employing the AIDA Model

Researcher	Year	Area Investigated
Ofoegh & Udom	2013	Investigated the effects of sales promotions on consumer buying in telecommunication firms using the AIDA model
Pradipta & Purwanto	2013	Examined the relationship between website design and structure towards purchasing decisions based on the AIDA model
Wood & Burkhalter	2013	Assist marketers in how to successfully connect with potential consumers on Twitter by adopting the AIDA model principles
Rehman	2014	Assess the effectiveness of mobile and email marketing on gathering attention, interest and creating action amongst consumers
Hassan et al.	2015	Utilise social media as a marketing tool for small businesses based on the AIDA model
Ghirvu	2013	The consumer's purchase process by interpreting the AIDA Model in the context of online advergAMES
Cetinturk & Poyraz	2017	Defining Search Engine Advertising (SEM) metrics according to AIDA advertising model
Prathapan et al.	2018	Effectiveness of Digital Marketing: Tourism websites comparative analytics based on AIDA model
Budiawan et al.	2017	The quasi experimental study of the influence of advertising creativity and exposure intensity towards purchasing action with AIDA approach

The AIDA model is widely used in the industry of marketing, advertising and sales. This model helps businesses to understand what actions an individual must take before being influenced to purchase goods or services. It is generally used in marketing campaigns and is regarded as one of the strongest advertising frameworks (Tuan, 2015). According to Kotler et al. (2016), the model is to be used as a checklist by marketers when designing advertisements. For advertisements to be effective in influencing consumers, it must be designed in a way that incorporates consumers into all four stages.

The model is essentially a funnel-shaped (inverted triangle) or hierarchy shaped model, where individuals start at the top of the funnel and work their way down to the bottom.

The total number of prospects or individuals decrease as they go through each stage (Li & Yu, 2013). The further down an individual is in the funnel, the more valuable they are to a business and the likelihood of them leading to a conversion or purchase is increased. However, it is not as simple as putting prospects in at the top of the funnel and expecting each one of them to come out the bottom as loyal customers. Godin (2010) denotes that the mistake some businesses make is that they believe there are not enough people at the top of the funnel or not enough people being exposed to the marketing campaign. When in fact, the problem lies within the efficiency of the funnel and the likelihood of these prospects becoming loyal customers. The funnel must be designed more efficiently in order to successfully convert a prospect to a consumer (ibid). It must grab the attention of a prospect, interest them in your products and service which creates a desire to want the product, then leading to action to make a purchase. Godin (2006) also refers to the notion that individuals can change behaviours. For example, people change their attitudes towards something or change their attention to what they are focusing on. While a person receives more knowledge and retains more information about a product, their value as a prospect begins to change too. Moreover, the further they move down the funnel, the more valuable they are.

Claude Hopkins, one of the greatest advertising pioneers, focused his work on the AIDA model and ways on how to achieve action. His belief was if you include the consumers in the marketing process then they are more likely to change behaviour. One of Hopkins most used examples on achieving action involved the use of coupons which required consumers to take small steps in order to redeem a benefit (being involved in the process). For instance, cut out a coupon from a newspaper ad and take it to the shop. Hopkins would compare ads against each other by counting the number of coupons cashed into the shops, thus, measuring the effectiveness of the ads (Grafton, 2019; Norcross, 2019; Yilmaz, 2017). Ferrier (2014) later highlights that the likelihood of behavioural change increased when you involve prospects and consumers in marketing. Ferrier uses the example that a schoolteacher does not change the behaviour of her students by just talking to them, but rather involves them in the learning. The same applies to marketing. Furthermore, marketing is now an interactive communication, where consumers need to be more involved, as previously noted in section 2.3.3 by Kotler (2019). It is the situation where action changes attitude faster than attitude changes action (Ferrier, 2014).

Hassan et al. (2015) purposes that the AIDA model can be incorporated into a social media marketing strategy for small businesses. The findings from Hassan et al. (2015) study identified many ways to attract the attention of consumers while using social media. For instance, unique online advertisements, using search engines to reach potential consumers and using popular hashtags. Social media can also be used to generate interest by providing consumers with clear information about products and services, through the use of online advertising that they can relate to. Once consumers have shown an interest in the product or service, firms can take several measures to ensure consumers now have the 'desire' to want the product or service. For instance, companies can give discounts, promotions, free gifts, run competitions, update social media regularly, and offer good pre-sales customer service. After encouraging interest and desire form consumers, action must then be taken. Furthermore, the most important stage of the strategy is to ensure consumers take action to purchase goods and services. While Hassan et al. (2015) state that the AIDA model is typically applied in a business context or for commercial marketing, Basil (2019) and Edney et al. (2018) highlighted that the same concepts are likewise applicable to social marketing. Refer to section 2.4.3.1 for a social marketing study that employed the AIDA model.

2.3.7 Summary

This section sought to outline research conducted in the area of marketing and social media marketing. As noted, social media platforms and online advertising can be vital for companies as it allows them to connect, communicate and reach their target market. Notwithstanding, the growing phenomenon and extensive benefits of using Facebook and Instagram re-targeting strategies, it is still largely overlooked in the health-promotion sector. What is more, it is not even considered in the majority of physical activity policies that are implemented in the European Union countries (Breda et al. 2018). Furthermore, while there is existing literature on the underpinning models and theories utilised in a business context, for example, the AIDA model, there is relatively limited research investigating the use of the AIDA model in a social marketing and health promotion context. To the knowledge of the researcher, there has been no Irish study that employs the use of the AIDA Model in a social media marketing campaign aimed at increasing walking participation. Therefore, combining both concepts (the AIDA model in a social media marketing campaign and social marketing) to increase walking levels deserves more research attention, particularly from an Irish context as this limitation is seen in

national governing bodies of Ireland too. The following section will review previous literature in the area of social marketing and how the principles of social marketing aids in the success of campaigns and interventions.

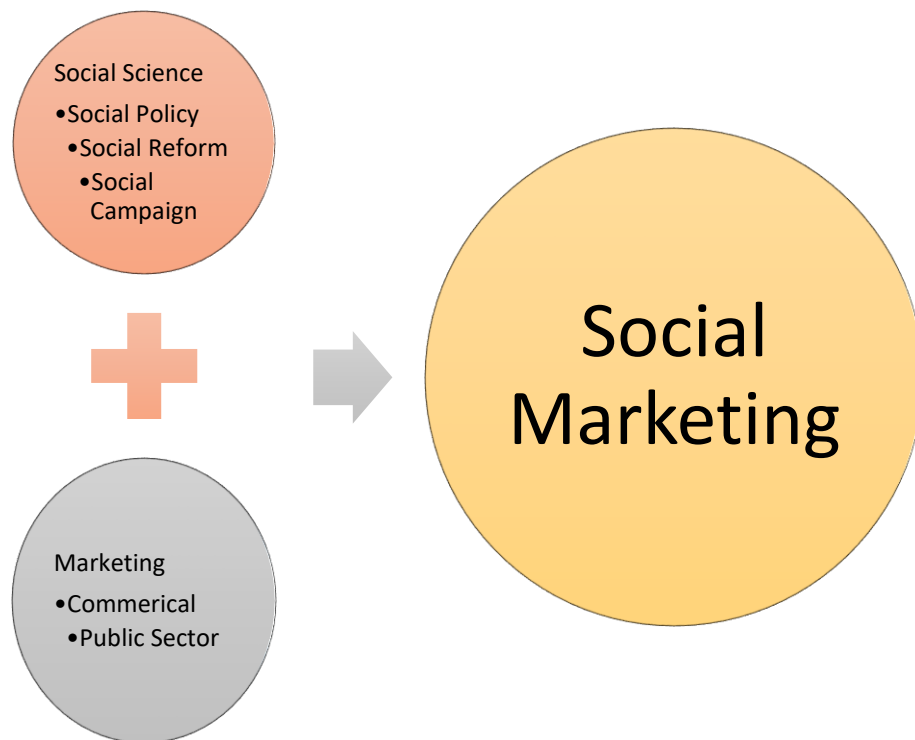
2.4 Social Marketing

The purpose of this section is to examine the concept and development of social marketing and how it can be applied to behavioural change interventions. Social marketing has received a lot of research attention. There is a considerable body of literature on social marketing interventions and campaigns (Perry et al., 2002; MacAskill et al., 2002; Huhman et al., 2007; Reger-Nash et al., 2008; Allen et al., 2009; Abioye et al., 2013; Bala et al., 2013; Krishen and Bui, 2015; Scarapicchia et al., 2015; Hamelin et al., 2017). This section will discuss the interventions that have successfully changed health-related behaviours while typically employing the use of traditional forms of marketing. Conversely, studies on social marketing interventions using digital technologies are also discussed. Following this, the reader will gain insight into how social marketing theories can be implemented in the area of advertising in an attempt to change behaviours. Within this area of investigation, different studies are drawn on that have applied advertising techniques to their campaigns.

2.4.1 Introduction to Social Marketing

The evolution of social marketing began in the 1950s when psychologist Dr. Wiebe put forward that it was appropriate to fuse commercial marketing techniques and the study of social science in order to influence human behaviours (Wiebe, 1951-1952). French et al. (2011) suggested that the word ‘social’ and ‘marketing’ can occasionally appear to be antagonistic, meaning they do not fit together or are incompatible. ‘Social’ interventions, campaigns, health programmes, and concepts are related to enhancing society as a whole, while the term ‘marketing’ is the action or process of a business promoting and selling products and services. While it may be questioned if the two concepts fit together, they both share the same primary concern (French, Blair-Stevens, McVey, & Merritt, 2010). For instance, they both aim to seek the best possible way of influencing and changing one’s behaviour. Figure 7 represents the amalgamation of both marketing and social sciences (French and Blair-Stevens, 2007). Overall, combining both concepts allows for the construction of social marketing to emerge, which allows us to understand why people act the way they do and how we can help them to achieve positive behaviours.

Figure 7 - The Evolution of Social Marketing



The first-time social marketing was acknowledged in academic research was in 1971 by Kotler & Zaltman. Their paper supported the claim that the more the components of a social marketing campaign resembled that of a traditional marketing campaign, the more successful the social marketing campaign will be (Kotler & Zaltman, 1971). One of the earliest definitions of social marketing was also put forward by Kotler & Zaltamn (1971). They refer to social marketing as the design, implementation, execution and evaluation of programs that are intended to influence human behaviour. Social marketing has been further elaborated by Andreasen (1994) and Smith (2000) where they illustrate that social marketing is the process that influences human behaviour for the benefit of society by utilising traditional marketing principles. The general consensus among many academics is that social marketing is defined as the approach taken to influence, persuade and change human behaviour and enhance the quality of life of individuals and societies (Kotler et al., 2002; Dann, 2010; French, 2010; Nanda, 2015; Firestone et al., 2017). While the classification of social marketing varies across literature, there are two primary components that can be found in most definitions: The fundamental objective of social marketing is to change behaviours and achieve social good. It is made up of a definite set of principles and concepts that are implemented into interventions and campaigns (French et al., 2011). These principles are reviewed in section 2.4.2 below.

Social marketing that is utilised in the health sector aims to resolve many health-related and social problems. In addition to this, there has been a major growth since the 1970s in the application of commercial marketing principles and practices, specifically to enhance social good (Gordon, 2011). The very first campaigns that employed the concept of social marketing methods addressed health-related issues like diseases and family planning in the 1980s (Manoff, 1985). Since then, there has been a vast amount of interventions and campaigns that have also successfully changed behaviours of target audiences by employing social marketing practices; for example, anti-smoking, alcohol and substance abuse, physical activity, safe driving, and railroad safety (Perry et al., 2002; MacAskill et al., 2002; Huhman et al., 2004; Huhman et al., 2007; Reger-Nash et al., 2008; Allen et al., 2009; Abioye et al., 2013; Bala et al., 2013; Krishen and Bui, 2015; Scarapicchia et al., 2015; Hamelin et al., 2017). Some of these studies are discussed in greater detail in section 2.4.3. However, it is important to note that social marketing campaigns that adhere to the principles of social marketing are said to be more successful at changing behaviours, in comparison to those who do not (Stead, Gordon, Angus, & McDermott, 2007). The following section will outline and discuss the principles of social marketing that are typically implemented in a successful behavioural change campaign.

2.4.2 Social Marketing Principles

The social marketing principles, also known as the benchmark criteria, were first developed in 2002 by Alan Andreasen (Andreasen, 2002; Stewart, 2015). The benchmark criteria were designed to support a better understanding of the core social marketing concepts and principles and to act as a framework for planning and developing social marketing interventions. Andreasen (2002) introduced six-point criteria that are included in successful social marketing interventions. The six elements of the social marketing benchmark were: behaviour, customer orientation, exchange, competition, segmentation, and methods mix. These key components were chosen based on successful social marketing interventions and recognising the common elements that contributed to their success (French et al., 2010). Building on Andresen's six-point criteria, two key elements were added by the National Social Marketing Centre (NSMC) in 2006 to make up the eight key elements of the social marketing benchmark (Harwood & Murray, 2019). The two elements added were theory and insight. The eight key components to achieving a successful social marketing behavioural change intervention are summarised in Figure 8 below.

Figure 8 - Social Marketing Benchmark Criteria



The following section outlines and explains each key component of the benchmark criteria. Each element aids in the planning and development of a social marketing intervention in a different way (National Social Marketing Centre, 2006):

Behaviour: The core aim of social marketing is to change human behaviour. However, it should be noted that an intervention must not just focus on changing behaviours but to focus on influencing behaviours and sustaining them over a long period of time. A successful social marketing intervention acknowledges how complex changing human behaviour can be. Therefore, they do not intend to change behaviours in one big step but to implement small gradual steps in achieving the behavioural goals. The most important principle of social marketing is being able to establish behavioural goals. These goals must be clear, specific, realistic and measurable and not just focused on information, knowledge, attitudes and beliefs.

Customer Orientation: This involves designing the intervention, so it is centred around the target audience. French et al. (2011) state that it involves seeing things through the eyes of the audience. This refers to understanding the challenges one might face along with coping mechanisms to overcome those challenges. It is most important to gain an

understanding of one's social context too³¹. To do so, market research should be carried out to gain additional knowledge of the customer, their lives, needs, habits, concerns, and existing behaviours. A range of different research and data sources are utilised, and stakeholders are implemented in order to achieve behavioural goals. It is important to note that when conducting a social marketing intervention, it is best to avoid assuming what the target audience wants or needs but rather to design the intervention based on what you know the target audience wants or needs. Matching the intervention strategies to an individual's needs before attempting to change behaviour is deemed more effective (Andres, Gomez, & Saldana, 2008).

Theory: The design of the intervention must be theory-based and informed (Lefebvre, 2000; Kelly et al., 2007). The underpinning theory and framework utilised in the intervention helps to inform problem understanding and programme design. When choosing a theory to inform the intervention, it is important to take into consideration how and what can influence human behaviour. However, a practical implication that has occurred is that many social practitioners do not utilise theory-based interventions (Manikam & Russell-Bennett, 2016) and earlier campaigns presented no adherence to a theory-based design (Noar, 2006).

Insight: The intervention should be insight-driven. As previously noted in customer orientation, it is important to understand the lives and behaviours of the target audience. However, the intervention should also have a clear focus on gaining an in-depth understanding of what motivates and what does not motivate the target audience to engage in such behaviours. Indeed, an insight into demographic data and problem understanding is necessary for the intervention but understanding why people act the way they do and what the target audience believes would help or encourage them to change is more important. Likewise, attention should also focus on the individuals who already carry out the positive behaviour that you are aiming to change or influence, as these individuals provide essential information on why they perform the positive behaviour, and the benefits and costs involved in the positive behaviour.

Exchange: The intervention must incorporate an 'exchange' for the target audience when aiming to change behaviour. This is also referred to as an 'offer'. The exchange that is offered must be something of value to the target audience. This considers the benefits and

³¹ This refers to how an individual reacts to something depending on their existing social and physical environment

costs of an individual adopting and maintaining a new behaviour. In commercial marketing, an exchange can be regarded as tangible or intangible. For instance, the selling of a unique product or the delivery of a service. Conversely, in social marketing, the exchange tends to be more intangible where people get a physical, social or psychological benefit. The benefit of exercising more, but not limited to, is weight loss, good body image, decreased mental health disorders and improved optimal health. However, the cost of changing behaviour can be negative like the loss of money, time, effort or social consequences. Overall, it is essential to increase the potential value of adopting the behaviour while lessening the cost of changing.

Competition: There is a variety of factors and competitions that affect the process of social marketing behavioural change interventions. Therefore, it is essential to identify these existing competing factors that undermine the behaviour your intervention promotes. There are two types of competition that need to be addressed: internal and external competition. The internal competition involves psychological factors, an individual's feelings, their attitudes and beliefs about a certain behaviour. Additionally, this includes the desire, habit and addiction involved in performing a certain behaviour. External competition is the factors that are competing for the target audience's time and attention. This can be environmental factors, negative social norms, people or organisations that are promoting a counter-behaviour or unhealthy behaviour. This creates barriers for individuals and decreases their motivation to change. To overcome competition, the intervention must implement strategies to minimise the potential risk of other competing factors.

Segmentation: This involves segmenting and allocating individuals into groups, based on a wide range of factors, to develop and design a specifically targeted behavioural change intervention. Most often, behavioural change campaigns will involve the targeting of demographic factors such as gender, age, education, income and occupation. However, implementing segmentation will allow social marketers to consider alternative ways that individuals can be grouped. For instance, segmenting individuals by their interests, goals, attitudes, beliefs, values, habits and existing behaviours. This allows for a better understanding of the types of interventions that are better suited to specific groups.

Methods Mix: The final principle of social marketing is to design an evidence-based, tailored, multi-disciplinary intervention aimed at changing human behaviours. This involves the use of multiple methods. To just raise awareness about a behaviour or to only

inform individuals of the behaviour is not enough to achieve sustained action. Nonetheless, if other elements are incorporated into the intervention, it is more likely to be effective. An example would be, offering practical guidance and education on how to change behaviour. Included in the methods mix principle is the 4Ps of marketing. This consists of product, price, place and promotion. The table below (Table 2) presents the 4Ps utilised in both commercial marketing and social marketing and the contrast between both concepts.

Table 2 - The Marketing Mix

The 4Ps (Marketing Mix)		
	<i>Commercial Marketing</i>	<i>Social Marketing</i>
Product	The product or service	The health-related campaign, intervention, project or programme
Price	The price of the product or service	The cost of adopting the new behaviour – time, effort, benefits, social consequences
Place	Distribution, delivery of product and service	Where the campaign, intervention, and programmes are located. Where the individual can engage in the behaviour
Promotion	Advertising, public relations, salespersons	Communication channels to best reach the desired target audience

Past studies by Gordon et al. (2006) and Stead et al. (2007) both carried out systematic reviews aimed at identifying the factors that led to successful physical activity social marketing interventions. However, these reviews are over 10 years old. Factors leading to success have perhaps altered since then. A more recent systematic review carried out by Kubacki et al. (2017) primarily focused on reviewing the effectiveness of social marketing campaigns aimed at increasing physical activity levels and to what extent did these campaigns adhere to the six social marketing benchmark criteria. Twenty-six social marketing interventions were assessed against the six social marketing benchmark criteria. It was noted that there were no interventions that incorporated all six social marketing benchmark criteria. Only four interventions included five criteria. The three most used criteria were behavioural goals (utilised in 20 out of 26 studies), customer-orientated (used in 22 out of the 26 studies) and mixed methods (seven interventions used

all four components of the marketing mix and eight interventions employed three components of the marketing mix). Only four interventions drew upon the principle of segmentation, five employed the competition element while six interventions integrated the exchange principle. While Carins and Rundle (2014) suggest that interventions that employ all social marketing benchmark criteria are more successful than those who do not, none of the interventions in Kubacki et al. (2017) systematic review report to utilise all principles. The application of the social marketing benchmark criteria acts as an important guide for social marketers and researcher to better design and implement behavioural change interventions. It increases the consistency of approach. Thus, improving the impact of social marketing interventions (Andreasen, 2002).

2.4.3 Social Marketing Interventions

As previously highlighted, social marketing can be utilised and implemented into campaigns and programs that are designed to change human behaviour (Wood, 2008; Andreasen, 2012). Most of the work in this area has focused on health-related behaviours like smoking, alcohol and healthy eating (Allen et al., 2009; Jepson et al., 2010; Bala et al., 2013; Krishen & Bui, 2015). Nonetheless, there has been social marketing interventions and campaigns designed and implemented to increase physical activity levels of specific target audiences. These studies are discussed further within this section.

The majority of prior research has applied traditional forms of marketing to their campaigns. Traditional forms include television ads, radio ads, newspapers, billboards, and bus signs (Merom, Miller, Lymer, & Bauman, 2005; Wray et al., 2005; Beaudoin, Fernandez, Wall, & Farley, 2007; Huhman et al., 2007; Reger-Nash et al., 2008; Abioye et al., 2013). Many studies have also focused on awareness of the physical activity campaigns as opposed to increasing levels of physical activity. Likewise, there have been many studies that sought to implement social marketing physical activity campaigns and interventions but focus more on adolescents and older adults aged 60 years (King, 2001; Huhman et al., 2004; Kamada et al., 2013; Fujihira, Kubacki, Ronto, Pang, & Rundle-Thiele, 2015; Komatsu, Yagasaki, Saito, & Oguma, 2017; Zubala et al., 2017). Contrary to using traditional marketing in previous interventions, there have been several studies that made use of digital technologies in the health sector. These studies examined health-related behaviours such as alcohol abuse and safe driving (Hamelin et al., 2017; Wakefield et al., 2017). Various studies have also utilised social media platforms in an

attempt to increase physical activity levels (Rote et al., 2015; Zhang et al., 2015; Wilson et al., 2016). These studies will now be discussed in greater detail.

2.4.3.1 Social Marketing Health-Related Interventions

An example of a social marketing campaign, based in Australia, that aimed to decrease the risk of chronic diseases related to one's lifestyle is the Measure Up campaign. This campaign targeted 25-50-year olds who had children and 45-60-year olds who either had a chronic disease or were living an unhealthy lifestyle (King et al., 2013). The first form of communication was a sixty and thirty-second television advertisement based on the link between waist circumference and the risk of chronic diseases. Following this, radio advertisements were delivered. The first advertisement showed a father who was overweight trying to play and run with his daughter. However, the man fails to keep up, stops and loses his breath. The tag used was 'The more you gain, the more you have to lose'. This ad tried to emotionally manipulate and persuade parents to make lifestyle changes, so they are not missing out with their children. The second ad showed the same man but a healthier weight with the tag line of 'it is never too late to start taking steps'. The results indicated that 90% of respondents claimed that they were aware of the Measure Up campaign. Further analysis showed that 82% stated seeing an ad based on 'waistline and risk' and 82% claimed to view an ad on '30 minutes of physical activity'. However, the results of this campaign sway heavily towards awareness rather than decreasing the risk of chronic diseases and increasing physical activity or minimising unhealthy habits. Another limitation of this study is it greatly relies on traditional forms of media to promote its messages. Essentially, the sample population are shown two comparative ads and expected to change behaviours with no follow-up ads or knowledge of their intention, desire or interest to change behaviour.

A study carried out by Scarapicchia et al. (2015) implemented a social marketing initiative aimed at increasing physical activity participation in 2,784 undergraduate students in a Canadian University. At baseline, the sample population completed a health assessment survey and questions related to the measurement of the campaign, along with a focus group aimed at identifying the perceived benefits of physical activity. This campaign was guided by the Hierarchy of effects model (Bauman et al., 2008). This involves individuals going through a five-stage process before becoming aware of the

new behaviour and adapting to it³². The key messages in the campaign were to associate PA with it 'being the most productive part of your day'. The messages were disseminated primarily through traditional media (posters on campus), the same advertisements delivered on social media platforms, a campaign portal page³³, in-class MoveU breaks, peer2peer involvement and lastly, free fitness classes on campus. Results indicated that 36.4% of participants were aware of the campaign 6 months post-launch. Findings also demonstrated that higher levels of awareness of the campaign were positively associated with outcome expectancies and self-efficacy which resulted in higher levels of intention to participate in physical activity. While this study focuses on increasing PA, the methods and results sway heavily in favour of awareness and intention to change rather than truly implementing behavioural change. Indeed, appropriate methods were incorporated to gain baseline data of PA levels. However, these findings were self-reported which could lead to some degree of bias. Furthermore, this study failed to increase participation levels but rather explore other elements related to behavioural change.

A social marketing campaign was implemented by Arulmani and Abdulla (2007) in the Republic of the Maldives to address the issues of unemployment that act as a precursor to worry, and stress for teenagers. The sample population was segmented into young adolescents and parents. The 'Yes' campaign was established to portray a positive image of employment and career development while utilising the AIDA model in its promotional marketing activities. The first stage was to create awareness around the issues of employment via advertisements based on the number of early school leavers, and the percentages of young people that continue to higher education³⁴. Secondly, interest was formed by presenting the 'Yes campaign' as a trendy and cool brand to adolescents. Free postcards, newspaper and television ads were developed in this stage³⁵. All ads gave details to the campaign number and website with an incentive to a competition. The subsequent stage was desire, which aimed to inform teenagers and their parents that 'small jobs' can progress to more successful employment opportunities. Ads based on interviewing role models in various employment sectors were used to showcase their careers. Lastly, the aim of the action stage was to move the target audience towards

³² The five stages consisted of awareness, outcome expectations, self-efficacy, intentions and adoption of behaviour change.

³³ An online site where the sample group can view promotional messages related to physical activity

³⁴ Print, TV, video and newspaper advertisements were utilised in this stage.

³⁵ The newspaper advertisement slogan was 'your future is at your fingertips' and the 15 second TV advertisement showed a teenage girl and her peers writing the word 'YES' on the TV screen.

career guidance and skills training. All previous advertisement formats were utilised again and based on providing information on counselling opportunities, employment opportunities and sectors. A comparative study was conducted between an intervention group that received career guidance from the campaign and a control group. Participants receiving the intervention (n = 161) show a decrease in negative career beliefs.

While the studies outlined above primarily utilise traditional forms of marketing, there has been an attempt made to integrate digital mediums into the field of social marketing.

2.4.3.2 Social Marketing Interventions using Digital Technologies

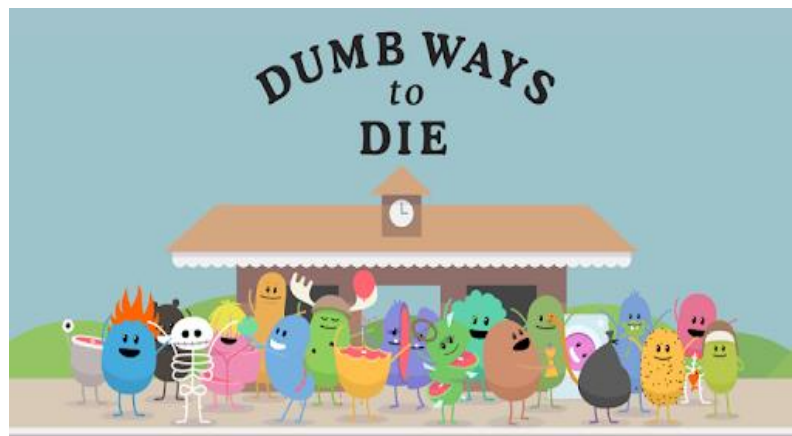
As previously discussed in section 2.3.4.2, social media has become one of the fastest-growing technologies worldwide (Moon, Tao & Ngai, 2015). In the context of health promotion, social media is widely used as a platform to provide health messages and interventions to the public (Bennett & Glasgow, 2009). This can be due to the new and improved technologies that enhanced the communication process of health messages (Kreps & Neuhauser, 2010). Soetens et al. (2014) highlight that the use of online web-based interventions is becoming increasingly popular to deliver virtual physical activity interventions. While Balatsoukas et al. (2015) and Rote et al. (2015) support the notion that social media can be an effective method used to deliver behavioural change interventions and reach a desirable target audience. In more recent times, digital technologies have been applied to social marketing campaigns in a number of contexts. For example to: (1) investigate the long-term effects of advertising on individual attitudes towards safe driving (Hamelin et al., 2017), (2) improve the effectiveness of alcohol harm reduction advertisements (Wakefield et al., 2017), (3) examine the effectiveness of an online social media intervention aimed at increasing physical activity (Zhang et al., 2015), (4) deliver an effective Active Travel campaign through social media (Wilson et al., 2016).

A notable social marketing campaign would be the ‘Dumb Ways to Die’ campaign that went viral on social media in 2012 while aiming to reduce the risk of young people being injured near trains and promoting rail safety (see Figure 9). Despite this campaign being almost a decade old, it is still recognised today as an effective and successful social marketing intervention (Algie & Mead, 2019). Their unique advertising methods involved creating a campaign that was funny, light-hearted and animated³⁶. At first, a YouTube

³⁶ Refer to Figure 9.

video and iTunes song were created and narrated by cartoon characters that died from performing ‘dumb’ behaviour around trains³⁷. Following this, a children’s book, soft toys, interactive outdoor posters, advertisements in train stations, radio advertisement and a Tumblr page were created³⁸ (Baron, 2019). Lastly, an animated smartphone game compatible for iPhone and Android was developed. All channels led individuals to the Dumb Ways to Die website where they could learn more about rail safety. This campaign won the ‘2013 Awards Report’ which features the most creative and celebrated campaigns of the year. Metro trains Melbourne stated that over 14 million individuals claimed that they were more likely to be safer around trains after being exposed to the campaign. Results also indicated that deaths and accidents around trains were reduced by 21% (McCann, 2013). The YouTube video has accumulated over 316 million online views (Algie & Mead, 2019). In 2018, the smartphone app had over 319 million downloads. Within six months of the campaign launching, it had generated 60 million US dollars in media impressions and reached 46% of the target audience in the first month (ibid). Moreover, a total of 126 million individuals pledged to be safer around trains³⁹ (see Figure 10). According to Ferrier (2014), people are more likely to change their behaviour if they pledge or commit to something. Costa (2018) backs up this argument by stating that commitment can be a powerful tool in behavioural change interventions.

Figure 9 - Dumb Ways to Die Advertisement

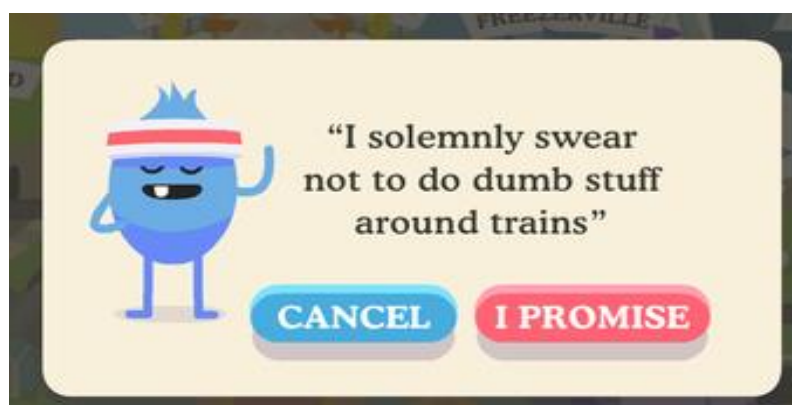


³⁷ As noted, these scenarios were given a comical spin rather than a scare or fear appeal.

³⁸ Tumblr is a social blogging platform that allows people to express their opinions, share content and connect with people of similar interests

³⁹ This involved people clicking on a pledge to ‘solemnly swear to be safe around trains’.

Figure 10 - Dumb Ways to Die Pledge



Research from Rote et al. (2015) highlighted that combining the use of social media and a walking intervention is an effective way to increase physical activity levels. This study examined the effectiveness of a Facebook social support group on increasing walking steps in female college students ($n = 63$). Participants were randomised into one of two interventions over an 8-week period. The first intervention involved a Facebook social support group ($n = 32$) and was compared against a standard walking intervention ($n = 31$) where this group received no treatment/intervention. At baseline, steps per day were calculated for both groups and again calculated post-intervention. Each group was provided with a 'weekly step goal', where they would track their steps per day. However, the intervention group were also registered for an online Facebook Group which they were asked to post information and provide feedback to each other. Findings indicated that PA for the standard walking group was significantly increased by a total of 80% compared to baseline results. Additionally, PA in the FB social support group increased by 136%, going from 5,292 steps per day to 12,472. These results meant participants of the social support group were walking 26 minutes more or 1.3 more miles per day compared to the standard walking group. While Rote et al. (2015) advocate that using social media can increase physical activity levels, it must be noted that the social group, social norms and peer influence played a more important role in encouraging physical activity levels. Nonetheless, as shown, utilising social media is an effective method to deliver a PA campaign as it reaches the desired target audience in a range of locations.

While using social media will allow social marketing campaigns to reach their desired target audience (Chou, Prestin, Lyons, & Wen, 2013), some interventions do not use it to its full potential. As noted above, some campaigns used social media to generate awareness about physical activity or use social media platforms as social supports for

individuals aiming to increase physical activity (Zhang et al., 2015; Wilson et al., 2016; Hamelin et al., 2017; Wakefield et al., 2017). It is important to note that these online physical activity interventions may only be effective for short term if the adoption of social media is not utilised properly. Maher et al. (2014) claim that there is a need to investigate further how to continue behavioural change long term. The World Health Organisation Global action plan on physical activity 2018-2030 highlights the need for more research on the effectiveness of social media interventions aiming to increase activity levels. It is believed that a way of achieving a successful social marketing campaign is to incorporate effective principles, practises and techniques into the interventions. This is where effective advertising techniques come into play. The subsequent section will now review the advertising techniques most relevant to this current thesis.

2.4.4 Advertising Techniques in Social Marketing

This section aims to outline existing literature based on the different types of advertising techniques used in health-related campaigns in an attempt to change behaviour. For instance, educational advertisements and the use of emotions. While many advertising techniques can be used in social marketing, the ones most relevant to the current study are discussed.

2.4.4.1 Educational Advertisements

From a business perspective, advertisers and marketers use different concepts and techniques in their advertisements. For example, the use of education, facts, emotions, promotions, and endorsements. While these techniques are typically used in a business context, they can be used in social marketing advertising too. Demirgunes and Avcilar (2020) highlighted a research gap in social marketing, where advertising effectiveness is typically examined from a business perspective but not in a behavioural change context. What is more, according to Stead et al. (2007) effective advertising techniques play a vital role in informing and educating people about social good and better behaviours. Demirgunes and Avcilar (2020) also state that behavioural change can be achieved with properly designed advertising campaigns. The aim is to attract attention through advertising campaigns. A commonly used and effective advertising technique is the use of education.

Kubacki et al. (2017) conducted a systematic review of social marketing interventions aimed to increase physical activity levels amongst adults. The studies included in this review used a number of promotional tools to raise awareness and deliver messages about physical activity. These tools included TV and radio advertising, along with flyers, banners, brochures, posters, and billboard advertising. These advertisements aimed to create awareness around physical activity and to educate people on the importance and benefits of physical activity. Education has also been incorporated into many of the social marketing interventions outlined in section 2.4.3.1 above. More specifically, in a study conducted by Scarapicchia et al. (2015), the primary aim was to educate the target audience on the benefits of physical activity. This was achieved by portraying physical activity as the ‘most productive part of your day’. The messages were disseminated primarily through traditional advertising (posters on campus). In addition to this, a previous social marketing campaign conducted by Reger-Nash et al. (2006) aimed to increase physical activity levels of insufficiently active 40-65-year-olds in New York (n = 200,536). This study aimed to educate individuals on the national physical activity guidelines and the benefits physical activity has. The main marketing methods used to promote 30 minutes of moderate physical activity were paid advertisements (for instance, television, radio and newspaper advertisements). Findings showed a total of 16% of the participants went from being inactive to active walkers post-campaign. A significant 47% of participants stated that their total weekly walking time had increased. This study gives an insight into how social marketing campaigns incorporating educational advertisements can be effective. While education has been incorporated into social marketing campaigns, so too has the use of emotions. The following section will now discuss the literature on the use of emotion in advertisements to persuade individuals in changing health-related behaviours (Durkin et al., 2012; Lewinski, Fransen, & Tan, 2014).

2.4.4.2 Emotional Advertising

Emotion is a feeling or response to a certain situation (Hockenbury & Hockenbury, 2007). It is how a person expresses themselves. Emotions that you experience (for example, fear) trigger a response (for example, change behaviour). Therefore, emotions are the most powerful way for marketers to connect to consumers in an attempt to influence behaviour. In the 1980s, Dr Robert Plutchik created the ‘wheel of emotions’ model, which consisted of eight primary emotions. These emotions were joy, sadness, trust, fear, disgust, anger, surprise and anticipation (Plutchik, 2001). Five of these emotions might be considered

negative emotions. Ferrier (2014) reports that marketers and advertisers can play off human emotions in an attempt to persuade them into action. The Institute of Practitioners in Advertising highlighted that ads that solely focus their content on emotions are twice as effective compared to those with only information and facts in their ads (Binet & Field, 2007). Baumeister et al. (2001) state that people pay more attention to negative emotional messages compared to positive ones. Conversely, advertisements that demonstrate rational/factual/information messages have little or no impact on changing and influencing behaviours (Yakob, 2015).

Emotional advertising is employed in health-related campaigns to prompt both emotional and cognitive responses of an individual which may change their behaviour or attitude towards a health behaviour (Dunlop et al., 2008). An effective mass media advertisements campaign will have either one or more of the following elements to the message: informational content⁴⁰, format or style and emotional content (Kotler et al., 2002). Durkin et al. (2012) suggest that when a health message achieves one or more of the three elements, the likelihood of behavioural change is much higher. For instance, in a review by Durkin et al. (2012), smoking advertisements that put an emphasis on emotional content (consequences and seriousness of smoking) performed much better than advertisements that portrayed the 'how to quit' message. Hong et al. (2013) and Farrelly et al. (2012) equally agree with the previous statement, by highlighting that advertisements based around fear, negative or emotional appeals (guilt, sadness, disgust) generate more awareness on the health risks associated with smoking. Moreover, advertisements based on emotions will raise an individual's attention (Lewinski et al., 2014), where they are more likely to remember the advertisements after being exposed to it (McDuff et al., 2015).

A more recent study by Hamelin et al. (2017) investigated the impact of emotional advertising on participants attitudes towards safe driving. Two advertisements, developed in the UK, were shown to a sample group of 60 participants. The first advertisement (high emotional ad) showed a car accident and casualties, which conveyed a high level of negative emotions (Figure 11). The second advertisement (low emotional ad) used a more rational approach by providing information on how a biker could have avoided an accident by driving slowly (under 68 km/h). The sample group was divided into the

⁴⁰ What is said in the health messages

following two groups: participants who watched the car accident advertisement (n = 30) and participants who viewed the biker advertisement (n = 30). After the participants were exposed to the adverts, their emotional responses and attitudes were measured. Two weeks later the participants were measured again for attitude change and recall of the ad. Results found that participants experienced emotions of fear and shock when watching the car accident ad. This resulted in these participants having a better ‘safe-driving’ attitude compared to the participants that were exposed to the biker ad. This study suggested that delivering an advertisement that includes negative emotions has a stronger impact on behavioural change than rational/factual ads. Findings of the study also found that the ‘safe-driving attitudes’ of participants that watched the biker ad dropped after two weeks of being exposed to the ad. Whereas, participants that watched the car accident ad had the same level of attitude after two weeks.

Figure 11 - High Emotional Advertisement

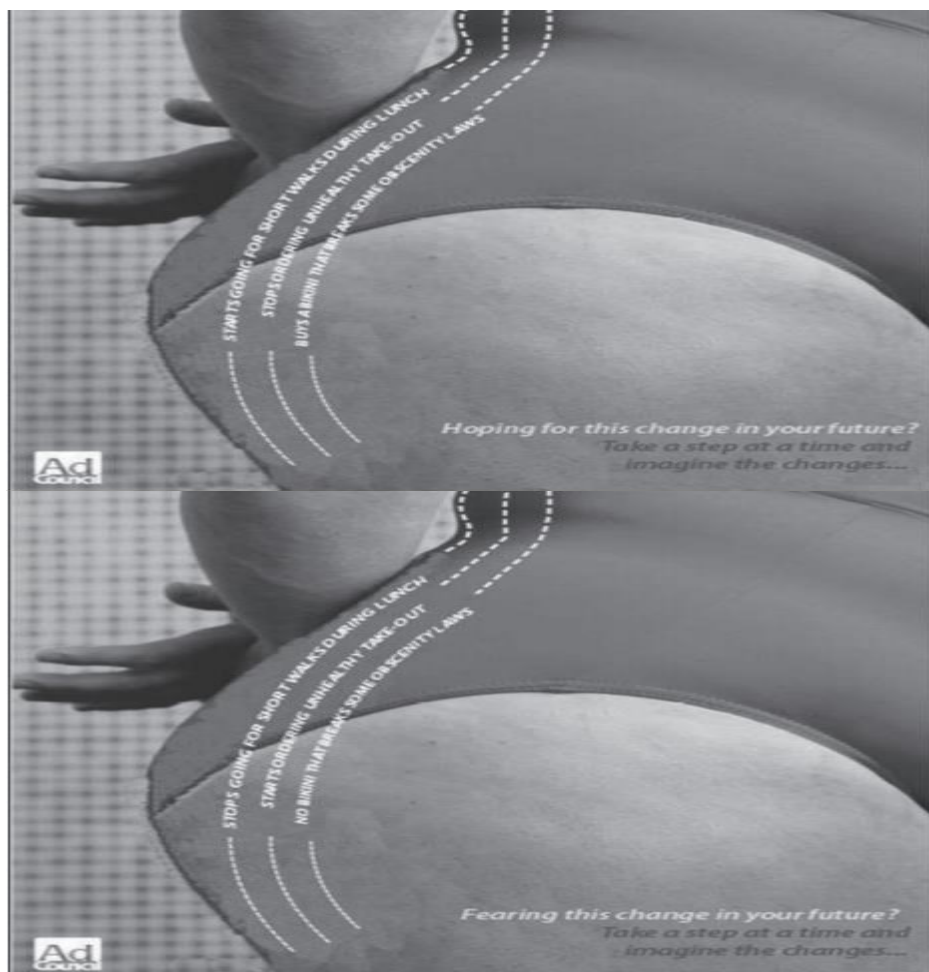


Research performed by Krishen and Bui (2015), examined the effectiveness of two different ‘message frames⁴¹’ (health-related advertisements) on an individual’s health-related choice (see Figure 12). The following two experiments were conducted: the first experiment focused on the type of advertisement (fear versus hope ads), and the second experiment investigated food choices (indulgent versus non-indulgent food offerings).

⁴¹ Message framing involves putting emphasis and highlighting specific parts of the message to the viewer. Therefore, increasing the efficiency of marketing communication (Lee, Lui, & Cheng, 2018)

Moreover, hope messages portray a positive attitude to the consumers and appraise them. These messages are associated with the individual accomplishing a goal and feeling ‘hopeful’ in achieving that goal if they attain a certain behaviour (DeMello, MacInnis, & Stewart, 2007). Whereas fear messages date back as far as the 1990s, where LaTour et al. (1997) demonstrated that fear messages trigger emotions in individuals which leads to changes in their behaviour⁴². Findings show that when an individual views an advertisement that is based on ‘non-indulgent’ foods, then the likelihood of them choosing to eat indulging food is lower. However, when an individual views an advertisement with a negative fear appeal, this demonstrates a much stronger effect on changing behaviours. This research implied that if marketers integrate both the ‘fear’ and the ‘non-indulgent’ elements to their marketing messages, then this will lead to a positive health behaviour change and where ‘one good health decision can lead to another’.

Figure 12 - Fear and Hope Appeal Advertisements



⁴² An advertisement based on the emotion of fear persuades consumers to avoid the consequence of the unhealth products or behaviours (for example, unhealthy food).

2.4.5 Summary

To conclude this chapter, it is clear that social marketing has received a lot of research attention. The most noteworthy discussion in this section is the social marketing benchmark criteria. This was developed to support a better understanding of the core social marketing concepts and principles and to act as a framework for planning and developing interventions (Andreasen, 2002). There is also a considerable body of literature on social marketing health-related interventions, that have employed both traditional and digital forms of marketing (discussed in section 2.4.3). These campaigns focused on health-related areas such as alcohol abuse, smoking, rail safety, healthy eating and physical activity. What was put forward in this section was the amalgamation of social marketing theories and the concept of advertising to change behaviour. Within this area of investigation, different studies were drawn upon that have applied advertising techniques to their campaigns. It is believed that advertising works in changing behaviour (Sethuraman, Tellis, & Briesch, 2011) and is deemed an appropriate mechanism to deliver key messages in behavioural change interventions.

As previously noted, there has been many recent social marketing campaigns that have made use of digital mediums and social media from an array of perspectives (Rote et al., 2015; Zhang et al., 2015; Wilson et al., 2016; Hamelin et al., 2017; Wakefield., 2017; Mehmet, Roberts, & Nayeem, 2020; Blair, 2020), however, the issue identified in this section is that there is little evidence to show that Irish health promotion and social marketing studies have made use of the AIDA Model in a social media marketing campaign in the context of increasing physical activity levels. To bridge the gap in research, the following chapter will outline the methodological approach taken for this research, in order to answer the proposed research questions.

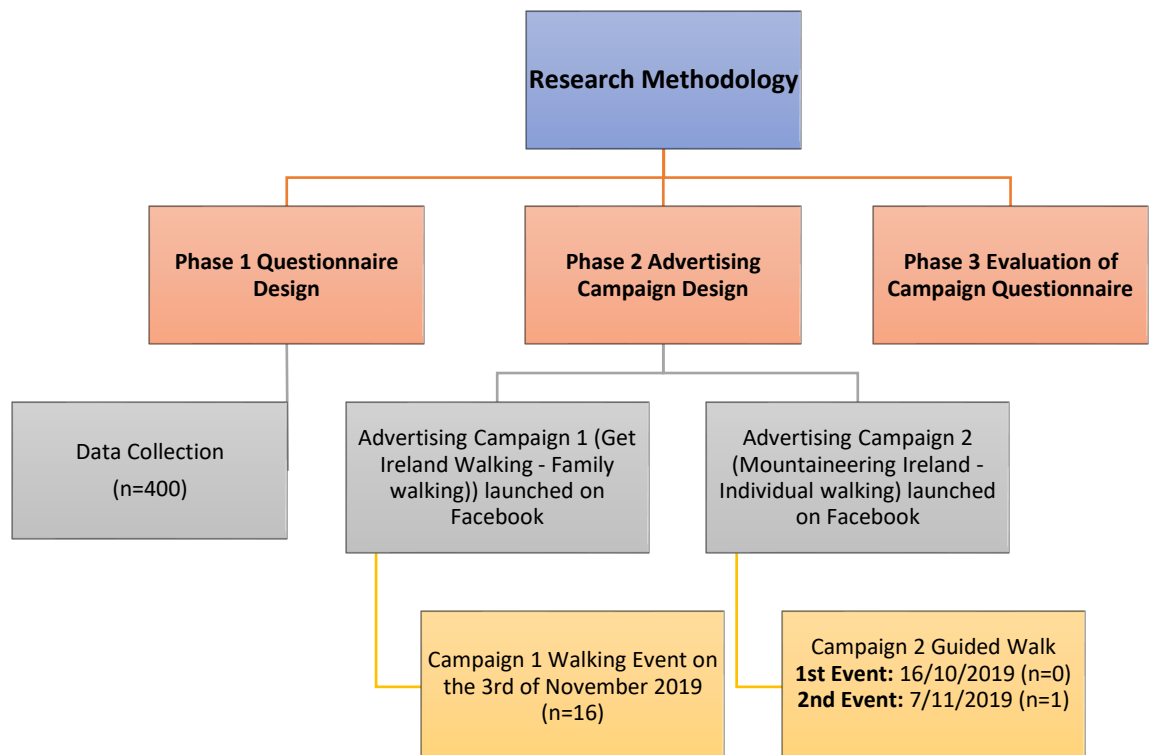
Chapter Three: Methodology

3.1 Introduction

The purpose of this chapter is to describe the methodology used to investigate the research questions of this study as presented in section 1.3. An experimental approach, using quantitative research methods was used. This approach is discussed in this chapter. In addition, attention is drawn to the data collection process and analysis. Finally, ethical considerations relating to this research are outlined.

The purpose of this study was to examine the effectiveness of a social media marketing campaign on encouraging 25-45-year-old males and females to attend walking events. This study was conducted in three phases. Phase one investigated the walking levels of participants and the factors that influenced their walking behaviours and habits. Two online advertising campaigns were conducted in phase two using a quantitative experimental research design. This involved a specifically designed social media marketing advertising campaign (based on phase one results) using Facebook and Instagram to promote walking. Finally, phase three of this study involved an evaluation of the social media marketing campaign. The overview of the methodology can be viewed in Figure 13. The specifics of each phase are further discussed throughout this chapter.

Figure 13 - Overview of Methodology



3.1.1 Research Question

Is it important to revisit the research questions of this study in the methodology chapter. For this study, the research questions are as follows:

1. What are the current walking levels of 25-45-year-old male and females in Waterford?
2. What factors are influencing 25-45-year-old male and female walking levels in Waterford?
3. How effective is a social marketing campaign, using the AIDA Model, on encouraging 25-45-year-old male and females in Waterford to attend walking events?

3.2 Research Approach

3.2.1 Theoretical Perspective

Research philosophy can be defined as assumptions about the way in which data about a phenomenon should be gathered, analysed and used (Saunders et al., 2009). The philosophical underpinnings of research are used to create new knowledge and methodological tools to collect and interpret information. The term research philosophy and research paradigm are often used interchangeably. However, they are not synonymous. The term research paradigm is defined as the theoretical perspective about research established by a community of researchers who share perceptions, values, and beliefs about the different theories and practices that can be used to carry out research (Kivunja & Kuyini, 2017).

The two most used but opposing research paradigms utilised in social science are positivism and interpretivism (Aliyu et al., 2014). These paradigms differ in their fundamental assumptions about ontology, epistemology and methodology (Holden & Lynch, 2004). A positivism approach is utilised to uncover the laws that govern human behaviour. It is said that positivism is based on the idea that society shapes an individual. For instance, an individual's actions can be explained by the social norms they have been exposed to (Thompson, 2015). Contrasting from the positivism style, the interpretivism approach seeks a more in-depth insight into human behaviour and tries to understand why individuals act the way they do (Chowdhury, 2014). According to Holt and Goulding (2014) however, researchers should not be constrained to a single paradigm when conducting a study. Certainly, the use of more than one paradigm is acceptable (Kaushik

& Walsh, 2019). This is known as a pragmatic approach where mixed methods are utilised (Creswell & Clark, 2011).

When the Author of this thesis was selecting a philosophical approach, the research questions being explored, the resources available, the experience of the researcher and any ethical considerations were all factored into the decision of which approach to take (Morrissey, 2013). It is imperative to note that the Author of this study came into academia from a positivistic approach, deriving from an undergraduate degree in Bachelor of Business (Honours) in Recreation and Sport Management. Therefore, the philosophical approach of the current study drew inspiration from the researcher's undergraduate modules and thesis (The influence of social media on an athlete's athletic identity and the coping strategies utilised to deal with social media). Along with the experience and knowledge of the supervisors involved in this study, the researcher chose to take a positivistic approach in this methodology. What is more, it is beyond the scope of this current study to take a pragmatic or interpretivist approach where the researcher is not in-depth with these paradigms.

In relation to the research questions of this study, the researcher advocates the positivist paradigm. Typically, in positivism studies, the data collection methods are quantifiable by using surveys and experimental designs. According to Johnson and Onwuegbuzie (2004), a positivistic approach allows researchers to replicate other methodologies based on evidence and statistics for different population groups. Moreover, researchers can use prior research findings of specific studies for their own quantitative hypothesis, predictions or studies. In addition to employing a positivistic approach, utilising data methods underlined by positivism provides clear and factual results that are valid and reliable (Cohen, Manion, & Morrison, 2011). For instance, utilising a high standard and widely cited questionnaire.

The theoretical underpinnings of quantitative methods are positivistic in nature guided by the two philosophies' ontology and epistemology. At an ontological level, there is believed to be only one truth. It relates to the values a researcher has about what can be known as real and what someone believes to be factual. Ontological research is objective in its measures and free from any bias of the researcher (Zukauskas et al., 2018). Epistemology, however, is when the researcher is independent of the study with minimal interaction with the participants. The researcher is limited to the data collection and interprets it in an objective manner (Rehman & Alharthi, 2016).

However, a limitation to using a positivist approach is that it may be difficult to measure participants attitudes, experiences and beliefs. It overlooks these experiences and perspectives as there is a lack of interaction between the researcher and the participants in the data collection process (Rahman, 2017). It has also been argued that positivist research sought objectivity in such a way that it fails to understand a social phenomenon (Ryan, 2018). It has a tendency to leave out underlying explanations, deeper meanings and the reasons for effect in research. Despite the above drawbacks, a positivistic approach was deemed a more suitable theoretical approach to employ in this study as it allows for quantifiable results, it may be generalisable and permits analysis of the causal relationships between social phenomena⁴³.

3.2.2 Methodologies Underpinning the Research

The following section will outline previous research in the area of social marketing. Within this area of investigation, while some studies have utilised a traditional marketing approach to promote a health behaviour, some recent research has made use of digital mediums and social media in their social marketing campaigns. However, it is important to reiterate that there is little evidence to show that Irish health promotion and social marketing studies have made use of the AIDA Model in a social media marketing campaign in the context of increasing physical activity levels. This limitation is also in existence in National Governing Bodies and organisations that aim to promote physical activity in Ireland. To the knowledge of the researcher, there has been no study that utilises the following methodology, outlined in section 3.2.3, in the context of social marketing and behavioural change.

Prior to selecting the chosen methodology for this current research, an audit was conducted on previous studies and their methodological tools used to achieve their aims and objectives. Many studies that are outlined below have been previously discussed in the literature review chapter. Following this, the researcher determined the best methods to be used to answer the proposed research questions for this research. After reviewing and considering a number of alternative methods, the approaches outlined in section 3.2.3 were deemed the most suitable and appropriate to answer the research questions of this study. The methodologies utilised in this study were also influenced by the experience of the Author, previously outlined above in section 3.2.1.

⁴³ Social phenomena involves the individual and external factors that change and affect human behaviours

Predominantly, the vast majority of the work in the area of social marketing has focused on health-related behaviours like smoking, alcohol and healthy eating, outlined in the literature review. However, these specific studies generally relied on utilising traditional forms of marketing (Allen et al., 2009; Jepson et al., 2010; Bala et al., 2013; Krishen & Bui, 2015). Furthermore, many previous studies in the field of social marketing that have aimed to increase physical activity participation have also heavily relied on traditional forms of marketing (Wray et al., 2005; Merom, Miller, Lymer, & Bauman, 2005; Peterson et al., 2005; Reger-Nash et al., 2006; Beaudoin, Fernandez, Wall, & Farley, 2007; Huhman et al., 2007; Reger-Nash et al., 2008; Abioye et al., 2013; Scarapicchia et al., 2015). While the preceding studies primarily focused on utilising traditional methods to promote physical activity, there has also been existing research in the area of social marketing and physical activity that has predominately concentrated more on adolescents and older adults (King, 2001; Huhman et al., 2004; Kamada et al., 2013; Fujihira et al., 2015; Scarapicchia et al., 2015; Komatsu et al., 2017; Zubala et al., 2017).

While the studies outlined above are conducted within a social marketing context, it is necessary to note that a systematic review carried out by Kubacki et al. (2017) showed evidence that not all social marketing studies adhere to the social marketing benchmark criteria. The social marketing benchmark criteria, discussed in the literature review chapter, was designed to support a better understanding of the core concepts and principles of social marketing and to act as a framework for planning and developing social marketing interventions (Andreasen, 2002). Carins and Rundle (2014) highlight that interventions employing all social marketing benchmark criteria are more successful than those who do not. However, as previously noted, there is evidence to show the lack of practice of the benchmark criteria in campaigns. Further discussion of the social marketing benchmark criteria and how it links within the current study is provided in section 3.2.3.4.

As noted in section 2.3.4, the use of digital technologies has significantly increased over the past number of years for individuals, businesses and everyday use. For example, social media, blogging, microblogging, mobiles, and the internet (Brewer, 2015; Barcena, Prado, Cimoli, & Perez, 2018; Poushter, Bishop, & Chwe, 2018; Kemp, 2019). Digital technologies have also changed the way in which marketers promote their products and services. There has been a significant shift in using traditional marketing to using digital technologies as a means of promotion and communication for businesses. Moreover, a

primary model used that helps businesses understand what actions an individual must take before being influenced to purchase goods or services is the AIDA model. This model was explained in section 2.3.6.1 of the literature review chapter. This model is widely used in the industry of marketing and advertising from an array of perspectives, as can be previously seen in Table 1, page 50. Despite the AIDA model being supported by Arulmani and Abdulla (2007) in their social marketing study, the AIDA model has not been used in a social media marketing campaign aimed at increasing physical activity, that is to the knowledge of the researcher.

Digital technologies have made an impact in the world of academia and research. The new digital age can offer researchers a new way of constructing methodologies (Tsatsou, 2015). There has been a number of studies that made use of digital technologies in the health sector, but to examine health-related behaviours such as alcohol abuse, safe driving and mental illnesses (Hamelin et al., 2017; Wakefield et al., 2017; Mehmet et al., 2020). As noted in the review of literature, studies that have used social media platforms to increase physical activity levels focused more on awareness of physical activity, online engagement or online social support to increase physical activity levels (Rote et al., 2015; Zhang et al., 2015; Wilson et al., 2016). These studies have demonstrated the potential use of social media into social marketing campaigns, particularly both studies from Mehmet et al. (2020) and Blair et al. (2020). Rote et al. (2015) provided evidence that social media can be utilised as an effective delivery method of online interventions for physical activity. This finding is congruent with work conducted by Zhang et al. (2015), who examined the effectiveness of an online social media intervention designed to increase physical activity levels. Digital methods and social media platforms are regarded as a satisfactory component for increasing physical activity as they act as an effective delivery method of promotional messages.

Roberts et al. (2013) denote that using digital methods offers social researchers a chance to generate and analyse information in new ways and address new research questions. Snee et al. (2016) also highlight that digital technology is a methodological innovation for social scientists and a chance to broaden methodological tools (Karpf, 2012). Indeed, according to Venturini et al. (2018), social scientists are not taking full advantage of the use of digital methods. Both Snee et al. (2016) and Roberts et al. (2013) note that digital methods have yet to be fully accepted in mainstream methods and stress the need for further development of digital methods.

It has been discussed in the review of literature chapter that there are extensive benefits to using social media and digital mediums like online advertising. The researcher took into consideration the shift that has occurred from traditional marketing to digital marketing and factored this into the choice of the chosen methodology. Using traditional marketing would not allow the researcher to gather accurate statistical data. It would be very difficult for the researcher to know how many people viewed the promotional messages on posters⁴⁴. A further justification for employing the use of online advertising would be the immediate publishing of content and information to a specific target audience that is not limited to geography, time or demographic factors. Moreover, it is possible to target whoever you want through a social media marketing campaign provided the participants use social media channels and do not restrict or block online advertisements (Marzan & Gonzales, 2014). Lastly, the social media advertising campaign facilitated the use of re-targeting techniques and the adoption of the AIDA model (sales funnel approach). This was particularly important as this was the foundational structure of both advertising campaigns. This also allowed the researcher to only target individuals that were interested in the content, therefore, achieving the key principles of the social marketing benchmark criteria. As noted, to the best of the researcher's knowledge, no study in an Irish context or elsewhere has focused on utilising a social media marketing campaign based on the AIDA model to increase walking participation and encourage 25-45-year-old males and females to attend walking events. The methodology and research design that was employed in this study was deemed the most appropriate and adequate way of achieving and answering the proposed research questions. The following section will outline the structure of each phase involved in this current study.

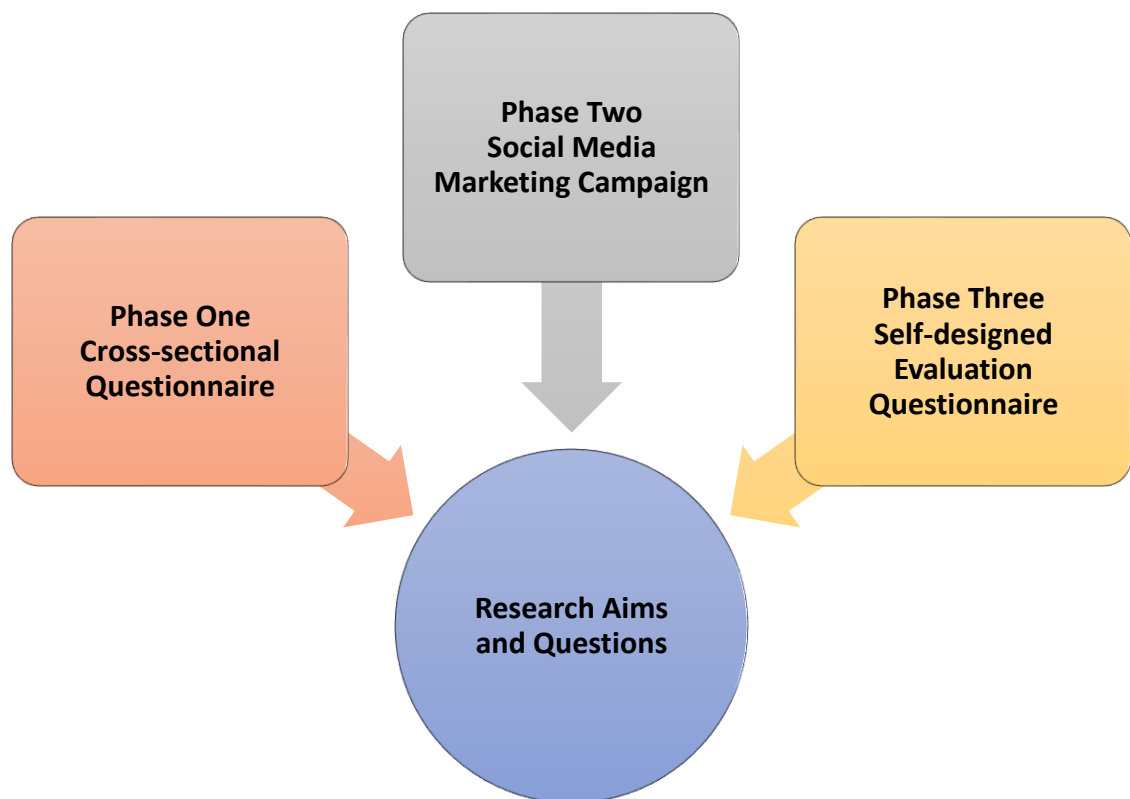
3.2.3 Structural Phases of the Research

The following sections will explain each phase of this study in detail. This methodology was conducted in three phases. It is necessary to note that these phases were underpinned by the social marketing principles and benchmark criteria, summarised in section 2.4.2 of the literature review chapter. Firstly, the three phases are outlined and explained. Secondly, a separate section is devoted to explaining how this current study fits within the social marketing benchmark criteria, reviewed in section 3.2.3.4.

⁴⁴ It is important for the researcher to see how many people viewed the promotional messages as it shows the number of individuals reached by the messages and who may be interested in the messages

The aim of phase one for this research was to gather information on the current walking levels and factors influencing walking participation in the target population. This was gathered through the use of a questionnaire. Phase one was also developed as prior market research was needed as it dictated the design of phase two. A key component of a social marketing campaign is the formative market research conducted prior to the campaign. The results from phase one survey were evaluated and utilised to design phase two. The overall aim for phase two was to design and implement a social media marketing campaign using an experimental design to promote walking and encourage the target population to attend specific walking events. This consisted of two separate social media marketing campaigns promoting key messages about walking through online advertisements. For phase three, the aim was to evaluate the impact of the social media marketing campaign on encouraging individuals to attend walking events. The effectiveness of both campaigns was measured by a self-designed questionnaire.

Figure 14 - Structural Phases of Research



3.2.3.1 Phase 1

Phase one adopted a quantitative approach by utilising a cross-sectional survey⁴⁵. The questionnaire was specifically designed and implemented to investigate current walking levels and factors influencing walking participation in the chosen sample group in County Waterford. The questionnaire was based on an adaptation of previous studies (International Physical Activity Questionnaire short form; Irish Sports Monitor Questionnaire, 2017; Healthy Ireland, 2015).

Following multiple modifications of the questionnaire, it formed a solid foundation to meet the goals of phase one (to identify the current walking levels and the factors that influence walking participation) and propel the subsequent phases of the research (given the significance of phase one, a well-developed questionnaire was needed as this phase dictated the design of phase two). An additional number of questions were incorporated by the researcher in relation to walking. The methodological tool that was selected for phase one was deemed the most appropriate method in comparison to using interviews or focus groups, as utilising a questionnaire allowed the researcher to reach a large sample population. As the researcher sought to gather quantifiable results on the current walking levels of the specific cohort, adopting the use of questionnaires was deemed more suitable. Furthermore, using interviews or focus groups would not have provided any statistical measurement and are typically utilised for smaller sample groups.

The methodological tool used in phase one was also predominantly determined by previous research of a similar nature. The previous studies that focused on identifying the correlations and factors influencing physical activity levels employed the use of quantitative measures (questionnaires)⁴⁶. Phase one was also developed to dictate the design of phase two social media marketing campaign. The results from phase one survey acted as market research as it sought to identify the factors that influenced adults participation in physical activity. These results led to the design of the social media marketing campaign implemented for phase two (outlined in section 3.4.2.2 and 3.4.2.3).

⁴⁵ A cross-sectional questionnaire gathers data to make a conclusion about a specific population of interest at one point in time. It allowed the researcher to analyse data collected from the survey of the representative sample group (Setia, 2016).

⁴⁶ (Sallis, Saelens, & Bourdeaudhuji, 2003; Bauman & Bull, 2007; Bauman et al., 2012; Solomon, Rees, Ukoumunne, Metcalf, & Hillsdon, 2013; Sawyer, Ucci, Jones, Smith, & Fisher, 2017; Liangruenrom, Craike, Biddle, Suttikasem, & Pedisic, 2019; Pedisic, Shrestha, Loprinzi, Mehata, & Mishra, 2019).

3.2.3.2 Phase 2

Phase two adopted an experimental approach. This phase involved the design and implementation of a social media marketing campaign. Typically, an experimental design approach purposely introduces a manipulation to observe an effect (Picardi & Masick, 2014; (Mildner, 2019). Additionally, an experimental research design is often followed by an evaluation process to examine the impact of manipulation on independent variables (Dutra & Nunes dos Reis, 2016).

The design of the social media marketing campaign for this study was supported by the social marketing framework and the AIDA model. Further discussion on how these theories underpinned the structure of phase two is outlined in section 3.2.3.4 and section 3.4.2.1. The social media marketing campaign aimed to promote walking and encourage the target population to attend specific walking events while using social media targeting strategies. This consisted of two social media marketing campaigns. The two campaigns promoted key messages about walking, walking activities and events. The promotional messages were delivered using online advertisements on social media platforms like Facebook and Instagram.

As previously outlined, these events were designed and agreed with the affiliated organisation (Get Ireland Walking and Mountaineering Ireland). The two campaigns were created through the use of Facebook Business Manager⁴⁷ (FBM). Through Facebook Business Manager, the researcher was able to create, manage and keep track of all advertisements and view analytical data. All advertisements were conducted using the official Facebook account for Get Ireland Walking and Mountaineering Ireland.

Prior to explaining the two separate campaigns in section 3.4.2, an overview of both will first be outlined. The first campaign was run in conjunction with Get Ireland Walking. This campaign aimed at promoting walking and family time to 25-45-year-old males and females living in Waterford who had at least one child. The start date of the campaign began on the 18th of October 2019 and continued until the 2nd of November 2019. There was a total of four online advertisements based on walking and walking activities for this campaign. The associated event for this campaign promoted a free family walk day and was scheduled for the 3rd of November in Mount Congreve Gardens, County Waterford.

⁴⁷ FBM is a tool developed to allow companies to manage and organise their Facebook pages and advertising accounts without the use of a personal Facebook account.

The second campaign was completed in conjunction with Mountaineering Ireland. The overall aim of this campaign was to promote hillwalking as a healthy use of time and a safe and accessible place to go walking. This campaign had two separate attempts at encouraging individuals to walking events. The first part of the campaign consisted of four online advertisements based on walking, walking routes and locations, and walking activities. This began on the 30th of October 2019 and finished on the 15th of November 2019. The proposed event was scheduled for the 16th of November at McGraths's Cross Greenway, County Waterford. This event promoted a free guided walk by Mountaineering Ireland leaders. However, there were no registers for the event. Therefore, the event did not go ahead⁴⁸. This first attempt is elaborated on in section 3.4.2.3. The second part or attempt of the campaign consisted of one online advertisement and began on the 3rd of December 2019 and finished on the 6th of December 2019. The associated event was scheduled for the 7th of December at Kilclooney Wood Car Park. This event did go ahead.

After implementing the social media marketing campaign, an evaluation was carried out to examine the impact it had on encouraging the target population to attend the walking events. This made-up phase three of the study, which is discussed below.

3.2.3.3 Phase 3

Phase three adopted a quantitative approach by utilising a self-design survey. The survey was used to evaluate the social media marketing campaigns in phase two. The overall aim of the survey was to obtain information pertaining to the impact the social media marketing campaign had on influencing people to attend the walking event. More specifically, the questionnaire sought information about how the participants heard about the event, the reasons for people turning up to the event, were they aware of the online advertisements on their social media platforms and what impact did the advertisements have on encouraging them to go walking⁴⁹.

The research approach used in all phases of this methodology was deemed appropriate and adequate to answer the proposed research questions. To the knowledge of the

⁴⁸ Further reasons for the event not going ahead are reviewed in the discussion chapter.

⁴⁹ It is important to note that in phase 2, Facebook Business Manager will also provide analytics on the success of each online advertisement from a variety of perspectives. This is separate from phase 3. To reiterate, phase 3 evaluates the impact of the social media marketing campaign on encouraging individuals to turn up to the walking events. While Facebook Business Manager evaluated the online advertisements. For instance, to see which ad performed better.

researcher, there is no evidence to show that the methodology utilised, specifically in phase two, was used in previous studies to promote a health behaviour like walking in this Irish cohort. In addition to this, research that was conducted with similar aspects to the study was primarily promoting other health behaviours like healthy eating, alcohol abuse and safe driving (Krishen & Bui, 2015; Hamelin et al., 2017; Wakefield et al., 2017). Previous studies that did adopt the social media marketing approach were used from a business perspective to promote goods and services or increase online engagement and not from a health-related viewpoint (Odhiambo, 2012; Hajli, 2015; Farook & Abeysekara, 2016; Birgisdóttir, 2018; Kireev, 2018).

The full design and implementation of these approaches are further discussed in this chapter. Phase one is outlined in section 3.2.3.1, phase two is discussed in section 3.2.3.2 and lastly, phase three is reviewed in section 3.2.3.3. The following section outlines the social marketing benchmark criteria that underpinned this study.

3.2.3.4 Social Marketing Benchmark Criteria

As previously noted, the three phases of this study were underpinned by the social marketing principles and benchmark criteria. Phase two of this study was also constructed in conjunction with the AIDA model, reviewed in section 3.4.2.1.1. The social marketing benchmark criteria was previously explained in section 2.4.2 of the literature review chapter. However, the following section is devoted to discussing how the current study has achieved each benchmark criteria.

Behaviour: The primary behavioural goal was to increase physical activity levels by encouraging this specific cohort to attend walking events. This goal was implemented using small gradual steps (phase two AIDA model/sales funnel). Aiming to increase physical activity levels through the walking events was a clear and specific goal. It was also a measurable goal which was quantified by the number of people that attended the events as a result of being exposed to the social media advertising campaigns.

Customer Orientation: This benchmark was achieved in phase one of the study where market research was conducted to gather information on the target audiences wants, needs, habits, concerns, and existing walking behaviours. Phase one of the study was designed to align with the social marketing concept, as it was then used to develop phase two. The social media advertising campaigns were centred around the target audience. The phase one questionnaire looked at understanding the challenges people face when

engaging or not engaging in physical activity, and the influential factors encouraging them to participate. As noted in the review of the literature chapter, there are many correlates of physical activity that affects an individual's physical activity behaviour. Bauman and Bull (2007) stress the importance of understanding the factors that influence walking behaviours before attempting to implement an intervention aimed at increasing walking levels.

Theory: The current thesis utilised the social marketing framework as a foundational structure. More specifically, for phase two, the design of the social media marketing campaign was underpinned by the AIDA model, outlined in section 3.4.2.1.1 of this chapter. The AIDA model, an evidence-based theory, constructed all stages of phase two.

Insight: Similar to customer orientation, it was essential to obtain an in-depth insight into the target audience. Phase one of this study had a clear focus on gaining an understanding of what motivated and what did not motivate the chosen cohort to participate in walking or physical activity. Moreover, phase one specifically examined why people act the way they do and what they believe would help them change their behaviour. It was also useful to understand why some individuals are already engaging in physical activity, as these individuals provided vital information about the benefits and costs involved (this was achieved by including the 'walkers' in the survey).

Exchange: The current study took into consideration the benefits and costs of adopting the new behaviour (physical activity). The exchange was broken down into intangible and tangible. The intangible exchange for each campaign was the benefits to taking part in walking, fulfilling the need for families looking for places to go walking by showcasing local routes and trails in the online advertisements, and by providing individuals interested in hillwalking with information on local hillwalking routes and trails. The tangible exchange for both campaigns was the 'free ticket' that participants could avail of when attending the walking events.

Competition: This study considered both the internal and external competing factors that would affect behaviour change. Based on the results from phase one survey, this study considered that families and parents working long hours had no time to participate in physical activity or meet the national physical activity guidelines. Therefore, it was necessary to promote accessible local walking routes to these families.

Segmentation: Phase one of this study achieved segmentation by specifically targeting individuals based on demographic factors. For instance, targeting only 25-45-year-old male and females living in County Waterford. Based on the results from phase one survey, phase two further segmented the audience into: (1) families and parents looking for walking routes and trails to bring their children for walks (Get Ireland Walking campaign) and (2) individuals interested in hillwalking routes and locations (Mountaineering Ireland campaign).

Methods Mix: This study involved the use of the marketing mix, also known as the 4 P's (product, price, place and promotion), while also incorporating quantitative measures (questionnaires) and the AIDA model (sales funnel).

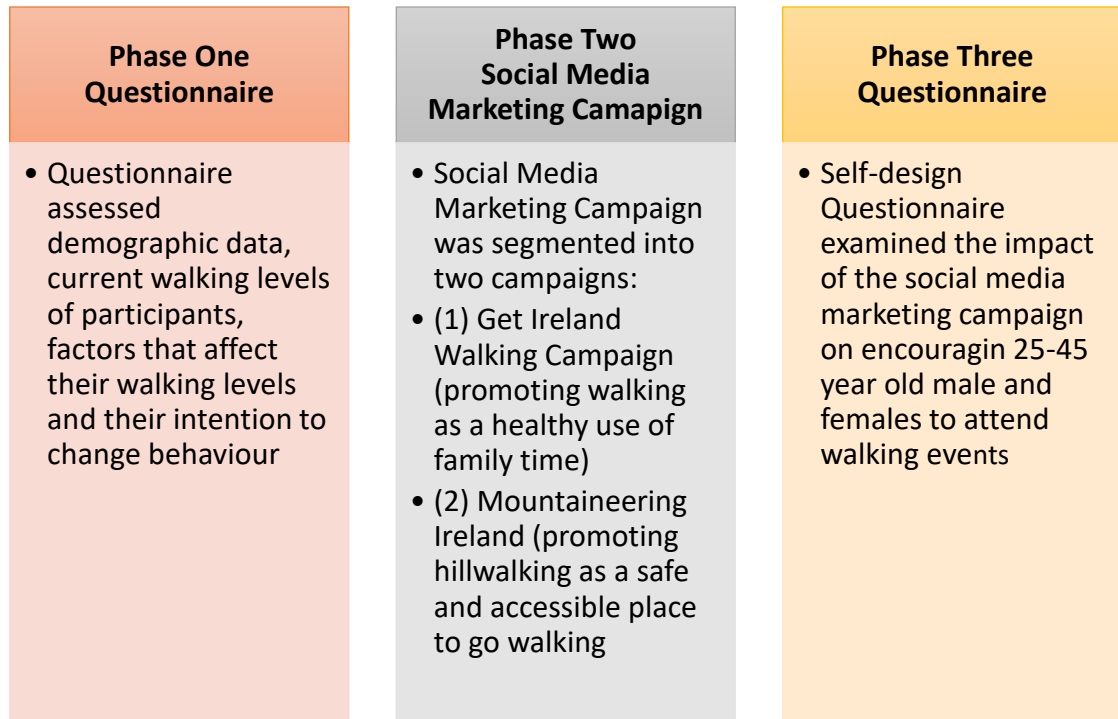
In relation to the current study, the 'product' involved in the campaigns was walking and physical activity participation. These two elements were promoted like products whilst also aiming to change behaviours. The price involved in this study was the cost of adopting the new behaviour. Specifically, the cost of increasing physical activity levels was time and effort. There was no financial cost involved. The place was the location in which the individuals could engage in the new behaviour. Both locations for each campaign (family campaign and hillwalking campaign) are explained throughout section 3.4.2. The promotion of walking and physical activity was involved in the social media marketing campaign, aimed at delivering promotional advertisements based on walking.

3.3 Research Design

According to Kerlinger (1973), a research design refers to the structure of how a study is conducted. The methods adopted for this study were chosen in order to answer the research questions outlined. It is important to note that all methods adopted for this study were carefully considered and are discussed in the subsequent sections. Having reviewed previous research studies, the following methodology was deemed adequate for this research. The subsequent sections will explain the data collection methods in greater detail. Briefly speaking, the data collection methods for all phases were quantitatively based. Figure 15 presents an overview of each phase of the study and the methods utilised for gathering data. Phase one utilised an adapted questionnaire to a sample of 25-45-year-old male and females ($n = 400$) living in County Waterford. The survey results from phase one dictated the design for phase two social media marketing campaign aimed at promoting walking events. Lastly, in phase three, a self-designed survey was

administered to attendees of the walking events. This survey evaluated the impact of the social media marketing campaign on walking participation.

Figure 15 - Research Design for All Phases



The following sections will outline the research design of each phase in further detail. Firstly, the instrument design and structure of phase one, two and three are discussed. In the instrument design section, an overview of the composition of both campaigns can be viewed. This will include the structure of the campaigns based on the AIDA Model (Kotler & Keller, 2006; Ferrier, 2014; Hadiyati, 2016) and the Social Marketing Benchmark Criteria (Andreasen, 2002). Secondly, the sampling population and implementation for each phase are examined. Thirdly, the merits and limitations of adopting each approach were also considered. Lastly, data analysis and ethical issues are presented.

3.4 Instrument Design and Structure

The following section will outline the instrument design and structure of phase one, two and three. Firstly, the survey designed for phase one of this methodology is discussed. Next, the structure of the survey for phase one is given and the type of questions asked in each section of the questionnaire. Finally, for phase one, pilot testing is summarised. The section also describes the construction of phase two social media marketing campaign. An introduction to both campaigns are given and the content of each online advertisement

delivered will be discussed. Lastly, the instrument design and the structure of the questionnaire for phase three are outlined.

3.4.1 Instrument Design and Structure of Phase 1 – Questionnaire

The aim of the survey was to identify the current walking levels and the factors influencing walking behaviours in the chosen target population. The questionnaire designed for phase one was an adaption of the studies outlined in section 3.4.1 below. An additional number of questions were incorporated in relation to reasons for walking, preferred places to go for a walk, where they go walking, what would help/encourage them to go walking and questions in relation to awareness about local walking trails/routes. The survey can be viewed in Appendix F – Phase One Questionnaire, page 326.

3.4.1.1 Phase One Questionnaire Structure

The questionnaire used for this research was divided into four main sections. The table below (Table 3) explains which section each participant completed on the questionnaire. Respondents that met the national physical activity guidelines⁵⁰ only completed section A, B and D and skipped section C. Respondents who did not meet the national physical activity guidelines only completed section A, C and D and skipped section B.

Table 3 - Structure of Questionnaire

Section	Action
Section A – Participant Profile	All respondents completed this part
Section B – Walkers	Only ‘Walkers’ completed this section ⁵¹
Section C – Non-Walkers	Only ‘Non-walkers’ completed this section ⁵²
Section D – Both Walkers and Non-Walkers	All respondents completed this part

⁵⁰ The National Physical Activity Guidelines for adults is to engage in 30 minutes of moderate physical activity a day for 5 days a week or 150 minutes of moderate intensity per week.

⁵¹ Walkers are regarded as individuals who met the national physical activity guidelines.

⁵² Non-Walkers are participants that did not meet the national physical activity guidelines.

The questionnaire was specifically designed to answer the research questions of this study. The survey was easy to follow, was short in length and questions were easy to answer for the participant. This minimised the risk of respondents failing to complete the questions/questionnaire. Multiple drafts of the survey were completed. The researcher aimed to design a questionnaire as short as possible to reduce the risk of respondent fatigue. The survey took approximately five minutes to complete. Each section of the questionnaire consisted of different questions. Specifically, the respective section investigated the following:

Section A: This section gave the researcher an understanding of the background of the participants. The aim of section A was to gather general information, demographic factors, and current walking levels. Details such as gender, age, where they live, do they own a car, work commitments, how they travel to work, how many children they have, if they own a dog, and if they are part of a club/sports club. Two questions were also asked in relation to their perceived current walking levels and utilitarian walking⁵³ levels. This involved the use of the International Physical Activity Questionnaire which was developed to measure all domains of physical activity⁵⁴. Questions from the IPAQ Questionnaires were adapted into this study in order to ask participants the frequency and duration of how many days and hours they went walking. Utilitarian walking questions were also adapted from the 2017 Irish Sports Monitor⁵⁵ Questionnaire. The Irish Sports Monitor questionnaire was the only suitable survey used that incorporated the measures of utilitarian walking. Demographic questions were also adapted from the 2017 Irish Sports Monitor Questionnaire.

Section B: The following section was specifically designed for any individual that met the national physical activity guidelines. This section asks questions in relation to the reasons they participate in walking, why they prefer walking over other activities, what factors encourage them to go walking, the most preferred

⁵³ Utilitarian walking can be defined as a type of walking for transport, walking from a to b, walking in work or walking for daily jobs (Hekler, Castro, Bauman, & King, 2012).

⁵⁴ The IPAQ has been extensively assessed in research including an evaluation in 12 countries and tested for reliability and validity in a number of different populations in different cultural settings (Craig et al., 2003; Kurtze et al., 2008; Ryan et al., 2018; Tran et al., 2018).

⁵⁵ The Irish Sports Council funds the Irish Sports Monitor initiative. The Irish Sports Monitor provides an ongoing assessment of active participation in sport and physical activity in Ireland.

place to go walking, how far they would be willing to travel to a suitable walking location, how frequently and where they go walking. Questions were adapted from the Healthy Ireland survey 2015. Healthy Ireland is a Government-led initiative, developed to improve the health and well-being of people living in Ireland. Questions adapted from the Healthy Ireland survey 2015 were based on reasons to participate in physical activity. In relation to the current study, this was appropriate to use to answer the proposed research questions.

Section C: Similar to section B, section C is specifically designed for only non-walkers to answer. Additionally, section C asks questions in relation to the factors that would help and encourage participants to go walking, factors that would stop them from going walking, how frequently they go walking, most preferred place to go walking and how far they would be willing to travel to use a suitable walking location. Questions from the Healthy Ireland survey 2015 were also incorporated into section C. These questions were based on factors that stop or discourage the participation of physical activity.

Section D: This section focused on questions related to awareness of local walking routes and if participants would like to be more informed of walking routes, health benefits, walking groups and activities.

The questionnaire comprised of a number of different question formats. This included the use of 5-point Likert scales. A Likert scale allows respondents to choose the option that best supports their opinion. It measures the intensity of feelings about the area in question. This format provides participants with a set of multiple-choice answers (Evans & Rooney, 2008; Mitchell & Jolley, 2010). Most questions in the survey were closed-ended. Closed-ended questions can be defined as questions that have a distinct set of pre-determined answers/responses that the participant must choose from. Close-ended questions were used as opposed to using open-ended, as close-ended questions are easier and quicker for respondents to answer. Exposing all respondents to the same pre-determined response categories allowed the researcher to gather standardised quantifiable data (Johnson & Christensen, 2014).

The following table (Table 4) presents a number of investigated variables and the source of where the survey questions were adapted from. Information is given in the table to show the variables and the corresponding research question.

Table 4 - Summary of Variables Measured

Variable	Source	Research Question	Question Number
Activity Levels			
Walking levels <ul style="list-style-type: none"> • Frequency • Duration 	IPAQ short form	1	A Q10 (a)
Utilitarian levels <ul style="list-style-type: none"> • Frequency • Duration 	ISM 2017	1	A Q10 (b)
Walking Components			
Most preferred place to go walking	ISM 2017	2	B Q16 C Q23
Frequency of specific walking locations	Author	2	B Q17 C Q24
Map locations of previous walking routes	Author	2	B Q18 Map
Willingness to travel to walking locations	Author	2	B Q19 C Q25
Awareness of walking routes	Author	2	D Q26
Walking information	Author	2	D Q27
Factors influencing walking levels - Individual Factors			
Demographic <ul style="list-style-type: none"> • Gender • Age • Location (home) • Car Ownership • Work commitments • Parenthood • Pet ownership • Club membership 	ISM 2017, Author, Marcus and Owen (1992)	2	A Q1 A Q2 A Q3 A Q4 A Q5, Q6, Q7 A Q8 A Q9 A Q11
Psychological <ul style="list-style-type: none"> • Reasons for taking part in PA • Reasons to prefer walking over other activities (walkers) • Factors to encourage walking (non-walkers) • Factors stopping walking 	ISM 2017 Healthy Ireland 2015	2	B Q13 C Q20 B Q14 C Q20 C Q22
Factors influencing walking levels – Intrapersonal (Social) Factors			
Social Support (positive or negative effect) <ul style="list-style-type: none"> • Reasons for taking part in PA • Factors to encourage walking (non-walkers) 	Healthy Ireland 2016, Author	2	B Q13 C Q21
Factors influencing walking levels – Environmental Factors			
Urban/Rural residence	Author	2	Map
No suitable location to go walking	Healthy Ireland 2015	2	C Q22
Transportation	Author	2	B Q15 C Q22

3.4.1.2 Phase One Pilot Testing

Multiple drafts of the survey were completed. The survey was pilot tested with two academic staff members of Waterford Institute of Technology and two representatives of the National Governing Bodies involved in the study. The questions in the survey were reviewed by these staff members multiple times. Moreover, the questions were altered as a result of the feedback given. It was important to modify the questions multiple times to suit the goals of phase one questionnaire. The final survey was produced and administrated to the selected population group.

3.4.2 Instrument Design and Structure of Phase Two – Social Media Marketing Campaign

Phase two involved the design and implementation of a social media marketing campaign to promote walking participation and encourage the population sample to attend walking events in Waterford. The first campaign worked in conjunction with Get Ireland Walking and aimed to promote walking as a healthy use of family time. The second campaign worked in conjunction with Mountaineering Ireland and aimed at promoting hillwalking as a healthy use of time and a safe and accessible place to go walking.

3.4.2.1 Instrument Design of Both Campaigns

The advertising campaigns designed for this current research, utilised the AIDA model as a foundation to construct the campaign in four stages, while also integrating the social marketing principles. From a business perspective, the AIDA model is typically used by marketers in their advertising procedures. The AIDA model was developed in 1898 by Elmo Lewis in an attempt to explain the steps a typical customer goes through in the process of purchasing a product (Ferrier, 2014), also referred to as a sales funnel. As previously noted, the social marketing benchmark criteria was updated by the National Social Marketing Centre (NSMC) in 2006 to make up the eight key elements of the social marketing benchmark (Harwood & Murray, 2019), designed to act as a framework for planning and implement interventions. It is important to note that a primary principle of social marketing is to target individuals who are interested in what you have to offer or promote. Throughout the campaign, only individuals that showed an interest or desire in the online advertisements would be targeted through specific re-targeting techniques. According to Edney et al. (2018), when consumers engage with a post or advertisement, then this could represent their awareness and interest. Their awareness and interest act as a precursor to the intentions of behavioural change (ibid). Engagement can be referred to

as the actions taken towards online advertisements. This includes liking, reacting, commenting, sharing, clicking on links, and viewing videos. One action from one individual counts as one engagement. The AIDA model will now be discussed in the context of how it links to the campaigns for this study. While the social marketing benchmark has already been discussed above, it will also be integrated within the following sections.

3.4.2.1.1 AIDA Model

As there is a comprehensive section devoted to the AIDA Model in the literature review chapter (section 2.3.6.1), it is not necessary to explain the model in great detail once again. However, for a brief synopsis of the model refer to Figure 6. The subsequent paragraphs will discuss how the AIDA Model was integrated into both campaigns for this current study. As noted in the literature review, this model describes the four individual steps in which a customer goes through in the process of purchasing a product or service (Gharibi et al., 2012).

The first stage of the campaigns aimed at building audience interest via video advertisement. A video advertisement was utilised in phase one as it was the most suitable ad format to capture what the researcher wanted to promote. In stage one, the Get Ireland Walking campaign promoted walking as a healthy use of family time, whereas the Mountaineering Ireland campaign focused on promoting hillwalking. The content of the ads for stage one was designed to capture participants attention. This is discussed further in section 3.4.2.2.3 and section 3.4.2.3.3. Only a certain amount of people engaged with the video advertisement in stage one of the campaign. Therefore, the aim of stage two was to scale the advertising campaign. This was done by creating a ‘lookalike’ audience. Briefly, a lookalike audience is created using the original audience from stage one. Facebook identifies the psycho-demographic or behavioural traits of anyone who engaged with the ad from stage one and creates a lookalike audience from that. This is discussed in greater detail in section 3.4.2.1.2.

The third stage re-targeted anyone who engaged with the advertisements in stage one and two. Anyone who engaged with stage one and two was regarded as having some level of interest; for instance, they may have liked, clicked on, or watched the video. If they showed interest by doing so, they were then re-targeted in the later stages. Therefore, stage three was designed to deepen the interests of the individuals. For both campaigns,

a carousel ad was used in stage three⁵⁶. A carousel was used as it was an appropriate ad format that allowed the researcher to show multiple images of walking locations. The fourth stage re-targeted anyone who engaged with the advertisements in either stage one, two or three⁵⁷. This action was completed using Facebook retargeting strategies, which has multiple purposes. For the purpose of this thesis, Facebook re-targeting was utilised to retarget anyone who engaged with the online advertisements. The aim of retargeting is trying to recapture potential customers or get them to re-engage with products, services or brands (Gotter, 2019). The advertisement in stage four provided information on a walking event in Mount Congreve Gardens and a guided walk in Kilclooney Woods⁵⁸. For both campaigns, the stage four advertisement had a unique link attached. Anyone who clicked on the link was directed to a dedicated Eventbrite landing page⁵⁹.

The landing page for both campaigns contained all the information about the event, time, venue, and how to avail of the free offer (by purchasing a free ticket online). If an individual clicked onto the unique link placed on the advert, this was known as a 'link click'. Link clicks are discussed further in section 3.7.2. Some individuals that clicked onto the link and were directed to the event page, registered for the event. If an individual registered for the event and showed up on the day, this was identified as a 'conversion'. If an individual registered for the event through Eventbrite but did not show up on the day, they were considered to have shown interest in the walking event but not enough interest or desire to attend for whatever reason. Many factors such as the weather on the day of the event may have influenced attendance.

3.4.2.1.2 Lookalike Audience

A lookalike audience was created for both campaigns in this study. The first action taken was to create the audience for stage one of the campaigns. Using Facebook Business Manager, the audience for stage one was generated and comprised of 25-45-year-old males and females living in County Waterford. Facebook was able to reach a large number of individuals from that specific population group. However, Facebook has some

⁵⁶ A carousel ad is made up of multiple images to deliver the online promotional message.

⁵⁷ Everyone who engaged with stages one, two and three were deemed to have an 'interest' or 'desire' in the ads. In conjunction with the AIDA model, anyone who engages with the ads moves onto the next stage of the model, the further an individual is in the model, the higher chance of them being converted to a purchase, but in this case an attendee of the walking events.

⁵⁸ The rationale for choosing this walking locations has already been discussed in the Introduction chapter

⁵⁹ Eventbrite is an event management and ticketing website that allows users to browse, create and promote events.

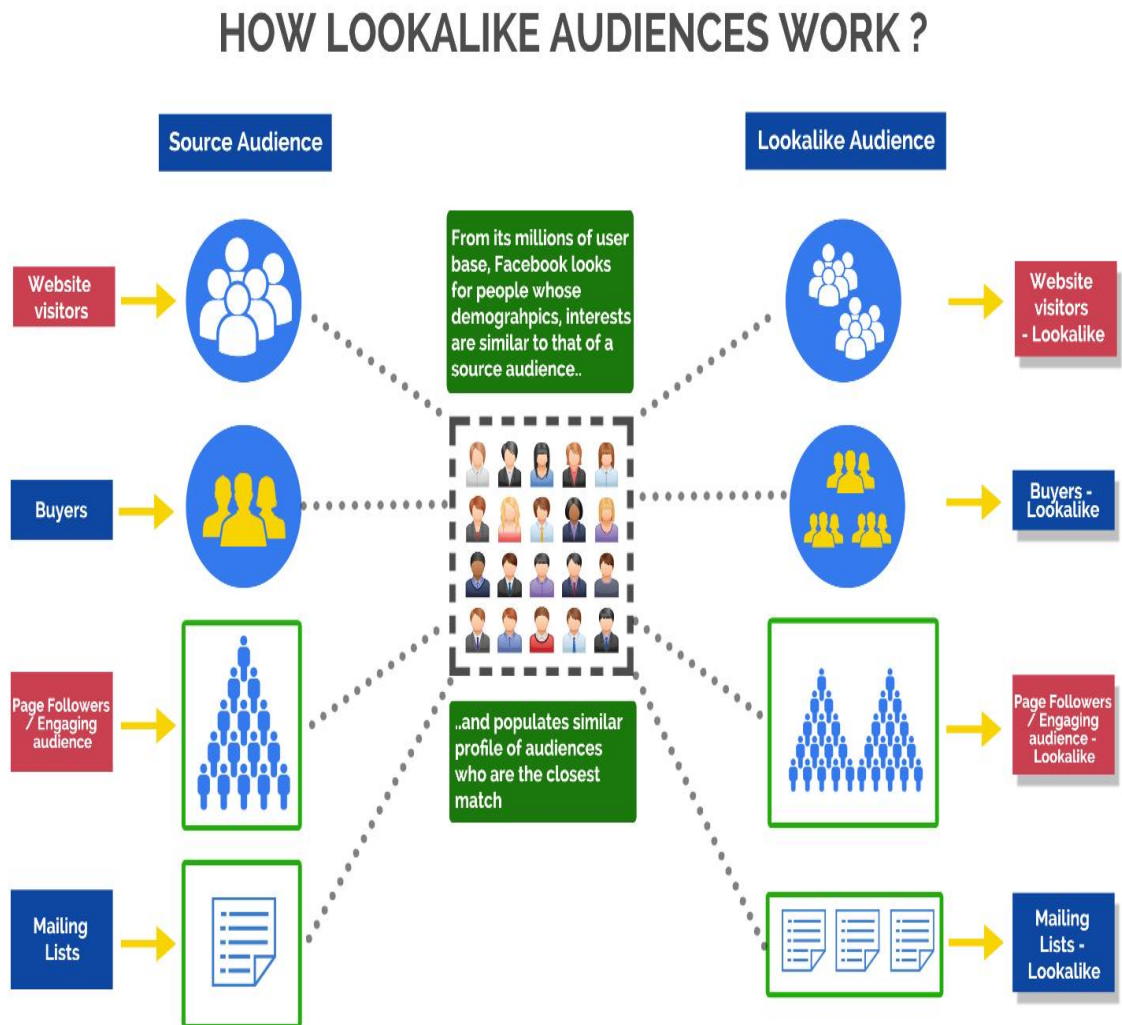
drawbacks in its retargeting methods and did not reach 100% of the individuals from 25-45-year olds in County Waterford in stage one. Therefore, this is where the lookalike audience was incorporated into the methodology.

Figure 16 explains the process of the lookalike audience. The lookalike audience involves Facebook algorithm identifying the qualities, characteristics and demographic features of anyone who engaged with the stage one online advertisement (this was the first audience). From these characteristics and demographic data, the researcher was able to create (via Facebook Business Manager) another audience, the lookalike audience. Anyone who was involved in stage one was excluded from stage two⁶⁰. The lookalike audience allowed the researcher to target anyone who was not involved in the first stage. There are a number of reasons why everyone targeted in phase one may not have received the advertisement, for example, they may not have logged onto Facebook that day or scrolled for long enough on their news feed, or Facebook may have simply overlooked them.

Creating a lookalike audience is a way of reaching new people who have similar interests and characteristics to the target audience in stage one. This increased the number of individuals that the online advertisement was delivered to. Thus, increasing the probability of online engagement and conversion. It is important to note that a higher budget was required at stages one and two, as there was a higher number of individuals being targeted. The budget set for each stage represents the amount of money spent on showing individuals the advertisements. The higher the target audience, the higher the budget required by Facebook to reach that target audience. The budget that was allocated to both campaigns was discussed and confirmed by both representatives from the affiliated organisations involved.

⁶⁰ Any individual who engaged with the advertisements in stage one was excluded from stage two lookalike audience. The reason being, stage two lookalike audience aims to be more targeted and scale up the campaigns, if stage one individuals were involved in stage two there would be a duplicate of numbers which is not the aim.

Figure 16 - Lookalike Audience Process



3.4.2.2 Campaign 1 – Family Walking Campaign

3.4.2.2.1 Introduction

The purpose of the campaign was to promote walking as a healthy use of family time. Working in conjunction with the social marketing principles, market research was conducted in phase one to understand the target audience. The results from phase one and the evidence-based theory of the AIDA model dictated the aim and theme of this campaign. The results from phase one surveys indicated that families did not have enough time to go walking and were unaware of local walking routes and trails. Further analysis showed that over 50% of both male and females claimed that they would be encouraged to go walking for recreation if there was more walking activities and events. Therefore, the overall aim of campaign one was to promote walking locations and routes where family members could be active together. The primary objective of this campaign was to

measure the impact of a social media marketing campaign on encouraging families to turn up to a one-day walking event at a designated family-friendly location. The secondary objective was to measure the overall engagement on the advertisements used in the campaign. The specific population chosen for this campaign was males and females aged between 25-45 with at least one child⁶¹. The sample group were required to be living in County Waterford. The total cost for campaign one was 425 Euro.

3.4.2.2.2 Structure of Campaign 1

As already discussed, campaign one was constructed in four stages. The following figure (Figure 17) provides an insight into these stages in greater detail. Stage one was designed in line with the AIDA model and aimed to generate interest and build awareness around walking participation using a video advertisement. The content of the video was based around the customer orientation and insight components of the social marketing principles⁶². This video ad reached 15,348 people between the ages of 25-45 years, both male and females living in County Waterford. The second stage delivered the same video advertisement as stage one. This ad was delivered to only the lookalike audience. A total of 5,042 individuals were reached in stage two. Following this, stage three consisted of a carousel ad which was made up of several images promoting local walking trails in Waterford. This stage comprised of the individuals who engaged with the advertisements from stages one and two⁶³. This ad reached a total of 2,814. The fourth stage involved the use of a single image ad based on the walking event in Mount Congreve Gardens. Stage four re-targeted any individual who engaged with stage one, two or three advertisements⁶⁴. However, as the stages of the campaign progressed, the number of participants got smaller. Not everyone in stage one and two continued to stage three, and not everyone in stage three continued to stage four. As noted, within the AIDA model, individuals who progress along the sales funnel may lose interest, or not acquire the desire to engage in the advertisements. From those individuals reached, a total of 70 people

⁶¹ The rationale for choosing 25-45-year-old male and females was previously discussed in the introduction chapter.

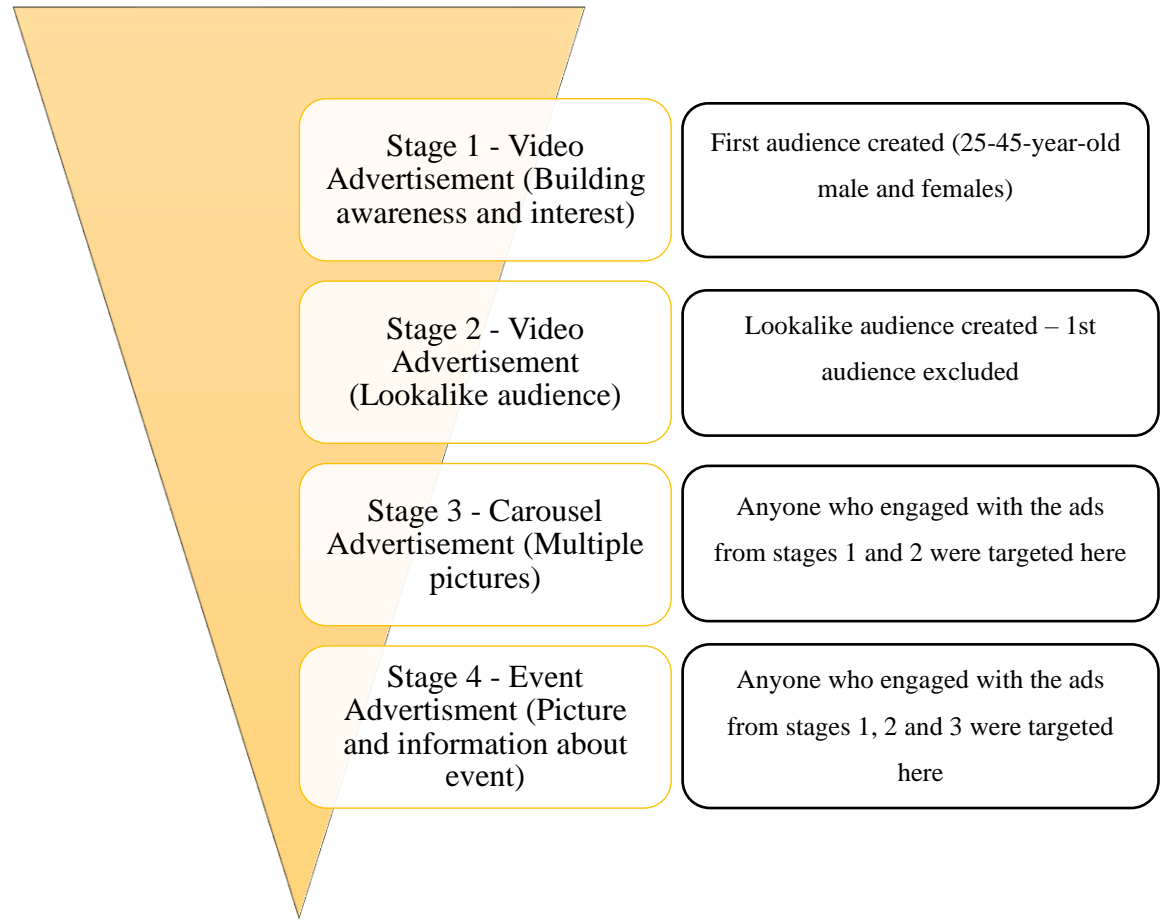
⁶² As previously noted, the results from phase one (market research) identified that families did not have enough time to go walking. The content of the video advertisement was then based around these results.

⁶³ In this research, engagement was defined as having watched at least 15 seconds of the video, also known as a Thruplay. Any individual who watched at least 15 seconds of the video ad in stage one and two were re-targeted in stage three.

⁶⁴ Refer to the footnote above for details on engagement for stages one and two. For stage three, engagement was referred to as 'link clicks'. This represents the number of links clicks on the advertisement that led to destinations on or off Facebook. In this case, the link directed individuals to the IrishTrails.ie page.

clicked on the unique link to be redirected to the Eventbrite landing page where they could register for the event. The landing page can be seen in Appendix G - Landing Page for Campaign 1 Mount Congreve Gardens, page 332. All of the advertisements can be seen in section 3.4.2.2.3.

Figure 17 - Structure of Campaign 1



3.4.2.2.3 Content of the Advertisements in Campaign 1

Each stage of the campaign had a different rationale for the chosen advertising content. The content of the advertisements was based on the results from phase one survey. As noted, the results indicated that families had no time for walking. Findings also demonstrated that families had the desire to go walking and looked for a location to bring their children for walks. Therefore, the rationale for promoting walking as a healthy use of family time. Trails were promoted in the advertisements as they were considered the best option for families and children to go walking. The trails were chosen because of their locality, easy access, scenery, and diversity regarding surfaces. The table presented on page 104 (Table 5) summarises each stage of campaign one; the aim, channel,

budget⁶⁵, showing the time of each ad and each stage corresponding to the AIDA model and the social marketing framework.

As noted, the first stage involved a video advertisement promoting family time and walking. The advertisement as displayed to the participants can be viewed in Figure 18. A number of messages were incorporated into this video advertisement, like promoting walking as a healthy activity for you and your family, making memories exploring the woods with kids and family, stop wasting time in front of the TV, children learning about their surrounding environments, and children having fun in the outdoors⁶⁶. The aim of this stage was to attract the attention of families and build awareness around the idea that the quality of their children's lives would be improved by walking in comparison to sitting in watching TV or being sedentary. This stage also aimed to generate interests from the participants and demonstrate the benefits of walking and family time. The content incorporated into stage one advertisement was adapted from a previous social marketing study by King et al. (2013). This study was formerly discussed in the review of literature chapter, section 2.4.3.1, page 62⁶⁷. Ultimately, this linked in with point one and two of the AIDA model (attention, awareness, and interest).

Only a certain amount of people engaged with the video advertisement in stage one of the campaign. Therefore, the aim of stage two was to scale the advertising campaign. This action was taken in order to increase the target audience and reach as many people as possible for the subsequent stages. The second stage involved the same video from advertisement number one. However, the video advertisement was put in front of the lookalike audience and excluded anyone who was involved in stage one. The reason being stage two lookalike audience aims to be more targeted. If stage one individuals were

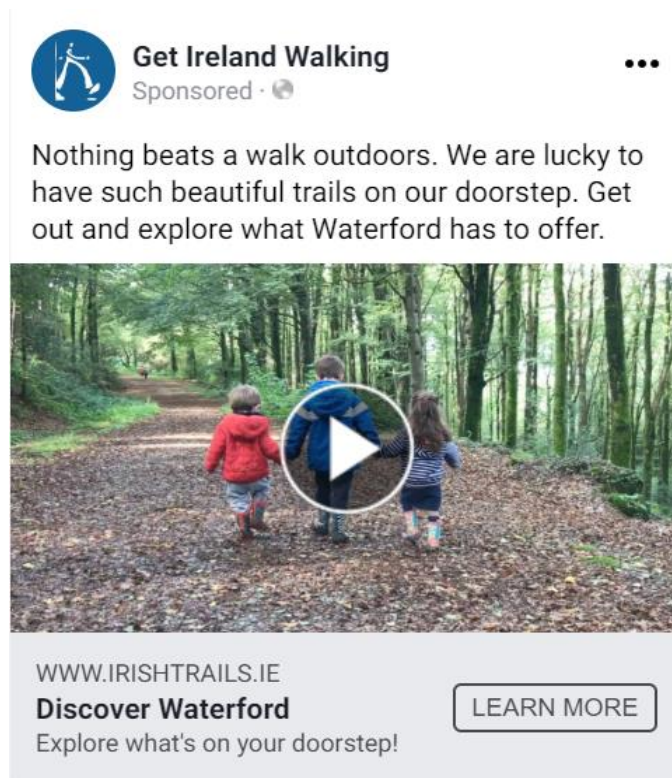
⁶⁵ It is important to note that for stages 3 and 4, less money was used in the campaigns as the target audience was smaller in comparison in stages 1 and 2. The lower the target audience, the lower spend required to target them.

⁶⁶ The results from phase one identified that working parents did not have time to bring children for walks. It was important to incorporate into the video the enjoyable and fun element of being outdoors for children.

⁶⁷ This campaign promoted health related ads that linked both waist circumference and the risk of chronic diseases. The target audience was 25-50-year olds who had children and 45-60-year olds who either had chronic disease or were living an unhealthy lifestyle. The first advertisement showed a father who was overweight trying to play and run with his daughter. However, the man fails to keep up, stops and loses his breath. The tag used was 'The more you gain, the more you have to lose'. This ad tried to emotionally manipulate and persuade parents to make lifestyle changes, so they are not missing out with their children. The second ad showed the same man but a healthier weight with the tag line of 'it is never too late to start taking steps.'

involved in stage two there would be a duplicate of numbers. Stage two of the campaign and the link to the AIDA model was the same as stage one of the campaign. For instance, they both aimed to attract consumer interest and attention of the individuals.

Figure 18 - Campaign 1 Stage 1 and 2 Video Advertisement



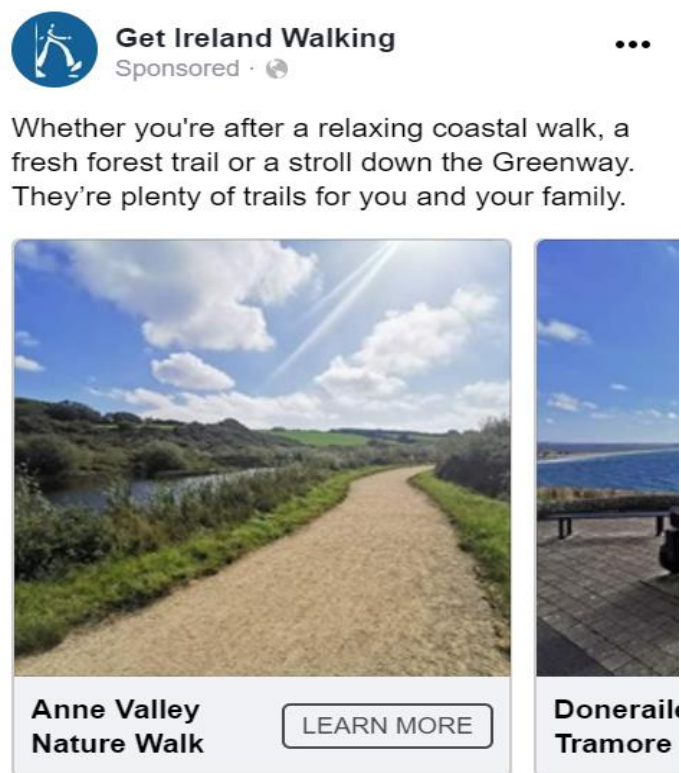
Link to Video Advertisement (<https://youtu.be/oOT4cw-wabM>)

For the third stage, the aim was to deepen interest levels of those who engaged with stage one and two advertisements by showing information about local family-friendly walking routes and trails. As already noted, the results from phase one suggested that families had an interest in bringing their children for walks and being active together. However, they were unaware of local walking trails. Therefore, promoting walking routes was deemed the most appropriate content for building their desire to go walking. The third stage of the campaign worked in conjunction with the third stage of the AIDA model, which is desire. This stage aimed to move the participants from 'liking' the idea of walking to 'wanting' the idea of walking. Stage three of the campaign involved a carousel advertisement⁶⁸ (see Figure 19, also view Appendix H – Campaign One Additional Images for Carousel Advertisement, page 333 for the latter images used in this advertisement). The theme of

⁶⁸ This is a Facebook/Instagram advertising format that combines multiple pictures into a single advertisement while also promoting 10 different walking locations and attached links respective to the walking trails.

this advertisement focused on local walking routes and trails for families to enjoy. A series of pictures were incorporated into the advertisement of local routes and trails. A link was also included in this advertisement, and when clicked on, it directed the target audience to the Irish Trails.ie website. A separate link was included for each trail shown. The Irish Trails website provided the participants with additional information on exact walking routes and locations. It also provided information on the walking routes that were shown specifically in the advertisement. The total number of people that clicked on the link to view further information on local walking trails and routes in Waterford is discussed in the presentation of the results chapter.

Figure 19 - Campaign 1 Stage 3 Carousel Advertisement



The final stage of the online advertising campaign involved a single picture advertisement (see Figure 20). This ad gave information about the free family walking event, which was held in Mount Congreve Gardens, County Waterford. Anyone who engaged⁶⁹ with the ads

⁶⁹ For stages one and two, engagement was defined as having watched at least 15 seconds of the video. Any individual who watched at least 15 seconds of the video ad in stage one and two were re-targeted in stage three. For stage three, engagement was referred to as 'link clicks'. This represents the number of links clicks on the advertisement that led to destinations on or off Facebook. In this case, the link directed individuals to the IrishTrails.ie page.

from stage one, two and three were targeted in stage four⁷⁰. As noted, also attached to this ad was a link which redirected anyone who clicked on it to a landing page on Eventbrite.ie. It is important to note that the advertisement was not shown as ‘free’ as this may lead to results being skewed. Furthermore, people may have clicked on the ad if they initially thought it was for free. Advertising the ad in this way allowed the researcher to clarify that they clicked on the ad because they were interested and showed a desire to know more about the event. It was only advertised as free when the participants reached the Eventbrite page where they could purchase the tickets. The fourth stage of the campaign was linked to the final stage of the AIDA model, which was action. The aim of this stage was to convert participations into taking action and attending the events. The event was facilitated by Get Ireland Walking. The event was promoted as a safe and accessible place for families to bring their kids walking on the day. This event took place in Mount Congreve Gardens in County Waterford on the 3rd of November 2019.

Figure 20 - Campaign 1 Stage 4 Static Image Advertisement



⁷⁰ This worked in conjunction with the AIDA model. Any individual that showed an interest or desire by engaging with the ads were targeted in the final stage of the sales funnel. Also, in a social marketing context, only individuals who show an interest or desire should be targeted

Stage 1	Stage 2	Stage 3	Stage 4
Aim			
To promote the healthy use of family time and how trails and the outdoors can help that	To scale the advertising campaign and increase the target audience by creating a 'lookalike' audience based on the individuals who engaged with stage 1	To deepen interest levels of those who engage with stage 1 and 2 advertisements by showing information about local family-friendly walking routes and trails	To influence as many people and families as possible into walking at Mount Congreve Gardens. Targeted anyone who engages with the ads in stages 1, 2 and 3.
Channel			
Video advertisement via. Facebook	Video advertisement via. Facebook, Same as stage 1	Carousel advertisement via. Facebook	Single picture ad via. Facebook
Showing time for ad			
4 days	4 days	4 days	4 days
Budget for Ad			
125 Euro Facebook/Instagram	125 Euro Facebook/Instagram	100 Euro Facebook/Instagram	75 Euro Facebook/Instagram
Corresponding stage of the AIDA Model			
Stage 1 and 2 – Attention and Interest; attracting attention of consumers and building awareness around the benefits of walking	Stage 1 and 2 – Attention and Interest	Stage 3 – Desire; Deepen interest levels and move consumers from 'liking' walking activities to 'wanting' to engage in walking activities	Stage 4 – Action; Convert consumers to take action and attend walking events
Corresponding component of the Social Marketing Benchmark Criteria			
<ul style="list-style-type: none"> • Behaviour: Small gradual steps were taken to change behaviour using the AIDA model (sales funnel) • Customer Orientation and Insight: Adopted the results from phase one survey to dictate the design and content of this campaign • Theory: Campaign structure based on the AIDA model • Exchange: providing information to families about local walking routes and trails and the specific walking event • Competition: Took into consideration the desire and interest individuals may or may not have • Methods Mix: Utilised different online advertising formats, content and promotional messages 			

Table 5 - Summary of Advertisements in Campaign 1

3.4.2.3 Campaign 2 – Hillwalking Campaign

3.4.2.3.1 Introduction

The aim of this campaign was to promote hill walking as a healthy use of time. The findings from phase one survey determined the overall aim of campaign two. Furthermore, in line with the social marketing benchmark criteria, it is best to avoid assuming what the target audience wants or needs but rather to design the intervention based on what you know the target audience wants or needs (Andres, Gomez, & Saldana, 2008). These results from the initial survey indicated that there was an interest in mountain and hills (16.3% of respondents) but no participation in hillwalking routes. Additionally, 6.8% of participants wanted more knowledge about nearby hillwalking routes and 22.4% wanted more knowledge about challenging walks like hiking or hillwalking. In line with the social marketing principles, interest and desire for hillwalking were identified here. Additionally, the mountains and hills were ranked the lowest on a scale for the most preferred place to go walking for exercise or recreation. Therefore, the aim of the campaign was to promote mountains and hills as a safe and accessible place to go walking and not just local routes around the community. The primary objective of this campaign was to measure the impact of the social media marketing campaign on encouraging individuals to engage with a guided walk event. The secondary objective was to measure the overall engagement on the advertisements used in the campaign. The total cost for the campaign was 475 Euro.

3.4.2.3.2 Structure of Campaign 2

Similar to campaign one, the stages in campaign two were dictated by the results of phase one survey. The following figure (Figure 21) provides an insight into the structure of campaign two. In this campaign, stage one promoted hill-walking by utilising a video advertisement. This video ad reached a total of 18,312 individuals of the target population. Again, the second stage was the same video advertisement as stage one. A total of 3,192 people was reached by stage two advertisement. Following this, the third stage was made up of the individuals who engaged with the advertisements from stages one and two (refer to footnote 63, page 98). This ad reached a total of 2,245 individuals by utilising a carousel ad to promote local hills and mountain walks in Waterford. In stage four of the campaign, the final advertisement promoted a guided walk. This stage re-

targeted any individuals who engaged with stage one, two or three (refer to footnote 64, page 98). It is important to reiterate that the guided walk was a free event.⁷¹

There were two attempts at promoting this guided-walk, due to the first attempt failing. The first time this advert was launched, there was a total of 2,105 individuals reached. A total of 67 individuals clicked onto the link to be redirected to the Eventbrite landing page (see Appendix I – Landing Page for Campaign 2 McGrath’s Cross Greenway, page 335). However, there were no registrations on the Eventbrite page⁷². Therefore, the event did not go ahead. After considering the content of the Eventbrite landing page, the researcher felt there was a need for a second attempt and a slightly different approach to be taken in an attempt to encourage individuals to attend walking events. Therefore, there were a number of changes made to the Eventbrite landing page in the second attempt of this campaign. The changes made to the landing pages are explained to section 3.4.2.3.3. Furthermore, the second advertisement and second attempt at promoting the guided walk reached 1,979 individuals. A total of 102 individuals click on the link to be redirected to Eventbrite (see Appendix J – Landing Page for Campaign 2 Kilclooney Woods, page 337). One individual registered for the guided walk, so the event went ahead.

It is necessary to note that where possible, existing members of the Mountaineering Ireland organisation were excluded in all stages of the campaign in order to limit any type on errors⁷³. To achieve this, a CSV file⁷⁴ of all Mountaineering Ireland members was uploaded to Facebook Business Manager. Facebook was able to match the email addresses provided by some of the current members with their personal Facebook profiles. Once identified, they were excluded from viewing any of the online advertisements. Approximately 1,000 members (from approximately 12,000 members) were excluded as a result of this process. There was however still a number of individuals that were members of Mountaineering Ireland and not excluded from the campaign. The

⁷¹ As previously noted, it was initially advertised as free. This was to limit any skewed results. For instance, people may have clicked on the ad if they initially thought it was for free. Advertising the ad as not free allowed the researcher to clarify that they clicked on the ad because they were interested and showed desired to know more about the event. It was only the individuals who clicked on the ad who then found out it was a free guided walk.

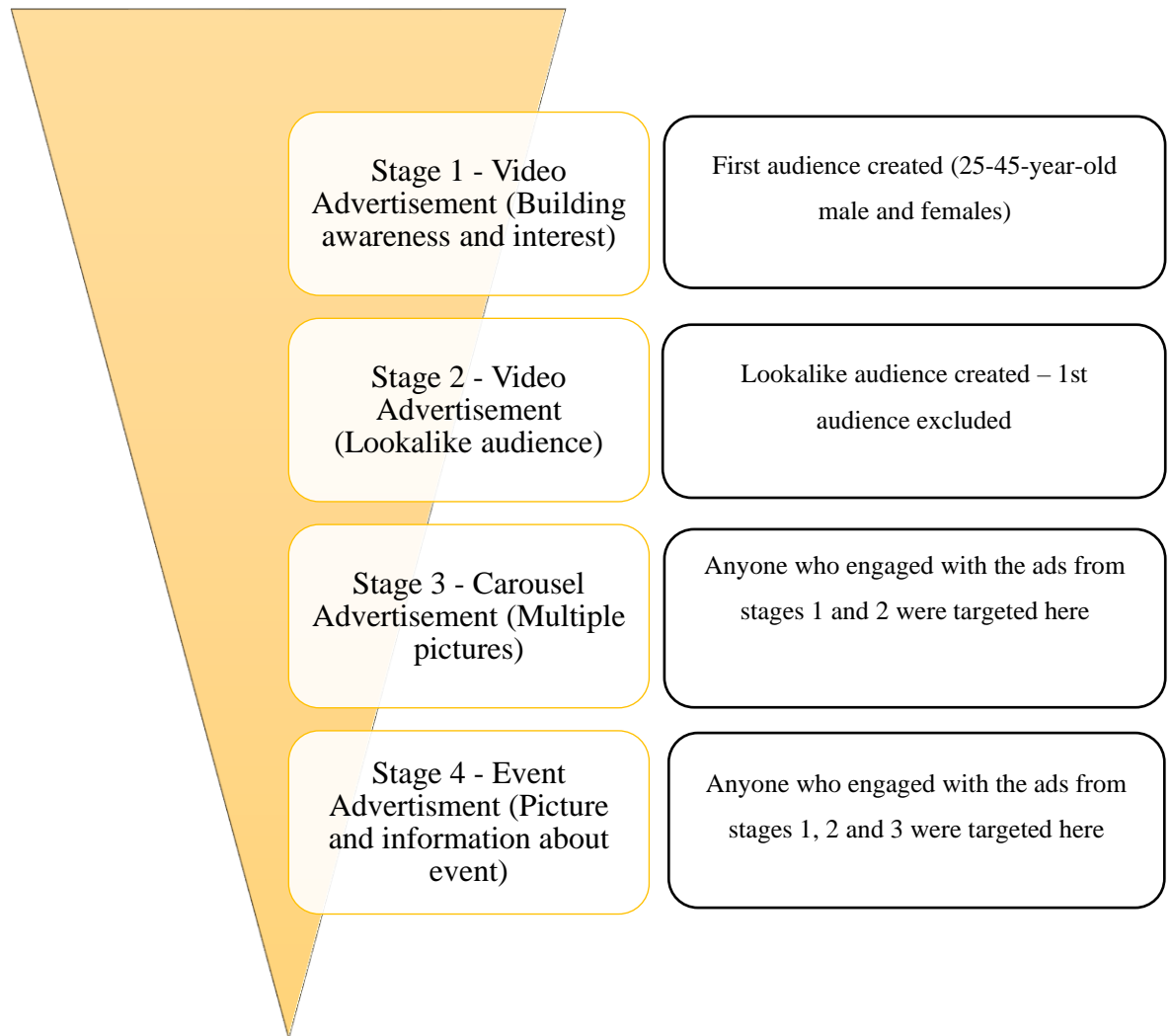
⁷² The reasons being are presented in the results chapter.

⁷³ The researcher chose not to target any existing members of Mountaineering Ireland as they were already deemed to have an interest in walking. Therefore, the results would have been skewed if the advertisements were placed in front of current Mountaineering members.

⁷⁴ A CSV File is a file format used to store data. For example, a spreadsheet or database.

reason being the email addresses that were gathered in the CSV file did not match the email address on their personal profile on Facebook.

Figure 21 - Structure of Campaign 2

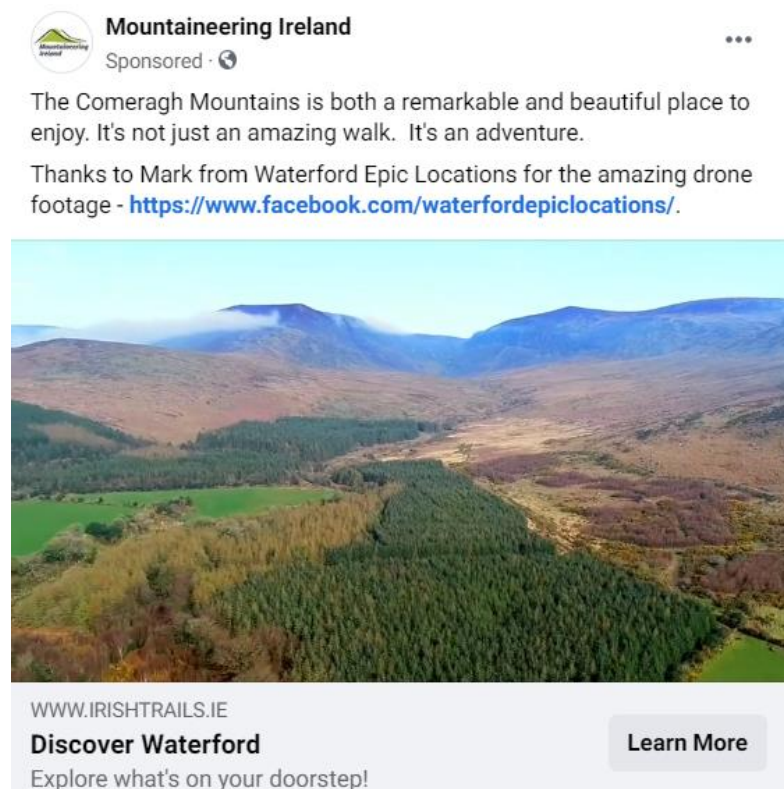


3.4.2.3.3 Content of the Advertisements in Campaign 2

As previously discussed in campaign one, the stages that made up campaign two were also linked to the AIDA Model. The table presented on page 112 (Table 6) describes each stage of the campaign and how it corresponds with the model and the associated social marketing principles. In stage one of the campaign, a number of messages related to hillwalking were incorporated into the video advertisement (see Figure 22). This video advertisement promoted the hills as accessible walking routes. The video showed many different locations to go walking and the natural scenery the mountains have to offer. It was important that this advertisement captured the unique resources Waterford has on offer and to embrace the mountains and hills, even for walkers at a beginner's level. This

stage was aimed at building awareness and interest around making use of free time and embracing the countryside in mixed weather conditions. The second stage involved the same video advertisement from stage one. There was only a certain number of individuals that viewed or engaged⁷⁵ with the video in stage one. Therefore, to scale and increase the target audience, a lookalike audience was created for stage two. The ad was then delivered to the new lookalike audience. Any individual that was targeted in stage one was not included in stage two.

Figure 22 - Campaign 2 Stage 1 and 2 Video Advertisement



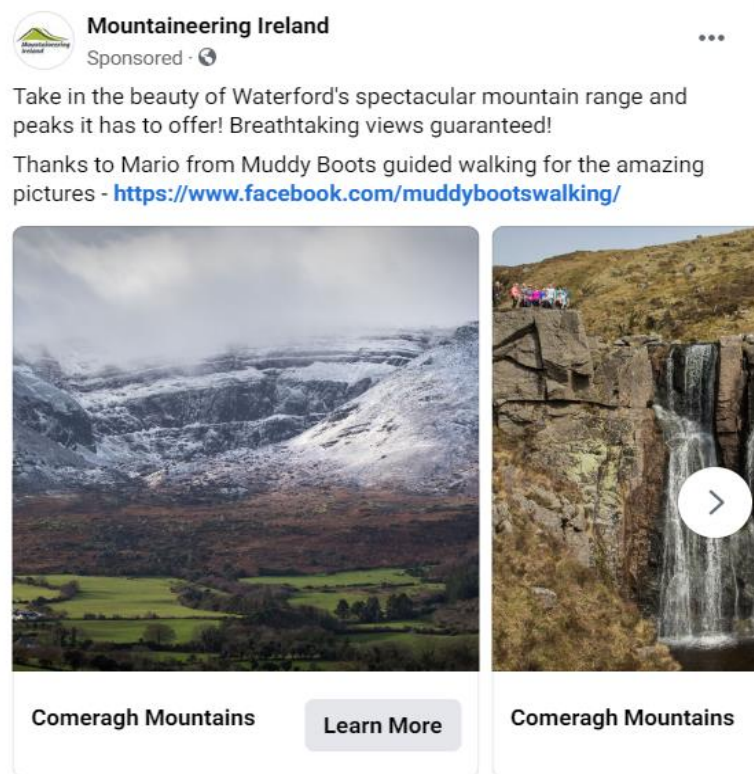
Link to Video Advertisement (<https://youtu.be/6fkYV8Ymlm4>)

The third stage involved a carousel advertisement where a combination of different images is shown (see Figure 23), also view Appendix K – Campaign Two Additional Images for Carousel Advertisement, page 339 for the latter images used in this advertisement). The theme of this advertisement focused on local areas to go hillwalking. An example of local hillwalking routes would be the Comeragh Mountains and Coumshingaun Lake. The aim of stage three was to deliver a further advertisement to

⁷⁵ For stages one and two, engagement was defined as having watched at least 15 seconds of the video. Any individual who watched at least 15 seconds of the video ad in stage one and two were re-targeted in stage three.

anyone that engaged with the advertisement in stage one and two⁷⁶. A link was also attached to this advertisement, and when clicked on, it directed the consumer to Irish Trails.ie website. The Irish Trails website provided the participants with additional information on local hillwalking routes and locations. The third stage of this campaign worked in conjunction with the third stage of the AIDA Model. This involved attempting to convert consumers to ‘want’ to go hillwalking as opposed to ‘liking’ the idea of hillwalking.

Figure 23 - Campaign 2 Stage 3 Carousel Advertisement



The fourth stage involved a single image advertisement. This ad gave information about the free guided-walk that was taking place. However, the advertisement was not initially advertised as ‘free’. It was not until an individual clicked on the unique link that they found out the event was free. The unique link attached to the ad redirected anyone who clicked on it to a landing page on Eventbrite.ie. This contained all information about the event, time, venue, and how to avail of the free offer (free ticket)⁷⁷. Anyone who engaged

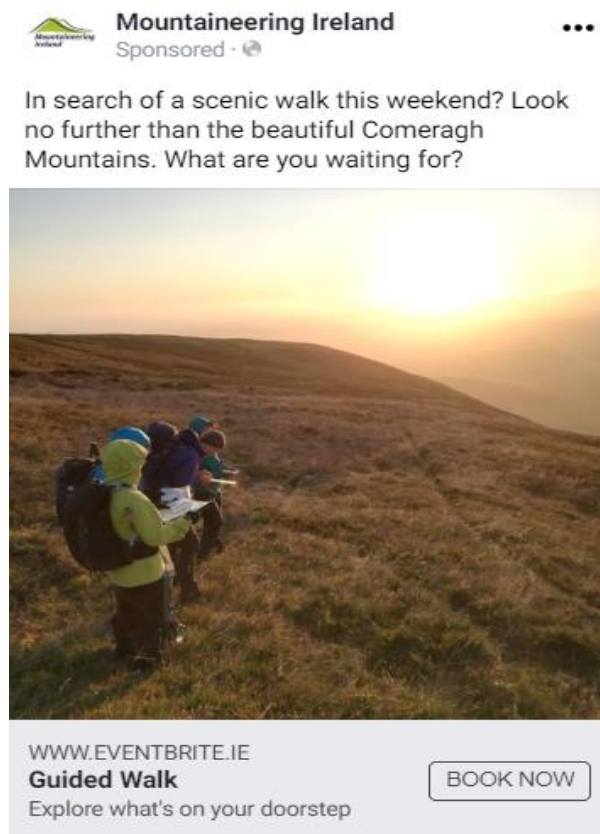
⁷⁶ Engagement was defined as having watched at least 15 seconds of the video. Any individual who watched at least 15 seconds of the video ad in stage one and two were re-targeted in stage three.

⁷⁷ The landing page can be seen in Appendix I – Landing Page for Campaign 2 McGrath’s Cross Greenway.

with the ads from stage one, two and three were targeted in stage four⁷⁸. This final stage was linked to the AIDA Model's final stage of Action. The aim of this advertisement was to persuade consumers into acting and attending the event.

The advertisement used to promote the first event for the Mountaineering Ireland campaign contained information about the event that was initially scheduled for the 16th of November (see Figure 24). The starting point was McGrath's Cross Greenway car park and was going to be led by walk leaders from Mountaineering Ireland. There was a considerable amount of engagement on the advertisement with several people clicking on the attached link to redirect them to the Eventbrite page. However, there were no online registrations for this event. Subsequently, the event did not go ahead. Full results of how many individuals clicked on the unique link is outlined in the presentation of the results chapter.

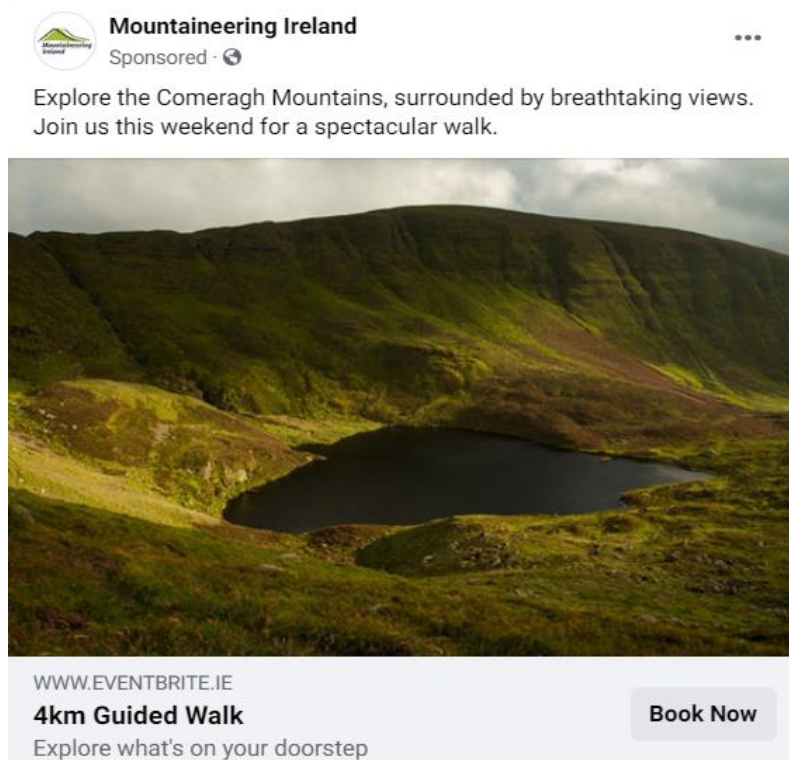
Figure 24 - Campaign 2 Stage 4 Advertisement – Initial advertisement



⁷⁸ Stages one and two engagement was defined as watching at least 15 seconds of the video advertisement while stage three engagement was referred to as the number of links clicks on the advertisement that led to the Irish Trails website.

A second attempt was made at encouraging individuals to attend a guided walk (see Figure 25). This ad was similar to the initial event, discussed above. This ad showed information on the event that was scheduled for the 7th of December. The starting point was at Kilclooney Wood car park and again was led by walk leaders from Mountaineering Ireland. The unique link attached to this ad directed individuals to the Eventbrite landing page so they could begin registration for the event. However due to the previous attempt not being successful, there were changes made to the landing page of this event; the length and time of the walk were greatly reduced in comparison to the first event, this was noted on the landing page⁷⁹. There was more information provided on what the walk entailed⁸⁰, what to bring to the walk and the proper equipment. Following this, there were additional pictures included to illustrate the scenery of the mountains and hills in Waterford⁸¹. There was only one conversion from this advertisement (one person registered online and turned up to the event).

Figure 25 - Campaign 2 Stage 4 Advertisement – Second Advertisement



⁷⁹ The researcher and the representative from the affiliated organisation felt the length of the first walk was too long and may have impacted the decision of individuals who portrayed themselves as beginners. The length of the walk was shortened for the second event to make it more appealing.

⁸⁰ There was not a sufficient amount of information provided about the walk for the first attempt, additional information was added to the landing page for event two to add more clarity.

⁸¹ (see Appendix J – Landing Page for Campaign 2 Kilclooney Woods, page 337).

Stage 1	Stage 2	Stage 3	Stage 4	
Aim				
To promote mountains and hills as a great place to go walking. To make use of free time and embrace the countryside in mixed weather conditions	To scale the advertising campaign and increase target audience by creating a 'lookalike' audience based on the individuals who engaged with stage 1	To deepen interest levels of those who engage with stage 1 and 2 advertisements by showing information about hillwalking opportunities in local areas	To influence as many individuals as possible into walking at designated location. Targeted anyone who engages with the ads in stages 1, 2 and 3.	
Channel				
Video advertisement via. Facebook	Video advertisement via. Facebook, Same as stage 1	Carousel advertisement via. Facebook	Single picture ad via. Facebook	
Showing time for ad				
4 days	4 days	4 days	4 days	
Budget for Ad				
125 Euro Facebook/Instagram	125 Euro Facebook/Instagram	100 Euro Facebook/Instagram	Event ad no. 1: 75 Euro Facebook/Instagram	Event ad no. 2: 50 Euro Facebook/Instagram
Corresponding stage of the AIDA Model				
Stage 1 and 2 – Attention and Interest; attracting attention of consumers and building awareness around the local resources	Stage 1 and 2 – Attention and Interest	Stage 3 – Desire; Deepen interest levels and move consumers from 'liking' hill walking activities to 'wanting' to engage in hill walking activities	Stage 4 – Action; Convert consumers to take action and attend walking events	
Corresponding component of the Social Marketing Benchmark Criteria				
<ul style="list-style-type: none"> • Behaviour: Small gradual steps were taken to change behaviour using the AIDA model (sales funnel) • Customer Orientation and Insight: Adopted the results from phase one survey to dictate the design and content of this campaign • Theory: Campaign structure based on the AIDA model • Exchange: providing information to individuals about local hill-walking routes and trails and the specific walking event • Competition: Took into consideration the desire and interest individuals may or may not have • Methods Mix: Utilised different online advertising formats, content and promotional messages 				

Table 6 - Summary of Advertisements in Campaign 2

3.4.3 Instrument Design and Structure of Phase 3 Questionnaire

Phase three of this methodology involved the design and implementation of a self-designed questionnaire. The questionnaire was designed in order to obtain information pertaining to the impact the social media marketing campaign had on influencing people to attend the walking event. More specifically, the questionnaire sought information about how the participants heard about the event, were they aware of the online advertisements on their social media platforms and what impact did the advertisements have on encouraging them to go walking.

It is essential that phase three was implemented as it is important to evaluate the success of the social media marketing campaign in influencing adults to attend walking events. The evaluation of the campaigns allowed the researcher to gain an insight into what influenced individual behaviours. It also allowed the researcher to assess the effects of each online advertisement and determine which ad was performing better. While Facebook Business Manager provides analytics on the online advertisements, it will not tell us why individuals turned up to the event. Therefore, the need for a self-designed survey to question this was deemed necessary. Due to the nature in which the evaluation had taken place (people turning up to the event), a quantitative approach was adopted over a qualitative approach, primarily for the reason that it would have been difficult to utilise a qualitative approach via interviews to all participants that showed up. Employing a questionnaire over interviews allowed the researcher to gather information from the participants in a short amount of time. The researcher developed the questionnaire to be relatively short and easy to fill out.

Campaign 1 Get Ireland Walking Event: There was a total of five questions in this questionnaire (see Appendix L – Phase Three Questionnaire (Get Ireland Walking), page 341).

Question 1: The participants were asked to record how many family members joined them at the event in Mount Congreve Gardens. This question specifically asked to record how many adults, children under 12 years of age⁸² and children over 12 years of age there were. It was important to document how many families

⁸² This age requirement was set by management at Mount Congreve Gardens.

attended the event and showed that they availed of the free ticket. This assisted in the evaluation of the campaign⁸³.

Question 2: Respondents were asked how many days they go walking as a family in a typical month and how long these walks last for. This question was asked to clarify if the families attending the event were generally active or not active.

Question 3: This question asked families where they heard about the event in Mount Congreve Gardens via. Facebook/Instagram advertisements, internet, word of mouth, family/friends, radio, poster/flyers/newspapers or through a website. While the campaign used only digital mediums, the researcher asked if participants heard about the event through traditional forms of marketing. This question clarified who attended the event as a result of being exposed to the social media marketing campaign and online advertisements.

Question 4: This question asked the participants did they notice any promotional advertisements about walking on their social media platforms via. Facebook/Instagram. If the participants answered yes to this question, they were further asked if they could recall the content of the advertisement they viewed. Again, they were further asked if the experience of the advertisements were positive or negative on a Likert scale. Lastly, respondents were asked to what extent did the advertisements about walking encourage them to get out and be active.

Question 5: The final question that attendees were asked was if they would like to receive more information about walking routes and trails nearby. If respondents answered yes to this question, it would perhaps suggest that they were open to learning more about walking for recreation.

Campaign 2 Mountaineering Ireland Guided-Walk: There was a total of four questions in this questionnaire (see Appendix M – Phase Three Questionnaire (Mountaineering Ireland), page 343).

Question 1: The aim of question one was to gather information on how active these individuals were. Participants were asked how many days they go walking for recreation and how long do these walks last for.

⁸³ Knowing the number of attendees allowed the researcher to see if the online campaign was successfully in influencing individuals to attend events.

Question 2: The second question asked the participant how they heard about the Mountaineering Ireland free guided walk. The aim of this question refined the number of people who had heard about the guided walk due to the social media marketing online advertising campaign.

Question 3: This question was the same as question four in phase one survey mentioned above.

Question 4: This question was the same as question five in phase one survey mentioned above.

As per phase one survey, all questions asked in phase three survey were closed-ended. This allowed the researcher to gather standardised quantifiable data as all participants were exposed to the same pre-determined response categories. The questionnaire was made up of tick the box questions and five-point Likert scale questions. Closed-ended questions were used rather than open-ended, as closed-ended questions are easier and quicker for respondents to answer, they can be easily analysed statistically, and answers are easier to compare. The researcher did not know exactly how many individuals would turn up to the events, therefore, having a short and succinct survey was deemed appropriate for phase three sample group to complete. Having open-ended questions for a large sample group would take too long to extract answers.

3.5 Sampling Procedure and Implementation

The following section will outline the sampling procedure for phase one, two and three. Further details on exactly where phase one survey was administrated is provided. The sampling procedure for phase two social media marketing campaign will also be presented. This sample population was retrieved from Facebook Business Manager and the online campaigns. Further details on how many individuals were reached during the campaign stage one and two are outlined. Lastly, the sampling procedure for phase three questionnaires is summarised. This population sample was made up of the attendees of the walking events.

3.5.1 Sampling Procedure and Implementation for Phase One Questionnaire

The sampling procedure for the phase one survey aimed to administrate the survey to 25-45-year-old male and females living in County Waterford.

Purposive sampling was utilised in phase one of this research. Purposive sampling is a non-probability sampling technique⁸⁴ (Das & Tripathi, 2017). Non-probability sampling can be most effective when the researcher aims to study a specific or very defined population (Tongco, 2007). It involves gathering participants who act as a representative of the whole population (Battaglia, 2008). The aim of the sampling method for this current study is to focus on the similarities of the participants and how it relates to the topic being researched (Etikan et al., 2016). Purposive sampling is deemed as one of the more convenient types of sampling methods (Das & Tripathi, 2017). A strength of using purposive sampling is that the sample is easily generalisable and a good representation of the whole population in comparison to a random sample where not all participants have the same characteristics. This sampling method was deemed appropriate as it allowed the researcher to focus on the sample group of interest.

The sampling procedure for phase one involved participants from a sample population of male and females (n = 400) between the ages of 25-45 living in County Waterford. Based on previous literature and knowledge from the representatives of both National Governing Bodies, the specific cohort was identified as an area of concern when it comes to physical activity and meeting the national physical activity guidelines. The sample size required for this research was determined using a sample size calculator by Survey Monkey (<https://www.surveymonkey.com/mp/sample-size-calculator/>). The tools needed for this calculation are the total population size⁸⁵, the confidence level⁸⁶, and the margin of error⁸⁷. To calculate the sample size needed, the total population size was 31,304 (CSO 2016 statistics for 25-45-year-olds in County Waterford), and the industry standard confidence level was set at 95% and the margin of error at 5%. Using the Survey Monkey sample size calculator, at these levels, the sample size needed to equate to 380 participants. In the end, a total of 400 participants were surveyed.

Over a period of seven weeks from the 15th of July 2019 until the 1st of September 2019 participants were recruited in various locations in County Waterford. Participants were

⁸⁴ Non-probability sampling is a sampling technique where the odds of any individual being selected for a sample cannot be calculated

⁸⁵ The total number of people whose opinion or behaviours your sample will represent

⁸⁶ The probability that your sample accurately reflects the attitudes of your population. The industry standard is 95%

⁸⁷ A percentage that tells you how much you can expect your survey results to reflect the views of the overall population. The smaller the margin of error, the closer you are to having the exact answer at a given confidence level

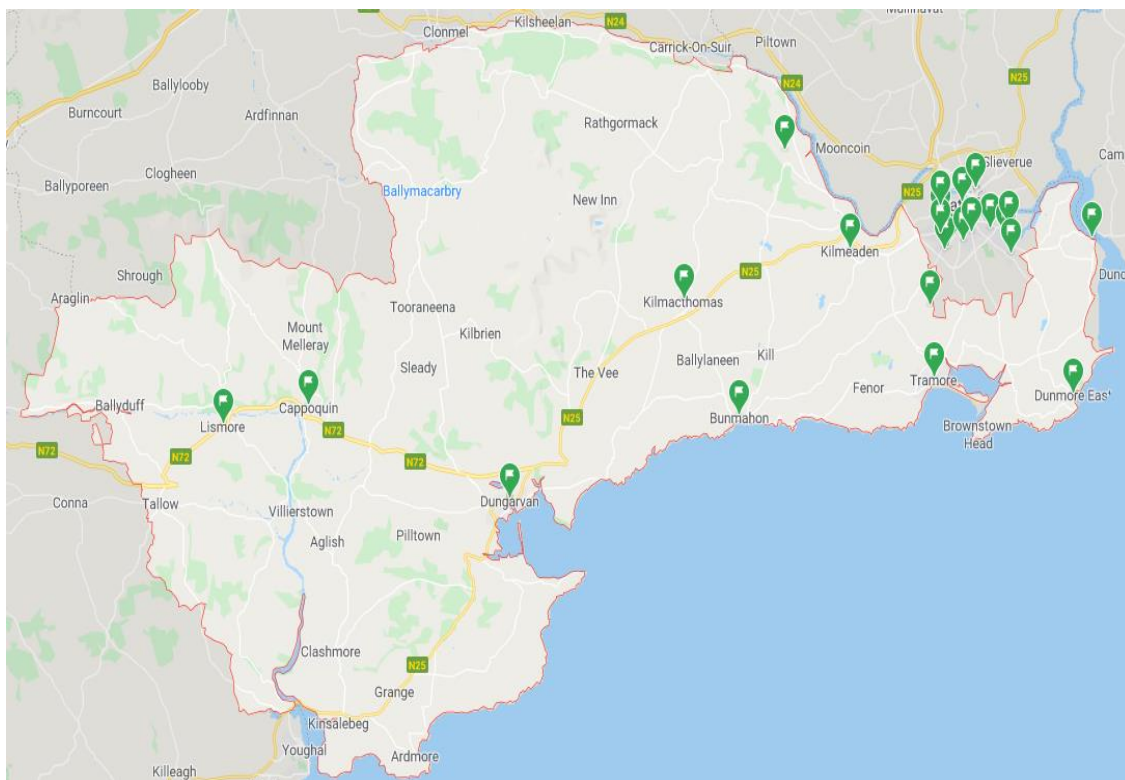
recruited by the researcher in Waterford City and surrounding areas. For instance, Tramore, Dunmore East, Ardkeen, Lisduggan, Ballinakill, Portlaw, and Kilmacthomas. All participants were recruited in public venues in these locations; for example, shopping centres, parks and town centres. Choosing a wide variety of venues allowed the researcher to gather a better sample of the targeted cohort in terms of geographical locations (both urban and rural), socioeconomic status, age and gender. The map presented below (Figure 26) provides an overview of where the population sample came from.

It is important to note that it was not feasible in this study for the data collection methods to go beyond County Waterford, mainly due to resources. The researcher also wanted to ensure that the methodologies for this study could be replicated. Therefore, gathering a county sample of Waterford was deemed to be sufficient.

The reason for not collecting surveys in workplaces, colleges and clubs is because they acquire social cliques. These individuals interact with each other on a daily basis where they share similar interests. Therefore, there may have been a possibility that when completing the questionnaire, these individuals may have answered according to what their colleagues had answered. This reduces the incidence of any type one errors occurring. Social cliques were not present when distributing the questionnaires as the research only aimed to stop participants individually and not in groups.

The protocol to administrating the surveys was to approach participants in a friendly and polite manner. The researcher wore a Get Ireland Walking t-shirt to allow individuals to see that the researcher was promoting physical activity and walking. The researcher portrayed a positive attitude when approaching any individual, spoke clearly and asked if they would like to take part in a research project on promoting walking participation. If they agreed to take part in the survey, full details of what was required were given before the survey commenced. However, if they agreed not to take part in the survey, all wishes were respected, and the individual was asked no further questions. On average, the survey took five minutes to complete.

Figure 26 - Locations of Phase One Sample Population



3.5.2 Sample Procedure and Implementation for Phase 2 Social Media Marketing Campaign

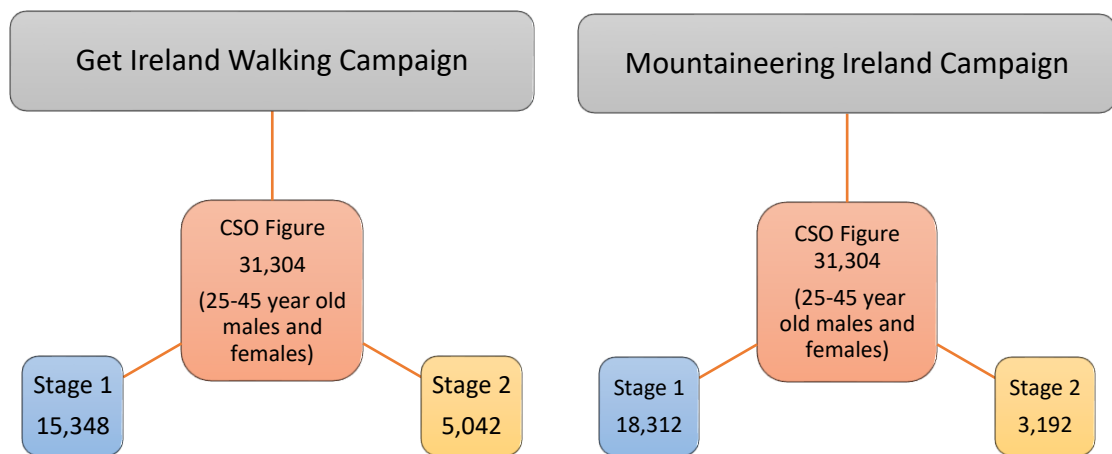
The social media marketing campaign allowed the researcher to target a large sample group of 25-45-year-old male and females living in County Waterford. This target population was solely based on age, gender and location. The Central Statistics Office 2016 stated that there were 116,176 people living in County Waterford (Central Statistics Office, 2016). Out of those 116,176 people, a total of 31,304 individuals were male and females between the ages of 25-44 (Central Statistics Office, 2016). For both campaigns, the reach⁸⁸ for stage one was considerably high (see Figure 27).

For the Get Ireland Walking campaign, stage one of the advertising campaign reached a total of 15,348. As mentioned in section 3.4.2.1.2 the lookalike audience was then created to scale the campaigns. An additional 5,042 individuals were reached in stage two of the campaign. For the Mountaineering Ireland campaign, a total of 18,312 were reached in stage one. The lookalike audience created for this campaign reached 3,192 people in stage two. The figures reached by both campaigns represent a county sample of 25-45-year-old male and females living in County Waterford that use social media (Facebook and

⁸⁸ The reach is the number of unique people that saw the advertisement on Facebook or Instagram.

Instagram)⁸⁹. Using Facebook’s and Instagram’s targeting methods allowed the researcher to reach as many individuals as possible. In doing so, the Get Ireland Walking Campaign reached a total of 65.1% of the CSO population. Furthermore, this meant 65.1% of the 31,304 individuals were reached in stage one and two. Whereas the Mountaineering Ireland campaign reached 68.6% of the 31,304 individuals in stage one and two.

Figure 27 - Campaign 1 Stages 1 and 2 Ad Reach



3.5.3 Sampling Procedure and Implementation for Phase 3 Questionnaire

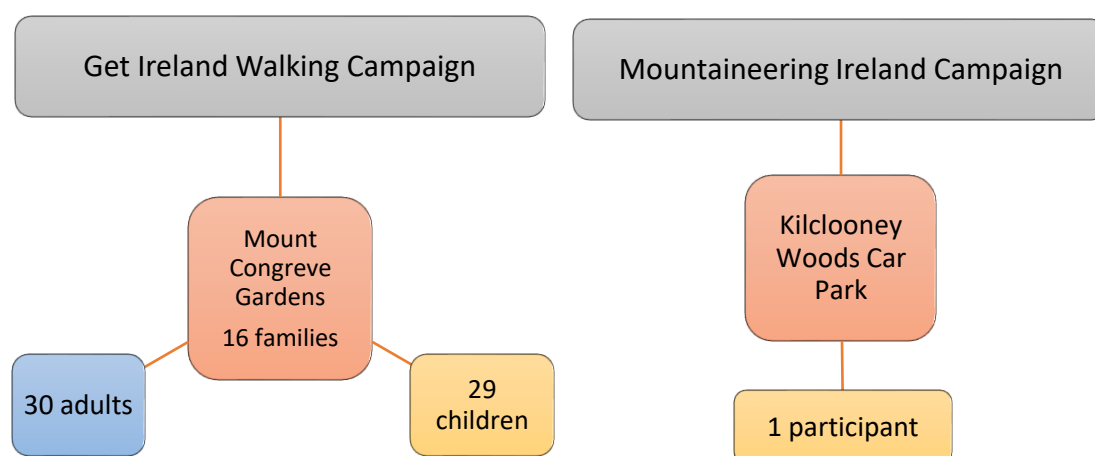
As previously outlined, a self-designed questionnaire was administrated in phase three to evaluate the social media marketing campaign. The walking event executed for the Get Ireland Walking campaign took place in Mount Congreve Gardens on the 3rd of November 2019, which was suitable for families and children and of easy access. This location had a car park for the families and only one entrance. Meaning, it was ideal for the researcher to approach each family as they came in and not miss out on anyone. A designated area was set up by the researcher where the surveys could be filled out. A teardrop flag was also at the area and displayed the Get Ireland Walking organisation name and logo. The parent/parents of the families were approached in a friendly and polite manner by the researcher. Any parent that provided the free ticket on the day was asked

⁸⁹ In this situation, the targeting options provided by Facebook and Instagram were dependent on by the researcher to target this specific cohort. While the researcher specified to Facebook and Instagram to target 25-45-year old male and females, the advertisements may have ended up outside of this exact target audience. For example, people aged 24 or 46 may have been shown the advert.

if they would take part in a short survey⁹⁰. A total of 16 families showed up and completed the questionnaire. The 16 families were made up of 30 adults and 29 children. Any parent that did not have a free ticket was redirected to an employee of the gardens.

The guided-walk that took place for the Mountaineering Ireland campaign was located in Kilclooney Woods car park on the 7th of December 2019. This location was chosen by the Mountaineering Ireland representative as they were familiar with hillwalking routes that were safe, of easy access and designed for beginners. The researcher and the representative from Mountaineering Ireland wore t-shirts with the Mountaineering Ireland name and logo on it to represent the organisation. The questionnaire was administered to the one participant that attended the guided walk⁹¹.

Figure 28 - Campaign 1 Phase 3 Population Sample



3.6 Merits and Limitations

The following section will report on the merits and limitations of each methodological tool used in each phase. Firstly, this section will review the use of questionnaires and then outline the merits and limitations associated with using a social media campaign. As outlined in the previous sections, quantitative measures via a Questionnaire were utilised in phase one and three. The aim of phase one was to investigate the factors that influenced physical activity participation in the target population. Moreover, the aim of phase three was to evaluate the impact of the social media marketing campaign on encouraging the

⁹⁰ The free ticket was shown to the researcher by the parents to prove that they had registered on the online event on Eventbrite

⁹¹ There were no questionnaires administered previous to this event as the first event did not go ahead.

target audience to attend walking events. Following this, the merits and limitations for utilising a social media marketing campaign are summarised.

3.6.1 Merits and Limitations of Questionnaires

The main aim of using quantitative research methods is to determine 'how many and what kinds of people in the general population have a particular characteristic which has been found to exist in the sample population' (Brannen, 1992, page 5). Questionnaires were deemed an appropriate method of analysis for a number of reasons.

The aim of phase 1 was to gather information on the current walking levels and factors influencing walking habits of the chosen population. Utilising a questionnaire allowed the researcher to gather this information from a relatively large sample group in a short time period while being cost-effective (Bryman, 2012). This information would have been more difficult to collect by the researcher if an alternative research method was used, for example, interviews (Bryman, 2012). Questionnaires require low development time and offer a great deal of flexibility in its structure (Queiros et al., 2017). In aligning with the social marketing framework criteria, market research needs to be conducted to gain an understanding of the target audience. Utilising questionnaires was deemed the most appropriate method to gather this information.

When using questionnaires as a form of data collection, there is less risk for bias or errors to occur by the researcher (Sarantakos, 2013). However, a further strength to employing quantitative research methods is, it is objective in its approach as it seeks to gather precise measurement and analysis (O'Dwyer & Bernauer, 2014). What is more, the researcher and their biases are unknown within the study, meaning that there is a lack of any personal judgements, favouritism or involvement by the researcher in the outcome of the research (Smith & Noble, 2014; Creswell, 2015).

Questionnaires also allow the researcher to query a variety of topics. The initial survey asked participants questions based on the factors affecting their walking behaviours, what factors influenced them to go walking, and what discouraged them from going walking. Knowing these factors justifies the need to promote walking and local walking routes and trails. Lastly, for phase 1 and 3, data analysis methods were quick and efficient as it made use of statistical software, for example, SPSS (Connolly, 2007).

Despite the advantages of using questionnaires, there are few drawbacks to employing questionnaires. Questionnaires do not allow the opportunity to prompt or probe the

respondent to elaborate on answers. Probing is used in interviews where open-ended questions are asked. However, questionnaires typically used close-ended questions where probing by the researcher cannot be performed. A questionnaire may not allow for additional information to be collected. Only the questions asked in the survey will be answered (Bryman, 2012). In addition to this, questionnaires do not capture the emotions of the respondents and only provide numerical data as results. Due to questionnaires being self-reported, social desirability bias may have occurred. Participants may answer questions with what they think they should say as opposed to what they feel (King & Bruner, 2000). There is a possibility that this may have occurred during the data collection of phases one and three questionnaires. The reliability of the data collected from the questionnaire is dependent on the quality of answers given by respondents. Participants may have given poor responses or not answered questions due to them not fully understanding the questions or not wanting to provide information on that question.

While there are strengths and limitations to all methods, using a quantitative approach was deemed the most appropriate method for the aim and objectives of this research.

3.6.2 Merits and Limitations of Social Media Marketing Campaign

The social media marketing campaign utilised in phase two has a number of advantages. It was considered applicable to choose social media marketing as it serves as a means of promotion and online advertising (Machado & Davim, 2016). For instance, the researcher was able to efficiently promote online advertisements and promotional messages about walking and walking events to a specific target audience (Deshwal, 2016).

Due to the increased number of offline consumers now using digital technologies like the internet⁹² (Kannan & Li, 2017), it was possible to reach the desired target audience. Additionally, there are very little limitations on geographical reach when it comes to marketers promoting their products and services online (Yamin, 2017). Therefore, it was possible to target the sample population through a social media marketing campaign provided the participants used social media channels and do not restrict or block online advertisements (Marzan & Gonzales, 2014).

⁹² According to the CSO (2019), a total of 99% of young adults aged 16-29 used in the internet in the last 3 months in both 2018 and 2019. A total of 96% of adults aged 30-44 used the internet in 2018 and increased to 98% in 2019.

Utilising the social media marketing campaign allowed the researcher to gain access to a large audience while using social media platforms like Facebook and Instagram (Nadaraja & Yazdanifard, 2013). It was then possible to segment the population and only deliver ads to the specific target audience. Anyone outside of the target audience was not included in this study. Due to the nature and constructs of the AIDA model, there were a number of participants that were re-targeted. This meant, once an individual engaged with the advertisement, they were moved onto the next stage to be re-targeted. This would have been very difficult to achieve without the use of a social media marketing campaign based on the AIDA model. Promoting the advertisements and key messages with a social media marketing campaign allowed the researcher to promote targeted messages on social media platforms like Facebook and Instagram. This was an appropriate marketing method as it reached the precise target audience for the study (Carter, 2013). A further benefit to utilising a social media marketing campaign was it allowed the researcher to easily measure the effectiveness of the campaign and the online advertisements.

The researcher used Facebook Business Manager to construct the online advertisements. Once these advertisements were launched, Facebook Business Manager provided live analytics on the advertisements. This allowed the researcher to gather instant online engagement on each advertisement and was provided with an analysis of data in electronic form. It was important for the researcher to have access to these analytics as it showed which advertisements were performing better (Rihan, 2019). Good quality camera footage and images were used for the ads, alongside relative ‘text’ or ‘copy’⁹³. Finally, the social media marketing campaign allowed the researcher to deliver multiple advertisements with key messages to the target audience. This meant that any individual with the interest and desire to go walking was provided with relevant advertisements. This worked in conjunction with the AIDA model/sales funnel.

Contrary to these advantages, there are a number of disadvantages to using the social media marketing campaign in this methodology. The advertisements used during the social media campaign were delivered to a specific cohort. It was not possible to distinguish the difference between who is defined as a walker and non-walker. Therefore, both walkers and non-walkers would have been targeted during the campaign. This may have led to ‘walkers’ or ‘active people’ turning up to the walking event and guided-walk.

⁹³ The copy chosen for each advertisement was carefully considered by the researcher, each piece of text had to fit within the corresponding image/video. The text had to be catchy and easy to read.

However, the focus would have been to try attracting as many non-walker or inactive people as possible. An additional limitation was not being able to conduct the campaign during the summer months. The campaigns were conducted in the weeks leading up to the Christmas period. This may have impacted an individual's decision to turn up to the events (particularly hillwalking) as this period can be quite a busy time for people. Additionally, an uncontrollable variable like the weather may have had an impact on people turning up to the family walk day and the guided walk. If both campaigns and events were conducted in the summer months, perhaps there would have been a higher conversion rate as poor weather may negatively impact the participant's decision to go to the walking events.

As there was only one conversion for the Mountaineering Ireland campaign, it may be possible that the campaign was not long enough. Promoting hill-walking and influencing individuals to attend guided walks may be a longer process, as opposed to promoting a family day event. It could be suggested that there was more motivation for parents to bring their children walking in comparison to motivating an individual to go walking in the hills. As for this current study, there were more conversions for the family day event compared to the individual mountaineering event. This links to the AIDA Model that was utilised in the current thesis. As previously noted, this model describes the four steps in which an individual goes through to reach the desired behaviour. Perhaps as the individuals targeted in the Mountaineering Ireland campaign progressed through the sales funnel, there was less motivation, desire or interest for these individuals to engage in hillwalking.

For the ads delivered during the Mountaineering Ireland campaign, there was a degree of 'text' or 'wording' in the ads that may have impacted individuals' decision to attend the guided walk. Furthermore, the text used for the ads would have included the words 'mountains' and 'hills'. From just viewing the advert, people may assume that the guided walk was not for beginners, required a certain type of equipment for the hills, or was designed for advanced hikers. However, this was not the case as the guided walk was designed for any individual at beginners' level. This was stated on the Eventbrite landing page.

3.7 Analysis of Data

As quantitative methods were used in this research, the data received from the questionnaires and social media marketing campaign were numerical and statistical in

nature. To facilitate the analysis, statistical software programmes were used to ensure that an accurate analysis was carried out. For phase one and three questionnaires, SPSS Statistics 25 was utilised to process the data. To facilitate the analysis of phase two social media marketing campaign, Facebook Business Manager was used to track and record online engagement on the advertisements.

3.7.1 Analysis of Phase 1 and Phase 3 Questionnaires

For both phase one and three, IBM SPSS statistical 25 programme was used to analyse all data that was obtained from the questionnaires used in this research. Each question was analysed separately. SPSS was chosen as it is the most commonly used software package for statistical analysis in academia (Arkkelin, 2014). SPSS which stands for Statistical Package for Social Sciences (Bolarinwa, 2015), is a user-friendly programme designed for the transportation of data from one programme to another typically used in social sciences (Miller et al., 2002). It allows researchers to store numerical data and run various statistical tests on different variables and relationships. SPSS is utilised for data analysis to understand and interpret the results of the questionnaires. However, SPSS has some drawbacks to it. SPSS packages can be an expensive software to use and the license for obtaining it is not user-friendly (Paura & Arhipova, 2012). A further disadvantage to using SPSS is it can be a complex programme (Greasley, 2008). Furthermore, Ozgur et al. (2015) highlight that using SPSS for the first time can be difficult to operate.

Despite the drawbacks of the SPSS programme, the researcher felt it was most appropriate to gather the data from phase one and three through the use of quantitative measures. Time was taken by the researcher to learn how to correctly use SPSS to ensure the data analysis was accurate. Support was also provided from the primary supervisor involved in this research as they helped towards the learning and developing of SPSS skills. Moreover, training in SPSS was also provided by Waterford Institute of Technology. Having taken the time to learn these skills, the author of this thesis is now comfortable using statistical analysis.

3.7.1.1 Statistical Tests

There were a number of statistical tests carried out on the data obtained from phase one and phase three questionnaire. The data was made up of parametric (scale), non-parametric (nominal and ordinal) variables. These variables were appropriately designated within the SPSS dataset. Prior to conducting inferential statistical tests,

descriptive statistics were retrieved from the data. This included descriptive values such as mean values, standard deviations, minimum, and maximum. This also included frequency analysis which shows the number of occurrences of each response chosen by the respondents (percentage values). The final descriptive analysis included cross-tabulation. This test compares two variables of categorical data against each other. Following this, inferential statistics were computed. This involved the appropriate tests carried out on the variables derived from the dataset. The tests of most significance were the Independent Samples T-tests, One-Way Anova, Mann-Whitney U, Kruskal-Wallis, Binary Logistic Regression, Pearson correlations, Spearman Correlation and Chi-Square Goodness of Fit. The tests are described below:

- **Independent Samples T-test:** This test compares the mean scores of two groups on a given variable and determines whether they are significantly differenced;
- **One-Way Anova:** The One-Way Anova is used to determine a significant difference between the means of two or more groups, based on one independent variable. Also including Post-hoc Tukey HSD Test⁹⁴;
- **Mann-Whitney U:** This test is utilised to compare a significant difference between two independent groups when the dependent variable is either ordinal or continuous, but not normally distributed;
- **Kruskal-Wallis:** The Kruskal-Wallis test is the non-parametric alternative to a One-Way Anova, it determines if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable;
- **Binary Logistic Regression:** A Binary Logistic Regression is used to analyse relationships between a dichotomous dependent variable and categorical and continuous independent variables. Including the Chi-Square Goodness of Fit test⁹⁵;

⁹⁴ Following a One-Way Anova test, a Post-Hoc test is utilised to find out which specific group's means (compared with each other) are different.

⁹⁵ This test is a non-parametric test that determines if the observed value is significantly different from the expected value

- **Pearson R Correlation:** This test measures the strength and direction of the association between two continuous variables, that are normally distributed;
- **Spearman R Correlation:** The Spearman Correlation test measures the strength and direction of the association between two continuous variables, that are not normally distributed;

The tests above were utilised to analyse the data obtained in this research. It has been noted by many Authors that in social science, a P-Value of < 0.05 for statistical analysis is the standard level for concluding that there is a statistically significant difference in the data (Sarantakos, 2005; Mindrila & Balentyne, 2013; Vidgen & Yasseri, 2016). In the Presentation of Results chapter, any P-Value that is below 0.05 is deemed as statistically significant. Furthermore, the P-Value shows that the effect or difference in the data exists. However, it does not show the size of the effect. Therefore, the effect size for each statistical difference must be calculated to determine the magnitude of the difference. To measure the size of the effect within this research, Cohen's d effect size was employed. Cohen's effect size estimates can be categorised into a small effect size ($d = 0.2$), a medium effect size ($d = 0.5$), a large effect size ($d = 0.8$) and a very large effect size ($d = 1.3$) (Cohen, 1988; Lakens; 2013).

3.7.2 Analysis of Phase 2 Social Media Marketing Campaign

For phase two, Facebook Business Manager was used to examine the effectiveness of each online advertisement on Facebook and Instagram. As previously discussed, FBM is a marketing tool that creates, organises and manages advertising activities like campaigns and online advertisements (Newberry, 2019). Facebook Business Manager was used in this methodology as it allowed the researcher to gain access to Get Ireland Walking and Mountaineering Ireland Facebook pages and run the ads directly from those pages to the chosen target audience. These actions are all completed in one place. Facebook Business Manager provided information on online engagement in each advertisement. The first phase of analysing the social media marketing campaign was to examine the online engagement of each advertisement in both campaigns. The researcher assessed many different items of online engagement; for example, how many individuals viewed the ad, the average number of times the ad was viewed by one person, and the number of times the video advertisement was played. Table 7 demonstrates the items measured by Facebook Business Manager. These are standard digital marketing variables used to

measure the effectiveness of campaigns and ads. This provided the researcher with information on how the ads were performing. The left column states the items that were measured by FBM. The right column defines each variable.

Table 7 - Items Measured in Campaigns

Items Measured	Meaning
Reach	The number of people who saw the advert at least once
Impressions	The number of times that the ad was on-screen
Frequency	The average number of times that each person saw your ad
Link Clicks	The number of clicks on links within the ad that led to destinations on or off Facebook
CPC (Cost per link click)	The average cost for each link clicks
CTR (Click-through rate)	The percentage of times people saw your ad and performed a link click
Unique Clicks	The number of times people performed a click
Post Reactions	The number of reactions on the ads. The reaction button on Facebook allows people to share different reactions on the content. Example, like, love, wow, sad, laughing, angry
Post Comments	The total number of comments on the ads
Post Saves	The total number of times the ad has been saved
Post Shares	The total number of times the ad has been shared. Example, shared on timeline/news feed, shared on a profile or to other Facebook friends
ThruPlays	The number of times that the video ad was played for at least 15 seconds
Cost per ThruPlay	The average cost of each Thru play

Facebook Business Manager provided statistics on how each ad was performing. The researcher was able to view the current status of the ad, the budget spent, the objective of the ad, how many times the objective of the ad was achieved, how many people the ad reached, and how many times the ad showed up in front of people’s screens. In addition to this, Facebook Business Manager indicated the number of link clicks on each ad. Furthermore, a link click demonstrated that a person clicked on the specific link that was

attached to the ad. This link automatically directed the individual to a destination, outside of Facebook. The unique link was directed to the landing page of Eventbrite. The researcher was also able to gain an understanding of the click-through rate of the ad and the cost per click of the ad. The click-through rate can represent the percentage of people who clicked on the specific Facebook advertisement (Goward, 2013). Cost per click is the amount of money spent on the advertising campaign, the price you pay for each click in your marketing campaigns (Kelly, 2013). The full results can be viewed in the presentation of the results chapter in section 4.8.

3.8 Ethical Issues and Clearance

The first step to ethical clearance was to submit a comprehensive ethical report and research proposal to the ethics committee of Waterford Institute of Technology. Both reports requested information on the methodologies utilised, the research sample population and the location of the research. Once this was satisfactory, ethical approval was granted by the research ethics committee for the study to then be conducted. The researcher undertook a number of ethical procedures and precautions proposed by Sarantakos (2005, page 15). The guiding principles for researchers to ensure that ethically sound research is carried out is outlined below. Research proposals must:

- Obtain approval from the ethics committee;
- Provide information on the type of questions being asked;
- Provide concern for the welfare of the participants;
- Seek voluntary and informed consent;
- Respect respondents' rights;
- Uphold confidentiality at all times;
- Keep the researcher records secure and safe.

One of the main ethical issues in relation to any social research project is that no false information should be portrayed to the participants (Sarantakos, 2005). To decrease the likelihood of this ethical implication occurring, all participants were fully informed about the purpose and scope of the research when approached by the researcher to complete the questionnaire. According to Bryman (2004), confidentiality is an essential element when it comes to research. Therefore, the researcher ensured that confidentiality was treated with the utmost importance throughout the lifespan of this research. The researcher

adhered to GDPR regulations⁹⁶. There was no personally identifiable information of the participants collected by the researcher. All data was safely and securely stored to eliminate any exposure of data. In relation to phase two of this study, utilising a social media marketing campaign does not collect any personal information from participants. Facebook does not collect names, email addresses, phone numbers, personal profiles, or any identifiable information in the type of advertisements used in this research.

This cross-sectional study involved surveying participants who differed in regard to their gender, socioeconomic status, educational background and ethnic group. Therefore, the wording of each questionnaire was carefully considered, and a neutral language was used. It is important to note that the methodological procedures and data collections methods were ethically sound. The study did not involve any tests or experiments on human subjects, nor was there any sensitive information required in this study. The researcher made every effort to make a positive contribution to the welfare of all participants involved. In doing so, the rights of the participants were respected.

3.9 Conclusion

This chapter sought to outline the research methods used to conduct this study. What was put forward in this chapter was the justification for each methodological tool used in each phase. The use of quantitative methods allowed the researcher to collect numerical data from a large population sample, which answered the research questions from this study. Utilising a social media marketing campaign for phase two allowed the researcher to effectively promote online advertisements and promotional messages about walking and walking events to the specific target audience. The social media marketing campaign was deemed an appropriate method of communication to promote walking to the population sample. The aims, objectives and research questions of this study allowed the researcher to investigate, collect and measure the effects a social media marketing campaign had on encouraging the target population to attend walking events, thus increasing walking participation. The next chapter will outline and discuss the research findings from the data obtained in phase one, two and three of this research. These results are constructed around the research questions of this study.

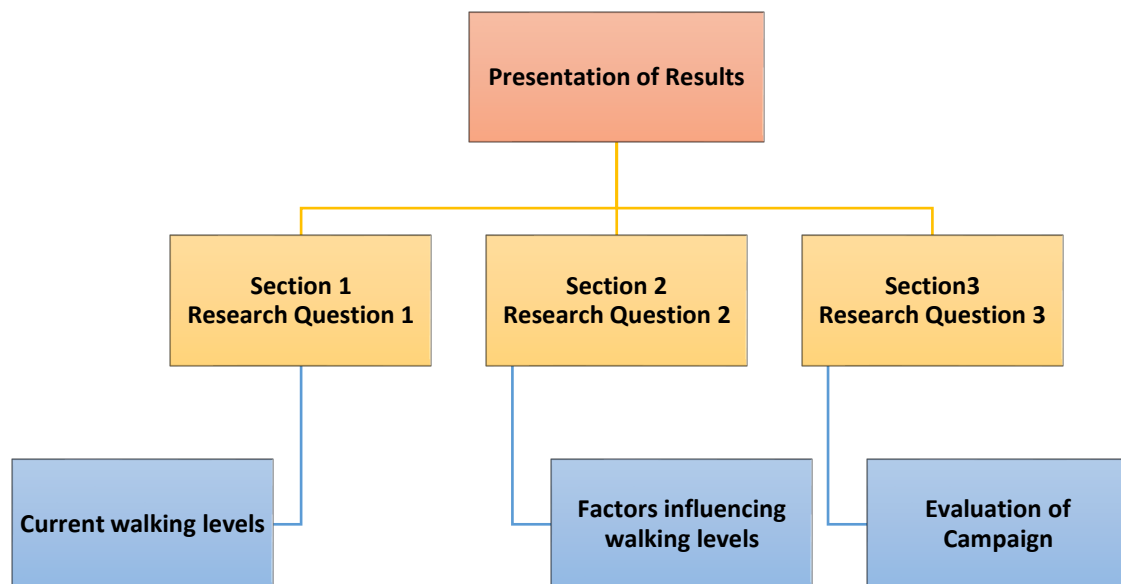
⁹⁶ GDPR (General Data Protection Regulation) is a European legal law and framework that sets guidelines for the collection and processing of personal identifiable information of European citizens

Chapter Four: Presentation of Results

4.1 Introduction

This chapter presents and analyses the main findings from the data obtained in phase one, two and three of the research. The chapter is broken down into three respective sections structured around the research questions, as illustrated in Figure 29. Prior to explaining the results, an overview of the general characteristics from the sample population of phase one, two and three are provided. Following this, research question one which was based on the current walking levels of the chosen cohort is presented. Research question two based on the factors influencing walking levels will then be examined. Finally, research question three based on the effectiveness of the social media marketing campaign is assessed.

Figure 29 - Layout of Presentation of Results Chapter



Prior to discussing the results, it is essential to note that the sample population is divided into ‘active respondents’, also known as walkers and ‘non-active respondents’, also regarded as non-walkers. To determine the difference, the national physical activity guidelines were utilised. These guidelines suggest that adults should perform at least 30 minutes of moderate physical activity⁹⁷ five times per week (150 minutes per week). Any individual who achieved the recommended guidelines on a typical week was regarded as an active respondent or a walker and any individual who did not was referred to as a non-active respondent or non-walker.

⁹⁷ The intensity of physical activity can be categorised by a person’s energy expenditure (metabolic equivalent - MET) For instance, moderate physical activity like brisk walking is between 3 and 5.9 METs.

4.2 Characteristics of Sample Population in Phase One

In phase one, a questionnaire was administered to the chosen target population. The sample size required for this research was determined using a sample size calculator. The tools needed for this calculation are the total population size⁹⁸, the confidence level⁹⁹, and the margin of error¹⁰⁰. The smaller the margin of error, the more confidence a researcher may have in their results. According to the CSO 2016 statistics, the population size for 25-45-year-olds in County Waterford was 31,304 (this is the total population). The industry standard confidence level was set at 95% and the margin of error at 5%. At these levels, the sample size needed equated to 380 participants. In the end, a total of 400 participants were surveyed.

Of the sample of 400 individuals, 60.5% (n = 242) were female, and 39.5% (n = 158) were males living in County Waterford. As seen in Table 8, this sample group is broken down into 20-24 years (16%), 25-29 years (15.3%), 30-43 years (20.8%), 35-39 years (30.5%) and 40-44 years (17.5%). Out of the 400 individuals surveyed, 37.3% (n = 149) were walkers, and 251 (62.8%) were non-walkers based on the classification profile utilised.

Table 8 - Demographic Characteristics of Phase One Sample Population

Baseline Characteristics	Population Sample		
		(n)	%
Activity Levels	Walkers	149	37.3%
	Non-Walkers	251	62.7%
Gender	Male	158	39.5%
	Female	242	60.5%
Age	20-24 years	64	16.0%
	25-29 years	61	15.3%
	30-34 years	83	20.8%
	35-39 years	122	30.5%
	40-44 years	70	17.5%

⁹⁸ The total number of people whose opinion or behaviours your sample will represent

⁹⁹ The probability that your sample accurately reflects the attitudes of your population. The industry standard is 95%

¹⁰⁰ A percentage that tells you how much you can expect your survey results to reflect the views of the overall population. The smaller the margin of error, the closer you are to having the exact answer at a given confidence level.

4.2.1 Home Locations of Phase One Respondents

Figure 30 details the home locations of participants that emerged from phase one survey results. These are represented by the green flags pinned on the map. The greatest number of respondents were living in Waterford City (n = 291). The remaining respondents were dispersed across County Waterford, including areas like Portlaw, Kilmeaden, Kilmacthomas and Tramore.

Figure 30 - Home Location of Participants



4.3 Characteristics of Sample Population in Phase Two

In phase two, a social media marketing campaign was implemented and delivered to the chosen target population who were users of Facebook and Instagram. According to the CSO census 2016, there were 116,176 people living in County Waterford (total population). The CSO figure for the total population was segmented into 25-45-year-old male and females living in Waterford (n =31,304)¹⁰¹. Table 9 shows a breakdown of the 31,304 individuals by age and gender.

As previously noted, the social media campaigns consisted of four stages. For stage one of the Get Ireland Walking campaign, the advertisement reached¹⁰² a total of 15,348

¹⁰¹ This is the estimate population sample that the researcher was aiming to target.

¹⁰² The reach is the number of unique people that saw the advertisement on Facebook or Instagram.

individuals. Following this, stage two targeted the lookalike audience¹⁰³ which reached an additional 5,042 individuals. Overall, for campaign one, the combined reach for stages one and two were 20,390 males and females between the ages of 25-45 years old. The researcher was able to reach a total of 65.1% of the estimated CSO population outlined above. In campaign two, stage one advertisement reached a total of 18,312 males and females between the ages of 25-45. As stage two included the lookalike audience, a further 3,192 people were reached. The combined reach for stages one and two of this campaign was 21,504 which equated to 65.1% of the CSO population.

Stage three and four were known as the retargeting stages. Specifically, stage three audience involved targeting any individual that engaged¹⁰⁴ with stage one and two advertisements. The total number of individuals reached in stage three for campaign one was 2,814 and in campaign two was 2,240. The fourth stage of the campaigns included anyone who engaged¹⁰⁵ with stages one, two and three advertisements. The total reach for campaign one in stage four was 2,034. As previously noted in the methodology chapter, campaign two had two attempts at promoting the guided walk. Therefore, there were two advertisements delivered to anyone who engaged with stages one, two and three. The first advertisements reached 2,105 individuals. However, as this event did not go ahead due to no registrations, there was a second ad delivered. The second advertisement reached 1,979 people. Table 9 presents the number of individuals reached by the online advertisements in each stage. A breakdown of the age categories and gender is also illustrated. In Table 9, campaign two stage four, the number (1) refers to the first advertisements utilised in this stage and the number (2) refers to the second attempt.

¹⁰³ To reiterate, the lookalike audience involves Facebook algorithm identifying the qualities, characteristics and demographic features of anyone who engaged with the stage one online advertisement (this was the first audience). From these characteristics and demographic data, the researcher was able to create (via Facebook Business Manager) another audience, the lookalike audience. Creating a lookalike audience is a way of reaching new people who have similar interests and characteristics to the target audience in stage 1. This increased the number of individuals that the online advertisement was delivered to.

¹⁰⁴ Engagement refers to a number of actions people take involving posts/ads. This includes liking, reacting, commenting, sharing, clicking on links, and viewing videos. One action from one individual counts as one engagement

¹⁰⁵ Refer to the previous footnote on engagement

Table 9 - CSO Total Population and Facebook/Instagram Re-targeting Population

CSO Results				Facebook Business Manager Results							
Sample Population				Campaign 1				Campaign 2			
25-45-year-old male and females				Stage 1	Stage 2	Stage 3	Stage 4	Stage 1	Stage 2	Stage 3	Stage 4
Total		31,304		15,348	5,042	2,814	2,034	18,312	3,192	2,240	(1) 2,105
Reach											(2) 1,975
Gender	Male	15,244	Male	6,292	3,420	969	658	9,220	1,617	1,246	(1) 1,169
											(2) 1,128
	Female	16,060	Female	8,856	1,558	1,817	1,356	8,844	1,548	959	(1) 904
											(2) 822
Age	25-29 years	6,261	25-34 years	6,992	2,310	1,163	841	8,612	1,463	865	(1) 813
											(2) 737
	30-34 years	7,562	35-44 years	7,770	2,586	1,529	1,111	8,976	1,608	1,258	(1) 1,179
											(2) 1,134
	35-39 years	9,027	45-54 years	584	146	122	82	724	121	1117	(1) 113
											(2) 108
	40-44 years	8,454									

4.4 Characteristics of Sample Population in Phase Three

Participants in phase three were individuals who registered for either events on the Eventbrite website and attended the family walk day or guided walk. In section 4.8, the number of individuals who registered for the events is discussed. It is important to note that not everyone who registered on the Eventbrite websites attended the events. For campaign one, there was a total of 16 families that attended the family walk day. For campaign two, there was one participant for the guided walk.

4.5 Presentation of Results

The following sections will outline the results for each respective research question. As already noted, active respondents (walkers) are individuals who meet the national physical activity guidelines, whereas non-active respondents (non-walkers) may still engage in physical activity but not enough to meet the requirements. The questions from the surveys can also be viewed in

4.6 Research Question 1: What are the Current Walking Levels of 25-45-year-old Male and Females in Waterford?

This section will provide information on the current walking levels of the chosen target population. The physical activity levels are broken down in days and minutes walking for recreation and days and minutes walking for utilitarian purposes. The results are further divided by gender, age and active and non-active respondents.

4.6.1 Current Walking Levels

The analysis presented in Table 10 illustrates the mean walking levels (minutes) for the overall sample population (N = 400) and is then segmented into a number of different variables. For instance, gender, age, work commitments, dog ownership, membership of a club, car ownership, walkers and non-walkers. As previously noted, walkers are the individuals who meet the national physical activity guidelines and non-walkers are those who may still be active but not enough to meet the physical activity requirements.

It is necessary to note that the data presented for physical activity levels is self-reported, meaning the respondent's answers may be somewhat arbitrary and bias (Steene-Johannessen et al., 2016). This analysis was completed in conjunction with the guidelines for data processing and analysis based on the International Physical Activity questionnaire (IPAQ, 2005). Any outliers that were present were re-coded in accordance with the IPAQ statistical analysis guidelines. The IPAQ scoring protocol (2005) proposes

that moderate physical activity is met when an individual performs one of the following; (1) 5 or more days of moderate physical activity and/or walking of at least 30 minutes per day, (2) 3 or more days of vigorous-intensity activity of at least 20 minutes per day, (3) 5 or more days of any combination of walking, moderate-intensity or vigorous-intensity activities achieving a minimum total physical activity of at least 600 MET-minutes per week. Achieving any of the above recommendations would be classified as 'meeting the national physical activity guidelines'. In this study, the guidelines used were 5 days of at least 30 minutes PA, accumulating to 150 minutes per week.

As outlined in Table 10, the average day's active respondents engaged in walking was 3.64 (± 1.547) days per week, in comparison to non-active respondents who engaged in 2.08 (± 0.851) days per week. The mean minutes walking for recreation for walkers was 79.48 (± 27.88) minutes per day, whereas the mean minutes walking for recreation for non-walkers is 43.15 (± 22.15) minutes per day. Additional findings showed that the mean value for days walking for utilitarian¹⁰⁶ for walkers was 5.01 (± 1.520) days. Furthermore, the results for minutes walking for utilitarian walkers is 122.52 (± 94.14) minutes. However, there was a high incidence of utilitarian walking for the non-active participants of 5.27 (± 0.804) days and 165.60 (± 97.37) minutes. It can be suggested that some respondents are meeting the national physical activity guidelines through utilitarian walking but not recreational walking. Further conversation in the discussion chapter will examine the discrepancy between these findings.

In the table below, the mean values for days walking for recreation and utilitarian are presented. Moreover, the minutes walking for recreation and utilitarian (per day) are illustrated, along with the standard deviation (\pm) of the mean values.

¹⁰⁶ Utilitarian walking can be defined as a type of walking for transport, walking from a to b, walking in work or walking for daily jobs. It is important to note that utilitarian walking levels was not used to determine if the participants met the national physical activity guidelines, only the levels walking for recreation were utilised to determine this.

Table 10 - Phase One Participant's Current Walking Levels

		Days Walking for Recreation	Minutes Walking for Recreation	Days Walking for Utilitarian	Minutes Walking for Utilitarian	Total Time Walking for Recreation	Total Time walking for Utilitarian
Overall (N=400)		2.67 (± 1.38)	56.39 (± 30.0)	5.17 (± 1.13)	149.55 (± 98.30)	153.2 (± 123.58)	778.4 (± 502.74)
Active/Non-Active	<i>Walker</i>	3.64 (± 1.54)	79.48 (± 27.88)	5.01 (± 1.52)	122.52 (± 94.14)	268.22 (± 136.04)	641.71 (± 497.36)
	<i>Non-Walker</i>	2.08 ($\pm .861$)	43.15 (± 22.15)	5.27 ($\pm .804$)	165.60 (± 97.37)	87.23 (± 38.63)	859.64 (± 489.06)
Gender	<i>Female</i>	2.98 (± 1.36)	59.69 (± 28.97)	5.22 (± 1.12)	134.14 (± 87.83)	177.6 (± 137.6)	702.9 (± 462.4)
	<i>Male</i>	2.19 (± 1.29)	51.29 (± 30.93)	5.11 (± 1.138)	173.16 (± 108.57)	115.3 (± 85.37)	894.1 (540.18)
Age	<i>20-24</i>	2.83 (± 1.57)	50.16 (± 35.62)	4.97 (± 1.65)	76.25 (± 57.87)	149.19 (± 144.34)	393.9 (± 281.42)
	<i>25-29</i>	2.74 (± 1.71)	44.58 (± 27.54)	4.84 (± 1.57)	115.08 (± 96.63)	138.91 (± 122.18)	605.24 (± 556.92)
	<i>30-34</i>	2.73 (± 1.32)	68.31 (± 31.33)	5.37 ($\pm .744$)	172.84 (± 84.26)	183.67 (± 133.87)	904.1 (± 408.50)
	<i>35-39</i>	2.61 (± 1.23)	57.44 (± 26.93)	5.25 ($\pm .826$)	160.61 (± 81.94)	151.65 (± 121.92)	835.36 (± 416.70)
	<i>40-44</i>	2.47 (± 1.20)	56.09 (± 24.91)	5.30 ($\pm .823$)	199.71 (± 122.60)	135.36 (± 85.70)	1032.8 (± 602.21)
Average Hours of Work Commitments	<i><10</i>	3.00 (± 1.41)	45.00 (± 21.21)	5.00 ($\pm .00$)	270.00 (± 42.42)	150.00 (± 127.27)	1350.00 (± 212.13)
	<i>10-20</i>	3.11 (± 1.85)	56.58 (± 27.79)	5.37 ($\pm .761$)	109.21 (± 62.94)	209.47 (± 195.54)	573.42 (± 326.32)
	<i>21-30</i>	2.57 (± 1.02)	56.94 (± 33.35)	5.20 (.683)	160.00 (± 66.70)	149.25 (± 126.63)	808.88 (± 308.53)
	<i>31-40</i>	2.46 (± 1.092)	59.01 (± 28.96)	5.24 ($\pm .965$)	171.86 (± 89.95)	136.16 (± 72.48)	899.22 (± 469.17)
	<i>>40</i>	2.45 (± 1.56)	58.04 (± 29.25)	5.22 (± 1.15)	230.90 (± 128.64)	152.64 (± 159.09)	1185.13 (± 643.69)
Dog Ownership	<i>Yes</i>	2.64 (± 1.28)	56.14 (± 30.71)	5.15 (± 1.14)	147.94 (± 102.24)	146.19 (± 101.48)	767.82 (± 521.96)
	<i>No</i>	2.72 (± 1.61)	57.03 (± 28.20)	5.25 (± 1.09)	153.74 (± 87.51)	171.17 (± 166.59)	806.17 (± 449.89)
Member of a Sports Club	<i>Yes</i>	2.55 (± 1.50)	47.09 (± 31.04)	5.17 (± 1.25)	89.08 (± 61.38)	131.62 (± 105.29)	473.33 (± 320.16)
	<i>No</i>	2.70 (± 1.35)	58.98 (± 29.23)	5.18 (± 1.09)	166.36 (± 100.08)	159.22 (± 127.71)	863.28 (± 511.66)
Car Ownership	<i>Yes</i>	2.58 (± 1.274)	58.60 (± 29.18)	5.21 ($\pm .995$)	164.81 (± 95.83)	151.15 (± 110.25)	859.24 (± 490.64)
	<i>No</i>	3.09 (± 1.79)	45.38 (± 31.79)	5.01 (± 1.64)	73.73 (± 72.165)	163.48 (± 176.36)	377.01 (± 347.15)

4.7 Research Question 2: What Factors are Influencing 25-45-year-old Male and Female Walking Levels in Waterford?

Firstly, the current walking levels are cross compared against age and gender. Following this, walking levels are examined based on average working hours, parenthood¹⁰⁷, sports club membership, car ownership and pet ownership. Finally, binary logistic regression analysis is presented (controlling for the above variables) to explore the impact of personal circumstances on whether an individual meets the recommended guidelines or not. The last two sections will discuss the factors influencing active respondents (walkers) and non-active respondents (non-walkers), in accordance with section B and C of phase one survey which can be viewed in Appendix F – Phase One Questionnaire, page 326.

4.7.1 Current Walking Levels Compared Against Gender and Age

There was a significant difference between males and females, ($t(393) = 5.556, p < .05$), with females (Mean = 177.68, SD = 137.65) walking more for recreation in comparison to males (Mean = 115.32, SD = 85.37). The magnitude of the difference in the means (Mean Difference = 62.364, 95% CI: 40.29 to 84.43) was medium according to Cohen's effect size estimates ($d = 0.5$).

Table 11 - Walking Levels Compared Against Gender

Group Statistics			Levene's Test for Equality of Variance		t-test for Equality of Means		
Gender	Mean	Std. Deviation	F	Sig.	t	Sig. (2-tailed)	
Females	177.68	137.65	EQA ¹⁰⁸	11.804	.001	5.047	.000
Male	115.32	85.37	EQNA ¹⁰⁹	-	-	5.556	.000

¹⁰⁷ Relating to the number of children in the family

¹⁰⁸ EQA – Equal Variances Assumed

¹⁰⁹ EQNA – Equal Variances Not Assumed

A one-way between-groups analysis of variance was conducted to compare levels of walking for recreation by age categories. Participants were divided into five groups according to their age (20-24 years; 25-29 years; 30-34 years; 35-39 years and 40-44 years). There was no statistically significant difference between age groups and walking for recreation, $F(4, 390) = 1.859, p = .117$. Furthermore, post-hoc analysis using the Tukey HSD test indicated that there was no significant difference comparing age groups against each other.

4.7.2 Factors Affecting Walking Levels

This section sought to cross-compare the independent variables against walking levels (dependent variables). As previously noted, the following variables are examined: average working hours, parenthood, sports club membership, car ownership and pet ownership.

4.7.2.1 Participant's Average Working Hours

Just over three-quarters (75.3%, $n = 301$) of the overall respondents stated that they had work or care commitments in a typical week, while 24.8% ($n = 99$) stated that they did not. As presented in Figure 31, of those who stated that they had work or care commitments, a minority of respondents (0.7%, $n = 2$) indicated that they worked less than 10 hours per week, 6.3% ($n = 19$) of respondents worked between 10-20 hours per week, 17.9% ($n = 54$) worked 21-30 hours per week, and 16.9% ($n = 51$) worked more than 40 hours per week. A large proportion of the respondents revealed that their average working hours were between 31-40 hours per week (58.1%, $n = 175$)

Figure 31 - Average Working Hours

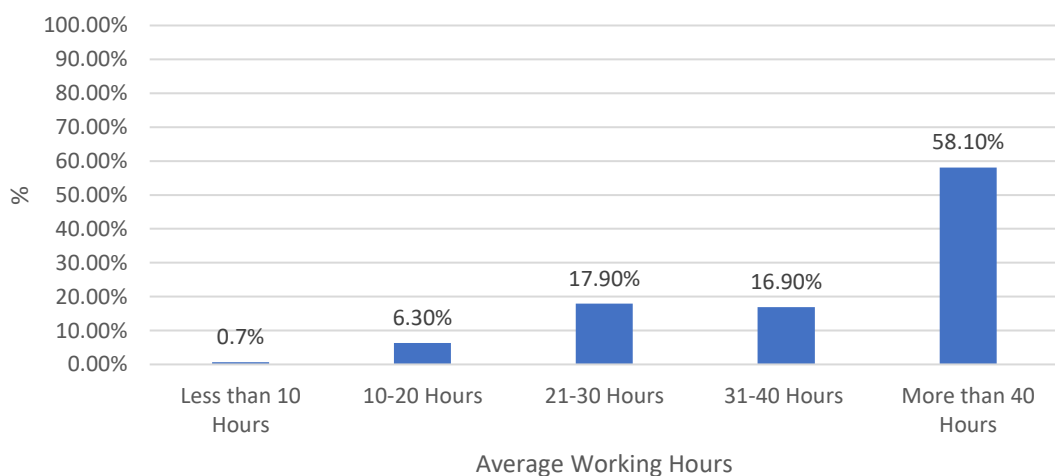
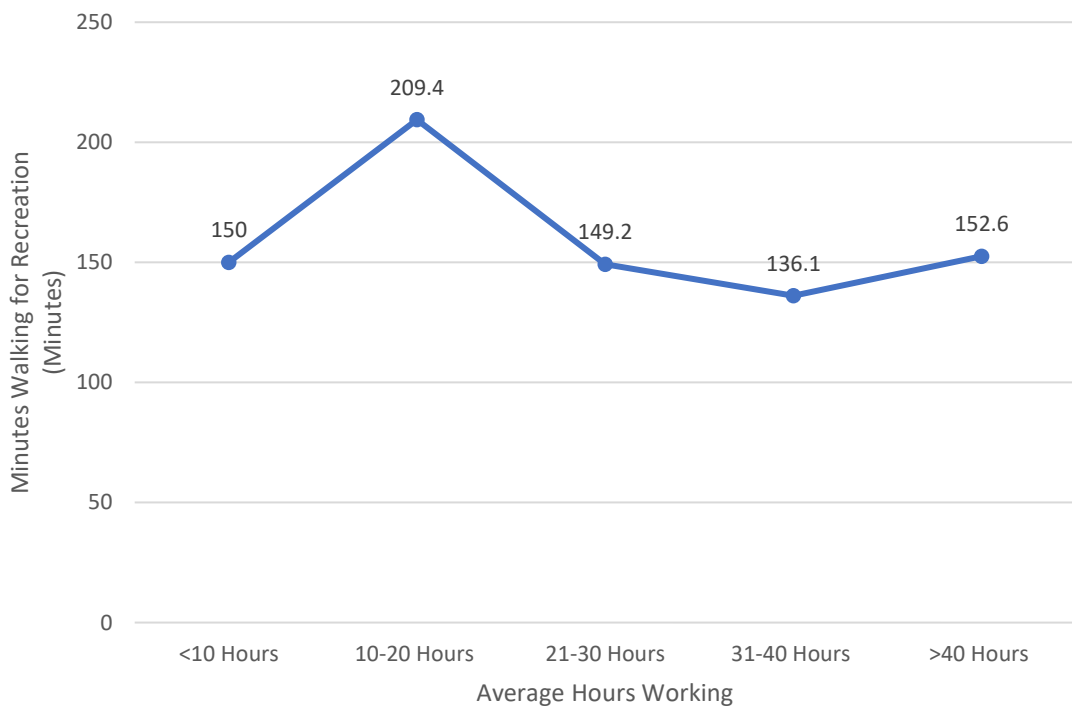


Figure 32 presents the mean values for the average minutes walking for recreation against the number of working hours. For participants working less than 10 hours, the total time walking for recreation was 150 minutes. For 10-20 hours, the mean value for total time walking for recreation was 209.4. This figure began to decrease as participants worked longer hours. For instance, the total time walking for recreation between the hours of 21-30 was 149.2, and for 31-40 hours was 136.1.

Figure 32 - Minutes Walking for Recreation Compared Against Working Hours



A one-way ANOVA was conducted to compare the difference between time walking for recreation and the average hours of work. The categories for working hours was segmented into five groups (less than 10 hours, 10-20 hours, 21-30 hours, 31-40 hours, and more than 40 hours). No significant difference between the age groups and time walking for recreation was found ($F(4, 293) = 1.892, p = .112, d = 0.1$). A post-hoc test comparison utilising the Tukey HSD test was conducted to determine if a between-group difference occurred. However, across all age groups, there was no significant difference found.

Participants were also asked to identify how they travel to work or care commitments. A total of 6% ($n = 18$) of the respondents stated that they walk to work while only 0.3% ($n = 1$) cycle and 0.3% ($n = 1$) use public transport to get to work. A high proportion (93.3%,

n = 279) of respondents noted that they use their car. Overall, a low number of respondents incorporate physical activity as a form of getting to work.

4.7.2.2 Number of Children

Participants were asked to identify the number of children they had in a creche, primary school and secondary school. As can be seen in Table 12, participants reported having at least one child or more attending creche (Mean = 1.29, SD = .454), primary school (Mean = 1.50, SD = .630) or secondary school (Mean = 1.59, SD = .61).

Table 12 - Number of Children in Schools

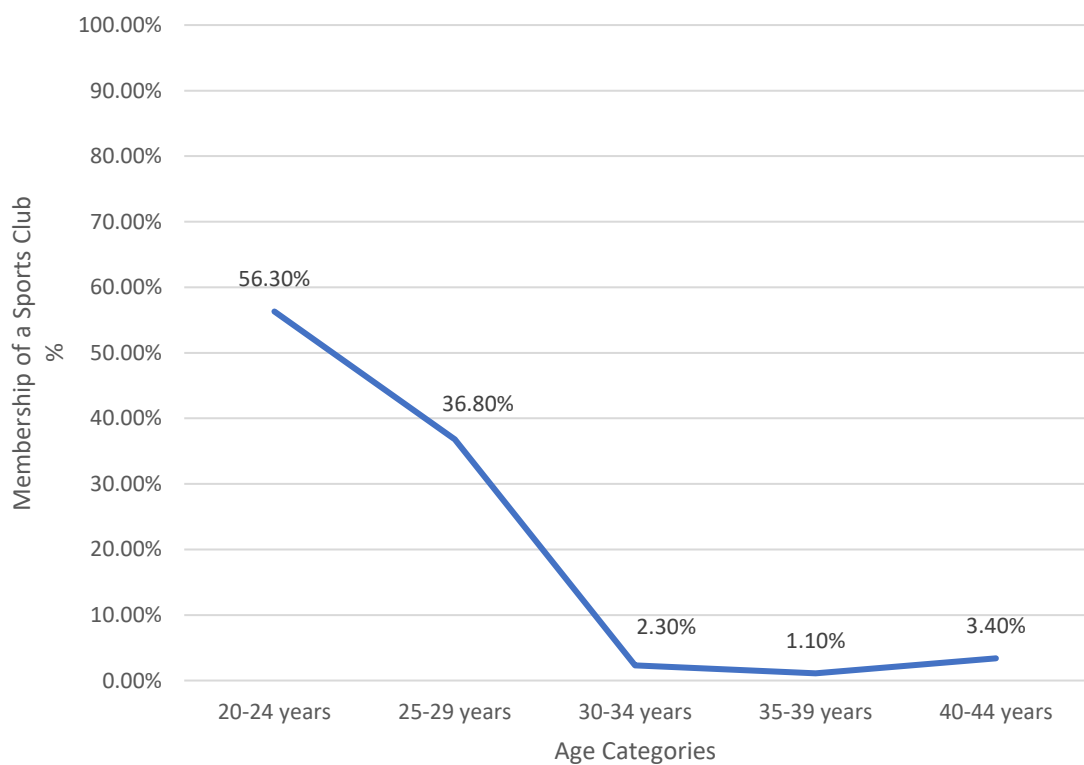
	N	Min	Max	Mean	Std. Deviation
Children in Creche	184	1	2	1.29	.454
Children in Primary School	179	1	3	1.50	.630
Children in Secondary School	61	0	3	1.59	.61

The relationship between total time walking for recreation and having children was investigated using a Pearson Correlation. No correlation was found however between the two variables ($r = .015$, $p = .809$). A Spearman Correlation was also used to examine the relationship between time walking for recreation and having a child, based on gender and age. The age groups were categorised into 20-24-year-olds, 25-29 years, 30-34 years, 35-39 years and 40-44 years old. There were no statistical analyses completed for ages 20-24 as one of the variables was constant; for instance, no children were presented. For females ($r = .151$, $p = .746$.) and males ($r = .303$, $p = .697$) in the age category of 25-29, there was no correlation noted between time walking for recreation and having children. There was also no correlation for females between the ages of 30-34 ($r = -.022$, $p = .882$), while there was a moderate significant correlation for males ages 30-34 ($r = .471$, $p = 0.10$). For the remaining age categories (35-39 and 40-44), there was no correlation between having children and total time walking for recreation.

4.7.2.3 Participant's Membership of a Sports Club

Results found that 21.7% (n = 87) of respondents cited that they were a member of a sports club. This included clubs for traditional sports and any other organization that provided opportunities to engage in physical activity for recreation, exercise or sport. Figure 33 presents a cross-comparison of membership of a sports club against age categories. Being a member of a sports club was more associated with the younger age categories of 20-24 years (56.3%, n = 49) and 25-29 years (36.8%, n = 32) in comparison to the older age categories. An independent samples t-test indicated that there was no significant difference between total time walking for recreation and being a member of a sports club, $t(393) = 1.837$, $p = .067$, $d = 0.1$.

Figure 33 - Participant's Membership of a Sports Club



4.7.2.4 Participant's Ownership of a Car

A high proportion of participants (83%, n = 333) stated that they owned a car, whilst only 16.8 % (n = 67) stated that did not. An independent samples t-test carried out demonstrated that there was no statistically significant difference between total walking time and car ownership ($t(393) = .547$, $p = .586$, $d = 0.05$). The two groups included in this test were individuals who owned a car (Mean = 151.15, SD = 110.25) and participants who did not own a car (Mean = 163.48, SD = 176.36).

4.7.2.5 Pet Ownership

Findings from the data indicated that 72.3% ($n = 289$) of respondents owned a dog. In addition to this, results demonstrated that out of the 289 respondents that stated that they owned a dog, 39.4% ($n = 114$) were walkers and 60.5% ($n = 175$) were non-walkers. Further results showed that 26.8% (34 out of 114) of walkers and 42.8% (75 out of 175) of non-walkers stated that walking their dog was a reason to take part in physical activity. An independent samples t-test was carried out to compare dog ownership and total time walking for recreation. There were two groups included in this analysis; individuals who owned a dog (Mean = 146.197, SD = 101.49) and individuals who did not own a dog (Mean = 171.17, SD = 166.60). No significant difference found between the two groups, $t(393) = 1.476$, $p = .142$. According to Cohen's effect size estimates, the effect size was below small ($d = 0.1$).

4.7.3 Correlates of Walking Compared Against Independent Variables

A binary logistic regression was utilised to analyse the relationship between a dichotomous dependent variable (has two values) and the categorical and continuous independent variables. The logistic regression combines the independent variables to estimate the probability that a particular event will occur. In this case, these independent variables were analysed to explore the likelihood of them having an impact on whether participants would meet the national physical activity guidelines or not. More specifically, the regression tests conducted assessed the following independent variables: gender, age, number of children, hours of work commitment, membership of a sports club, car ownership, dog ownership, and distance travelling to work. Multiple tests were carried out using logistic regression controlling for the above variables. The independent variables examined in this section were chosen on the basis of previous literature, covered in the review of literature chapter, section 2.2.5.

Logistic regression analysis controlling for gender was statistically significant (Chi-square goodness of fit, $df(1) = 14.615$, $p = .000$), indicating that the model was able to establish the impact gender had on meeting the PA guidelines. The model explained between 3.6% (Cox and Snell R square) and 4.9% (Nagelkerke R squared) of the variance in gender, and correctly classified 62.7% of cases. While only controlling for gender, females were 2.3 times more likely to meet the national physical activity requirements for walking ($B = .833$, $S.E = .223$, $Exp(B) = 2.300$, $p = .000$).

A further logistic regression test was conducted controlling for age categories, while also examining males and females. This test showed a significant effect (Chi-square goodness of fit, $df(5) = 20.269$, $p = .001$). The regression test was able to describe 4.9% (Cox and Snell R square) and 6.7% (Nagelkerke R squared) of the variance in age, while the accuracy rate was 63.7%. When controlling for age and gender, females were still 2.27 times more likely to meet the physical activity guidelines ($B = .823$, $S.E = .225$, $Exp(B) = 2.278$, $p = .000$). It was also highlighted that age had no impact on meeting the PA guidelines.

A binary logistic regression was again carried out in order to establish the impact of gender and the number of children a participant had on the likelihood of being a walker or non-walker. The Cox and Snell R square value was 2.3%, and the Nagelkerke R square value was 3.1%, while correctly classifying 63.5% of the cases. Controlling for the number of children in a household and gender, females were 1.9 times more likely to be a walker ($B = .646$, $S.E = .272$, $Exp(B) = 1.909$, $p = .018$). However, the number of children did not have an impact on the likelihood of meeting the PA requirements ($B = .044$, $S.E = .145$, $Exp(B) = 1.045$, $p = .762$). Finally, a regression test was carried out on the impact of owning a dog had on the likelihood of meeting the PA requirements, while also controlling for age and gender (Chi-square goodness of fit, $df(6) = 24.202$, $p = .000$). The regression test explained between 5.9% (Cox and Snell R square) and 8% (Nagelkerke R squared) of the variance in dog ownership and accurately classified 63.5% of cases. The analysis found that if an individual owned a dog, they were 1.6 more times more likely to meet the national PA requirements compared to non-owners ($B = .496$, $S.E = .253$, $Exp(B) = 1.642$, $p = .050$). Accounting for the same variables included in the analyses, females were 2.3 times more likely to meet the PA requirements ($B = .849$, $S.E = .227$, $Exp(B) = 2.337$, $p = .000$).

When controlling for age and gender, there was no statistically significant impact on hours of work commitments and meeting the national physical activity requirements (Chi-square goodness of fit, $df(5) = 6.118$, $p = .295$). Additional results demonstrated that owning a car also had no impact on whether you meet the PA requirements ($B = .022$, $S.E = .400$, $Exp(B) = 1.023$, $p = .959$), as well as being a member of a sports club ($B = -.519$, $S.E = .371$, $Exp(B) = .595$, $p = .162$), and the distance travelling to work ($B = -.002$, $S.E = .008$, $Exp(B) = .998$, $p = .784$).

4.7.4 Current Walking Levels for Active and Non-Active Respondents

For this analysis, a series of independent sample t-tests were conducted to compare differences between total time walking for recreation for active and non-active respondents based on their age and gender. The overall results demonstrated that there was a significant difference found between active and non-active participant's total time walking for recreation ($t(393) = -15.608, p < .05$). Notably, active respondents scored higher for walking more for recreation (Mean = 268.22, SD = 136.04), when compared against the non-walkers (Mean = 87.23, SD = 38.63). The mean difference was -180.9, with a 95% confidence interval (-203.9 to -158). Utilising Cohen's d estimates, the effect size was calculated to $d = 1.8$, indicated a very large effect size.

When these findings were compared against age, there was a statistically significant difference found across all age groups ($p < .05$). The age groups were segmented into 20-24, 25-29, 30-34, 35-39 and 40-44 years. Further analysis also found a significant difference when the total time walking for recreation was compared against genders ($p < .05$).

4.7.5 Factors Affecting Walking Levels – Active Respondents (Walkers)

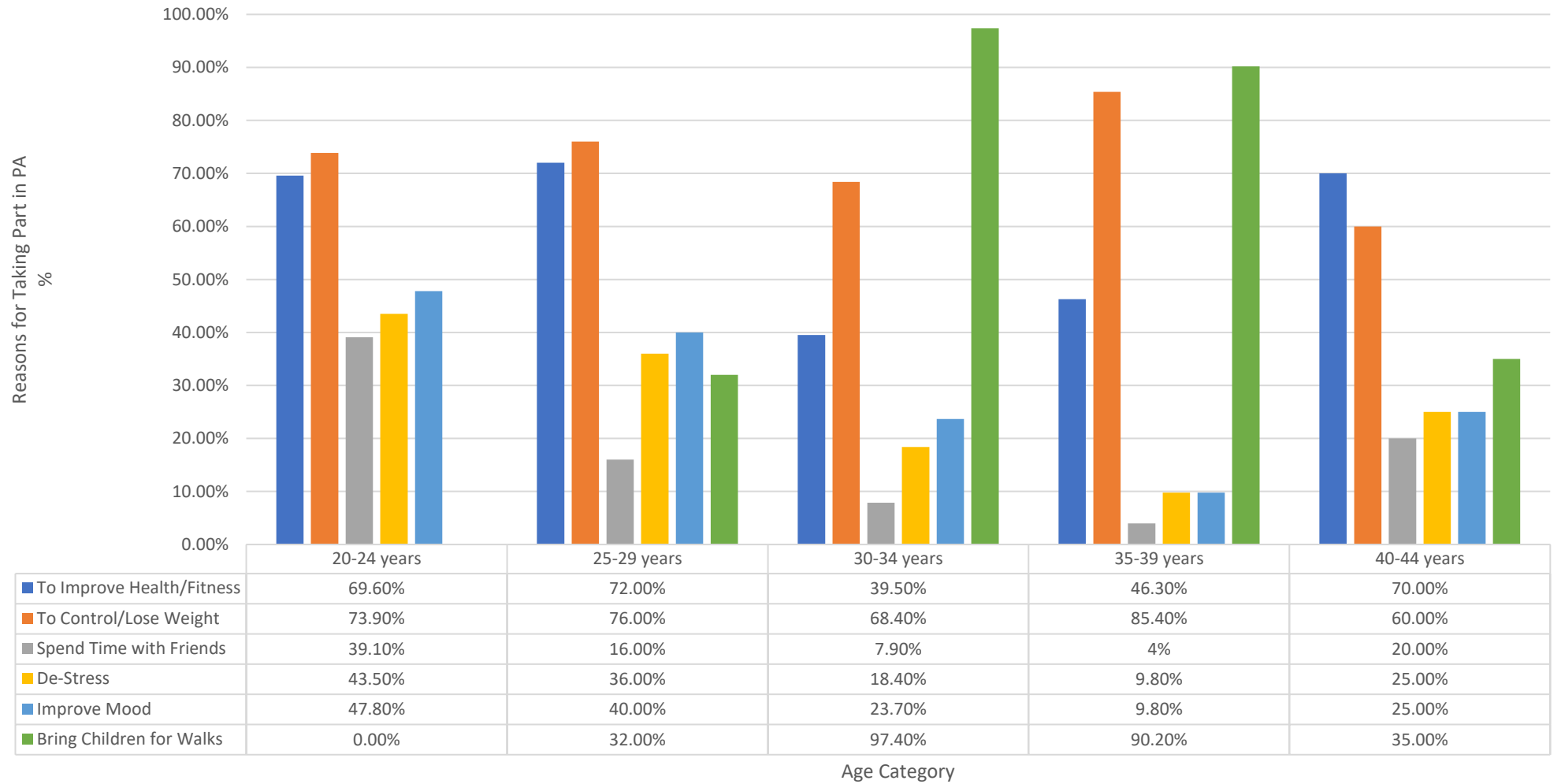
This section will identify the factors that impact physical activity levels of active respondents, also known as walkers. These individuals meet the national physical activity guidelines of 30 minutes of moderate-intensity physical activity, performed five times per week.

4.7.5.1 Reasons for Taking Part in Physical Activity – Active Respondents

The following data is related to the primary reasons why active participants took part in physical activity. As this question was presented in a multiple-choice format, the percentage of cases for multiple responses is shown in Figure 34. Overall, findings from the data indicated that to control or lose weight was one of the main reasons for taking part in physical activity (74.1%, $n = 109$). Following this was to bring children for walks (60.5%, $n = 89$), improve health and fitness (55.8%, $n = 82$), improve mood (26.5%, $n = 39$), De-stress (23.8%, $n = 35$), and spend time with friends (14.3%, $n = 21$). This information was cross compared against gender and age. Figure 34 demonstrates the reasons for taking part in physical activity compared to age categories. Improving health and fitness was most popular amongst the younger age categories of 20-24 years (69.9%, $n = 16$), 25-29 years (72.0%, $n = 18$) and the older age category of 40-44 years (70.0%, $n = 14$). To control and lose weight reported a high percentage from 35-39 years (85.4%,

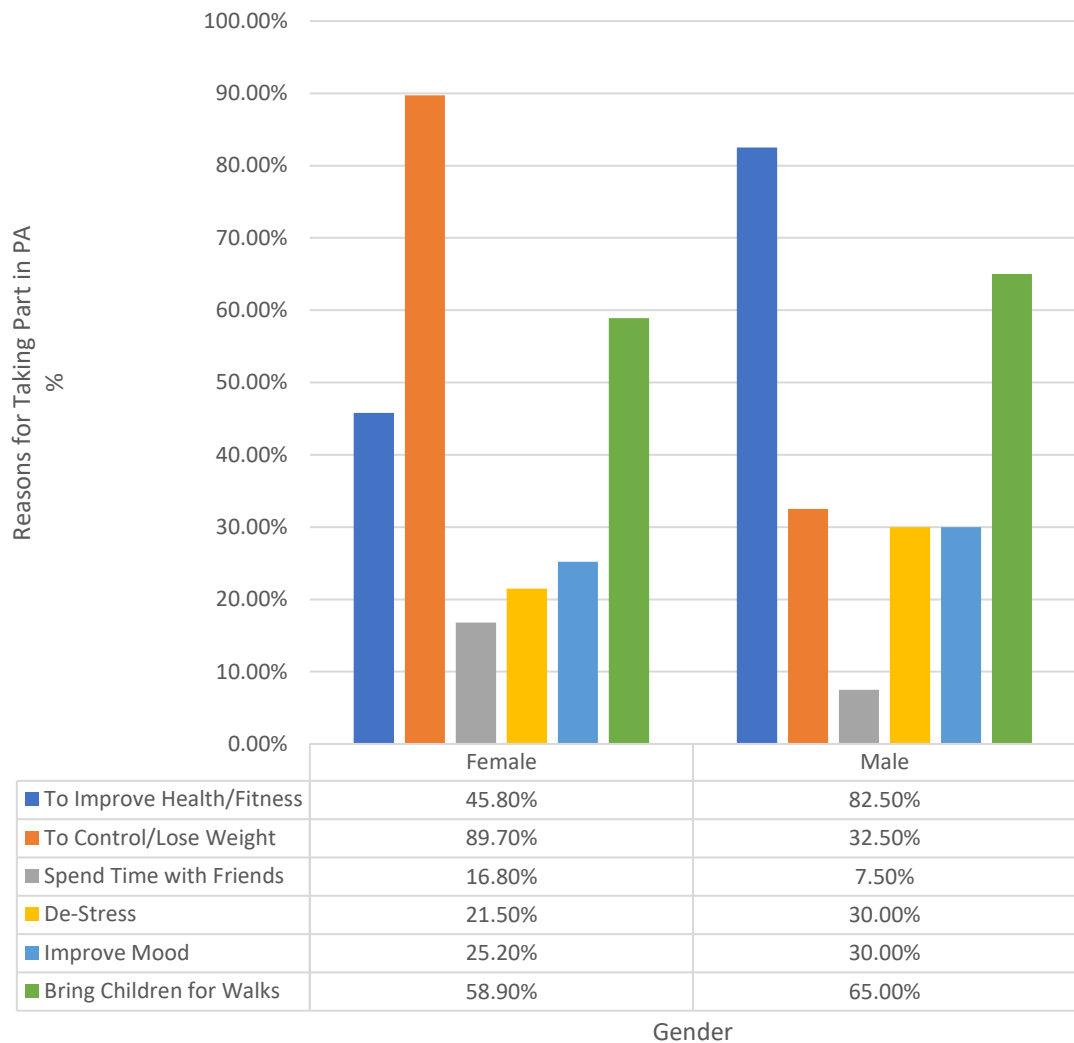
n = 35). Spending time with friends (39.1%, n = 9), de-stress (43.5%, n = 10), and improve mood (47.8%, n = 11) was more associated with 20-24-year olds. Lastly, to bring children for walks was highest amongst 30-34 years (97.4%, n = 37) and 35-39 years (90.2%, n = 37).

Figure 34 - Reasons for Taking Part in Physical Activity Compared Against Age (Percentage of Cases)



The reasons for walking were then cross compared with gender (male and female). Results identified in Figure 35 show that improving health and fitness was highest amongst males (82.5%, n = 33), whereas, to control and lose weight was highest amongst females (89.7%, n = 96). Spending time with friends was more associated with female walkers (16.8%, n = 18). Male walkers scored higher for de-stress (30.0%, n = 12), improve mood (30.0%, n = 12) and bring children for walks (65.0%, n = 26).

Figure 35 - Reasons for Taking Part in Physical Activity Compared Against Gender (Percentage of Cases)



4.7.5.2 Reasons Why Active Respondents Prefer Walking Over Other Activities

Figure 36 presents the percentages derived from active walkers in relation to why they prefer walking over other activities such as running, jogging and cycling. This question was conducted on a Likert scale using the following variables; strongly disagree, disagree,

no opinion, agree and strongly agree. From the overall results, there were low percentages for disagreeing and strongly disagreeing with all reasons to prefer walking over other activities. For instance, only 18.8% (n = 28) of respondents disagreed with the statement to go walking on their own as opposed to playing team sports (2.7%, n = 4, strongly disagreed and 16.1%, n = 24, disagreed).

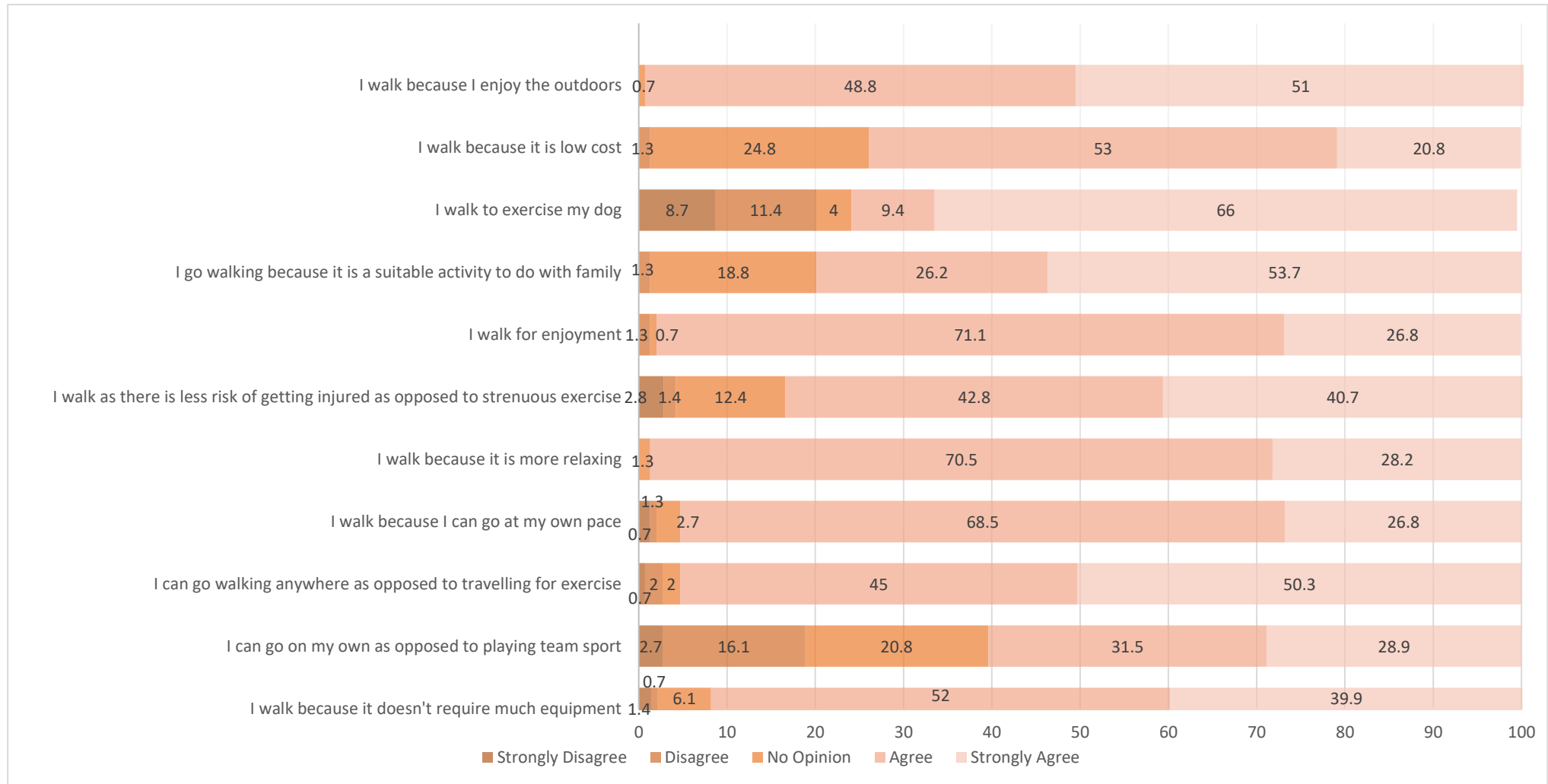
Some of the highest percentages were found for participants agreeing to go walking because they enjoy the outdoors, with 99.3% (n = 148) of respondents stating this (51%, n = 76, strongly agreed and 48.3%, n = 72, agreed). A total of 75.8% (n = 113) of participants claimed that they prefer walking as they can exercise their dog (66.4%, n = 99, strongly agreed and 9.4%, n = 14, agreed). Lastly, walking over other activities was deemed a suitable activity to do with the family amongst 79.9% (n = 119) of participants (53.7%, n = 80, strongly agreed and 26.2%, n = 39, agreed). Additional results show that 71.1% (n = 106) of respondents agreed that they walk for enjoyment, a further 70.5% (n = 105) agree that they walk because it is more relaxing than other activities and a high proportion of respondents (68.5%, n = 102) highlighted that they walk because they can go at their own pace.

Having explored the overall results for why active users prefer walking, a Mann-Whitney U test was computed to determine if there is a significant difference between genders. Across all variables, there was only one significant difference found for 'I walk because I can go at my own pace', with females (Mean rank = 70.95) more likely to state this compared to men (Mean rank = 85.66). The Mann-Whitney U value was found to be statistically significant, $U = 1777.0$ ($Z = -2.287$), $p = .022$. The effect size was calculated to $d = 0.3$ which represented a small effect size according to Cohen's effect size estimates.

Following this, a Kruskal-Wallis test was conducted to determine the overall effect of participants age compared against the reasons why they prefer walking over other activities. This question was presented in the form of a Likert scale. Within SPSS, the values for each option are as follows: Strongly Agree (1), Agree (2), No Opinion (3), Disagree (4), and Strongly Disagree (5). This meant the lowest mean rank found in the results would represent the extent to which participants agreed with the statement. For instance, the first statistically significant difference was for 'I walk to exercise my dog', ($df(4) = 10.238$, $p = .037$). The highest mean rank for this statement was 82.74 for ages 30-34, while the lowest was a mean rank of 60.31 for ages 20-24, and 60.80 for ages 40-

44. This meant, walking your dog was more associated with 20-24 and 40-44-year olds. Further results indicated a significant difference for going walking because 'it is a suitable activity to do with family' ($df(4) = 67.026, p = .000$). The highest reported mean value for this statement was 118.46 for ages 20-24 and the lowest mean rank was 48.33 for individuals between the ages of 30-34 years. Moreover, this meant, walking because it is a suitable thing to do with family was most associated with the age category 30-34 years. Lastly, there was a significant difference for being able to 'go walking on your own as opposed to playing team sports', ($df(4) = 16.532, p = .002$). The highest mean rank for this category was 100.17 for individuals between the ages of 20-24 and the lowest mean rank for 35-39-year olds (mean rank = 63.30) and 40-44-year olds (mean rank = 66.0).

Figure 36 - Reasons Participants Prefer Walking Over Other Activities



4.7.5.3 Factors Encouraging Walking Participation in Active Respondents

Active respondents were asked to identify which of the following factors would encourage them to go walking more and take part in other walking activities. The percentage of cases for multiple responses are presented in this section. Findings from the data indicated that 16.3% (n = 24) of respondents would be encouraged to go walking more if they had better transport/access to walking activities. Out of all the factors, a large proportion of respondents indicated that having a variety of walking routes nearby would encourage them to walk more (92.5%, n = 136). The second highest factor that would encourage higher levels of walking was the need for more opportunities for walking activities and events (56.5%, n = 83). In relation to owning or having hillwalking equipment, 2.7% (n = 4) of participants stated that this would be an influential factor in walking more. The results yielded additional evidence that 16.3% (n = 24) of respondents were interested in knowing more about hiking and hillwalking opportunities. In addition to this, 6.8% (n = 10) of respondents wanted more knowledge about nearby hillwalking routes, and 22.4% (n = 33) wanted more knowledge about challenging walks like hiking or hillwalking. Lastly, 10.9% (n = 16) of active walkers wanted more walking groups to join.

The above information was cross compared with gender and age. Figure 37 illustrates the findings for gender and the factors that encouraged active respondents to go walking more. A total of 13.9% (n = 15) of females claimed that more walking groups would encourage them to walk more for recreation, in comparison to 2.6 % of males (n = 1). Wanting more knowledge about hillwalking routes nearby was prominent in males (10.3%, n = 4). Indeed, results indicated that more males (20.5%, n = 8) wanted knowledge about hiking/hillwalking opportunities in comparison to females (14.8%, n = 16).

Figure 37 - Factors Encouraging Walking Participation Compared to Gender (Percentage of Cases)

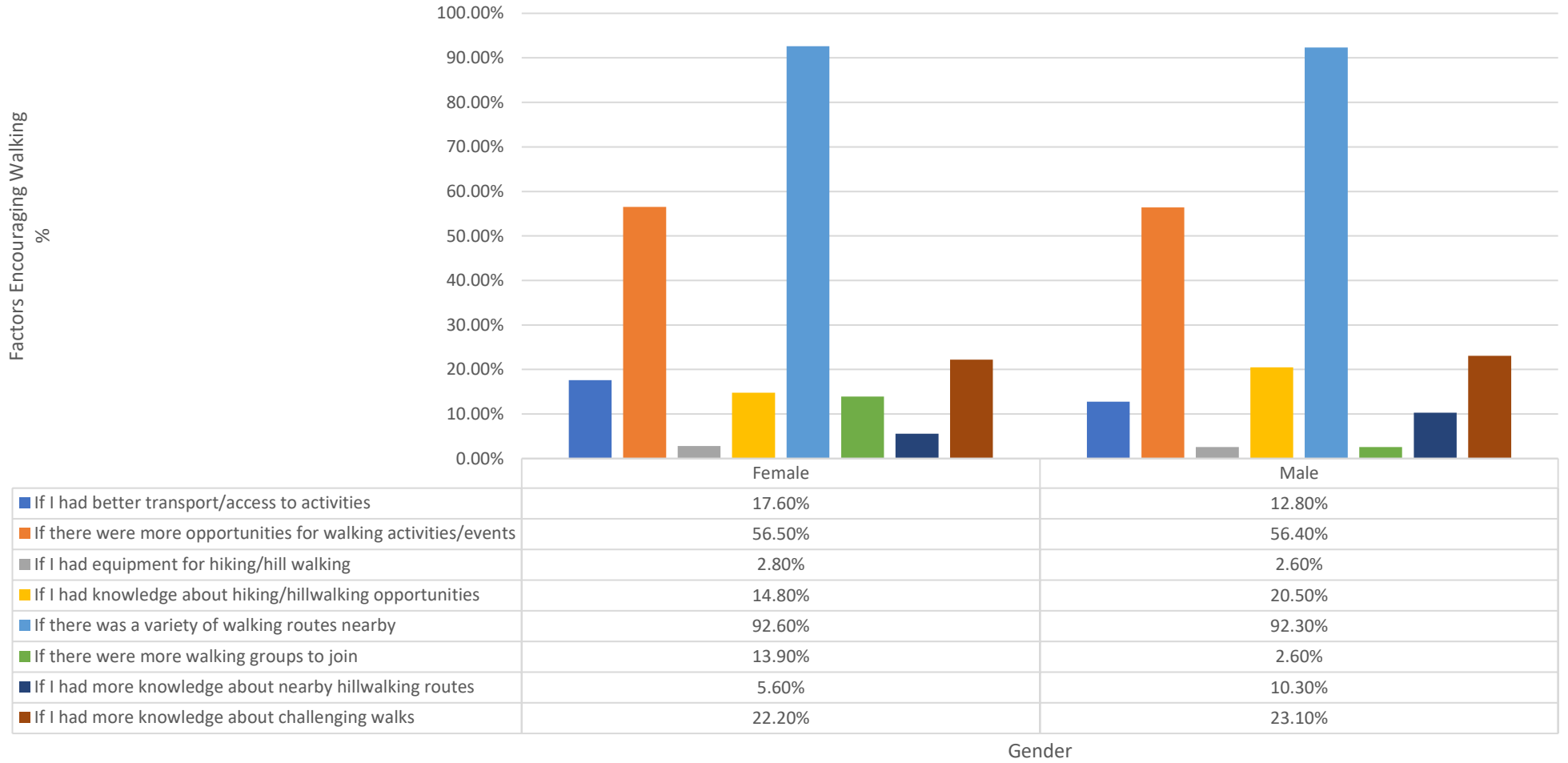
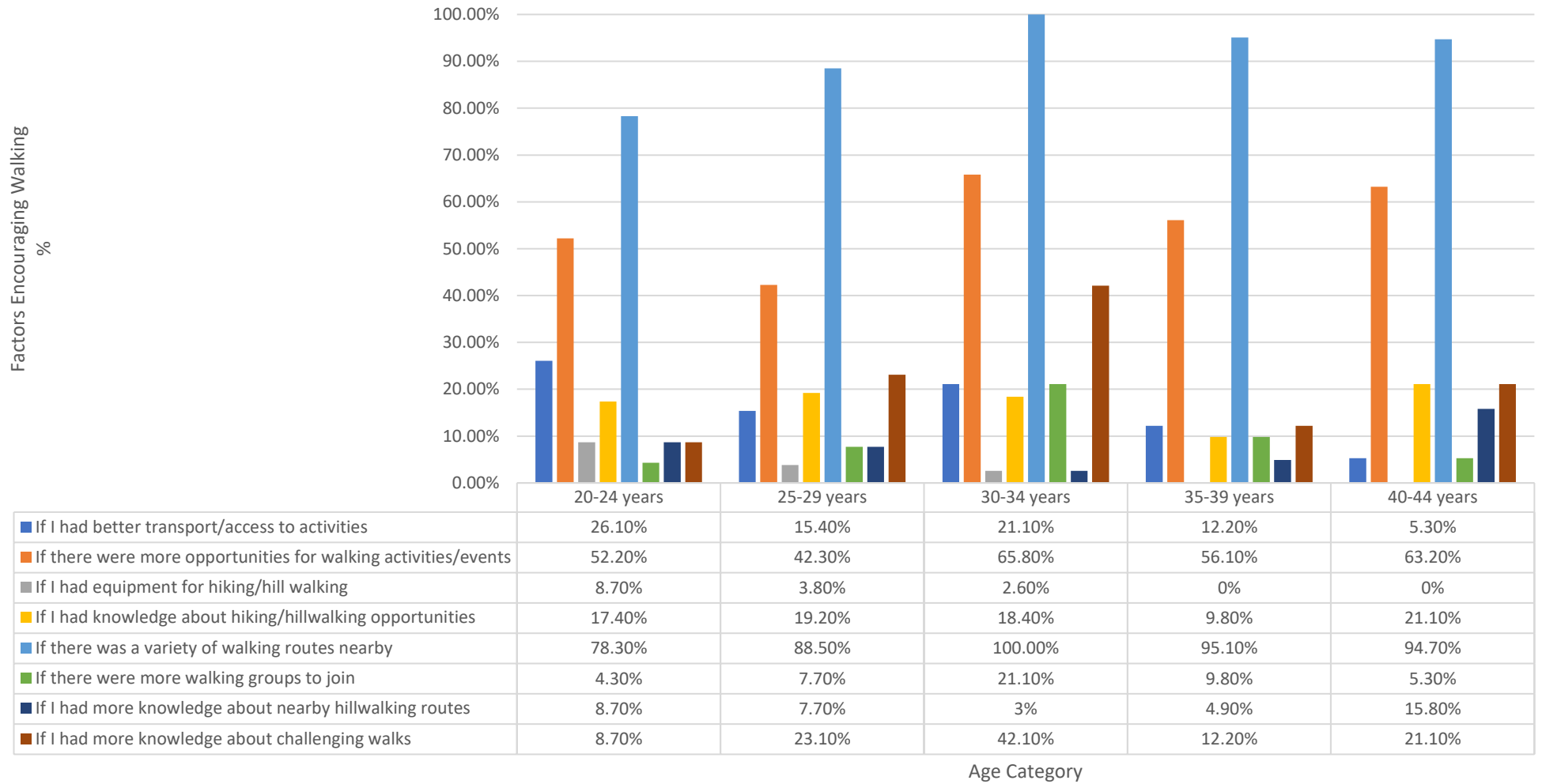


Figure 38 illustrates the cross-comparison between age categories and the factors that encourage active respondents to participate in walking more often. Participants between the ages of 20-24 stated that having better transport or access to activities would encourage them to participate in more walking (26.1%, n = 6). Having a variety of walking routes nearby was prominent in participants between the ages of 30-34 (100%, n = 38) and 35-39 (95.1%, n = 39). Additionally, individuals in the age category of 40-44 years wanted more knowledge about nearby hillwalking routes (15.8%, n = 3), whereas wanting more knowledge about challenging walks was highest in ages 25-29 (23.1%, n = 6) and 30-34 years (42.1%, n = 16). The latter three categories however did yield low response rates within the respective age groups.

Figure 38 - Factors Encouraging Walking Participation Compared to Age (Percentage of Cases)



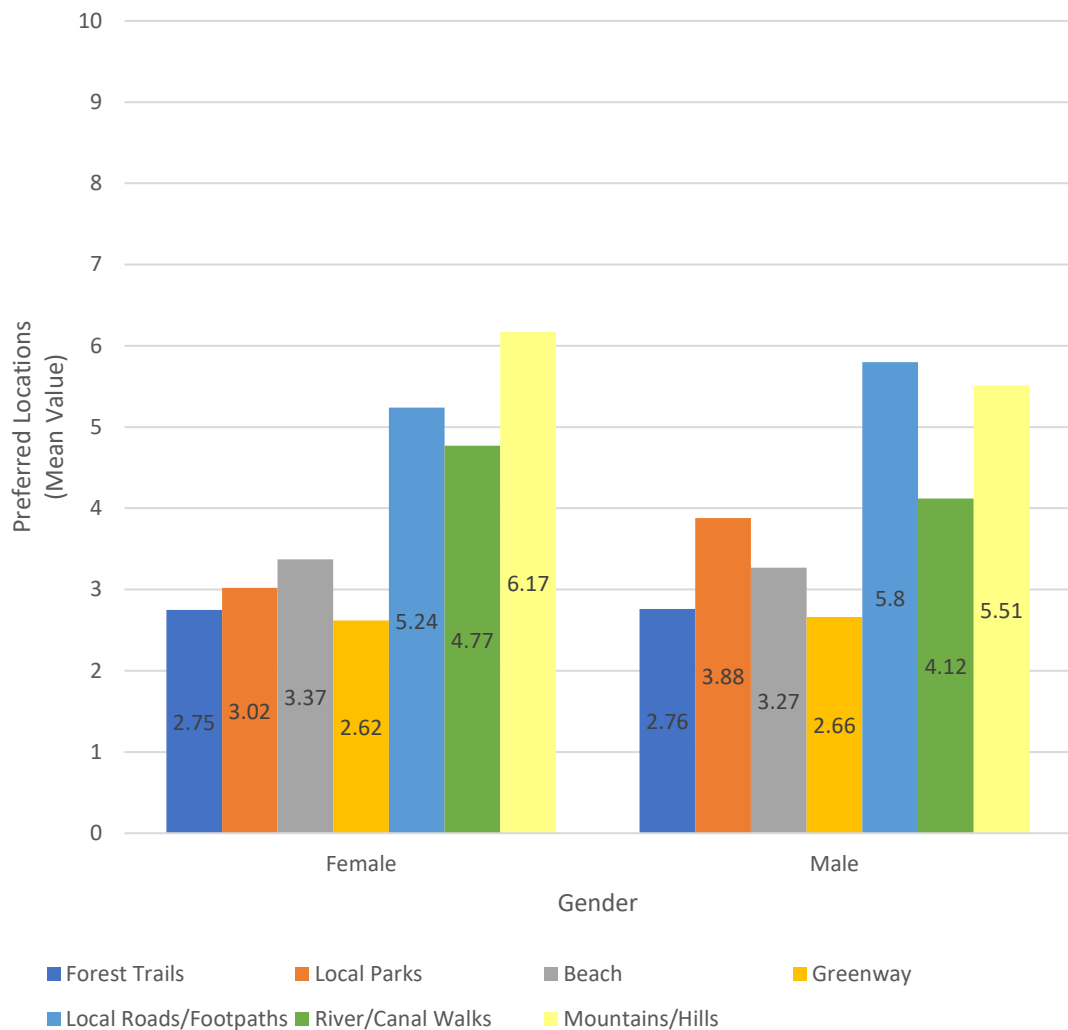
4.7.5.4 Most Preferred Place to go Walking for Active Respondents

Participants were asked to rank in order their most preferred place to go walking for exercise or recreation out of the following options: forest trails, local parks, beach, greenway, local roads/footpaths, river/canal walks, and mountains/hills. Within SPSS the subsequent values were set: 1 = most preferred place to go walking, 2 = second more preferred place to go walking, 3 = third-most preferred place to go walking, 4 = fourth most preferred place to go walking, 5 = fifth most preferred place to go walking, 6 = sixth most preferred place to go walking, and 7 – least preferred place to go walking.

Findings showed that the greenway ranked the most preferred place to walk with a mean value of 2.63 (SD = 1.708). Walkers indicated that forest trails (Mean = 2.75, SD = 1.250) was the second favourite place to go walking while local parks were ranked third place (Mean = 3.26, SD = 1.840). The fourth most preferred place ranked was the beach (Mean = 3.34, SD = 1.681), while rivers and canal walks were ranked 5th (Mean = 4.59, SD = 1.288), local roads and footpaths were ranked 6th (Mean = 5.39, SD = 1.834) and mountains and hills were ranked 7th (Mean = 5.99, SD = 1.325).

A series of independent samples t-tests was conducted to compare the above information against gender, as seen in Figure 39. A significant difference between both groups was found in local parks, $t(145) = -2.588$, $p = .011$, with females (Mean = 3.02, SD = 1.820) more likely to state local parks as their more preferred place to go walking, compared to males (Mean = 3.88, SD = 1.763). The calculated effect size for this significant difference was 0.5, indicating a medium effect size according to Cohen's d . There was also a statistically significant difference found in rivers and canal walks, $t(146) = 2.786$, $p = .006$, where males (Mean = 4.12, SD = 1.208) reported preferring this location over females (Mean = 4.77, SD = 1.278). This significant difference was also a medium effect size ($d = 0.5$). Finally, in relation to the mountains and hills, $t(146) = 2.756$, $p = .007$, males were more likely to indicate this location as a preferred place to go walking, with a mean value of 5.51 (SD = 1.583) in comparison to females (Mean = 6.17, SD = 1.169). This significant difference showed a medium effect size ($d = 0.5$). It should be noted that while differences exist in the latter two locations between genders, these areas did not rank high on either gender preferred location.

Figure 39 - Preferred Location Compared Against Gender

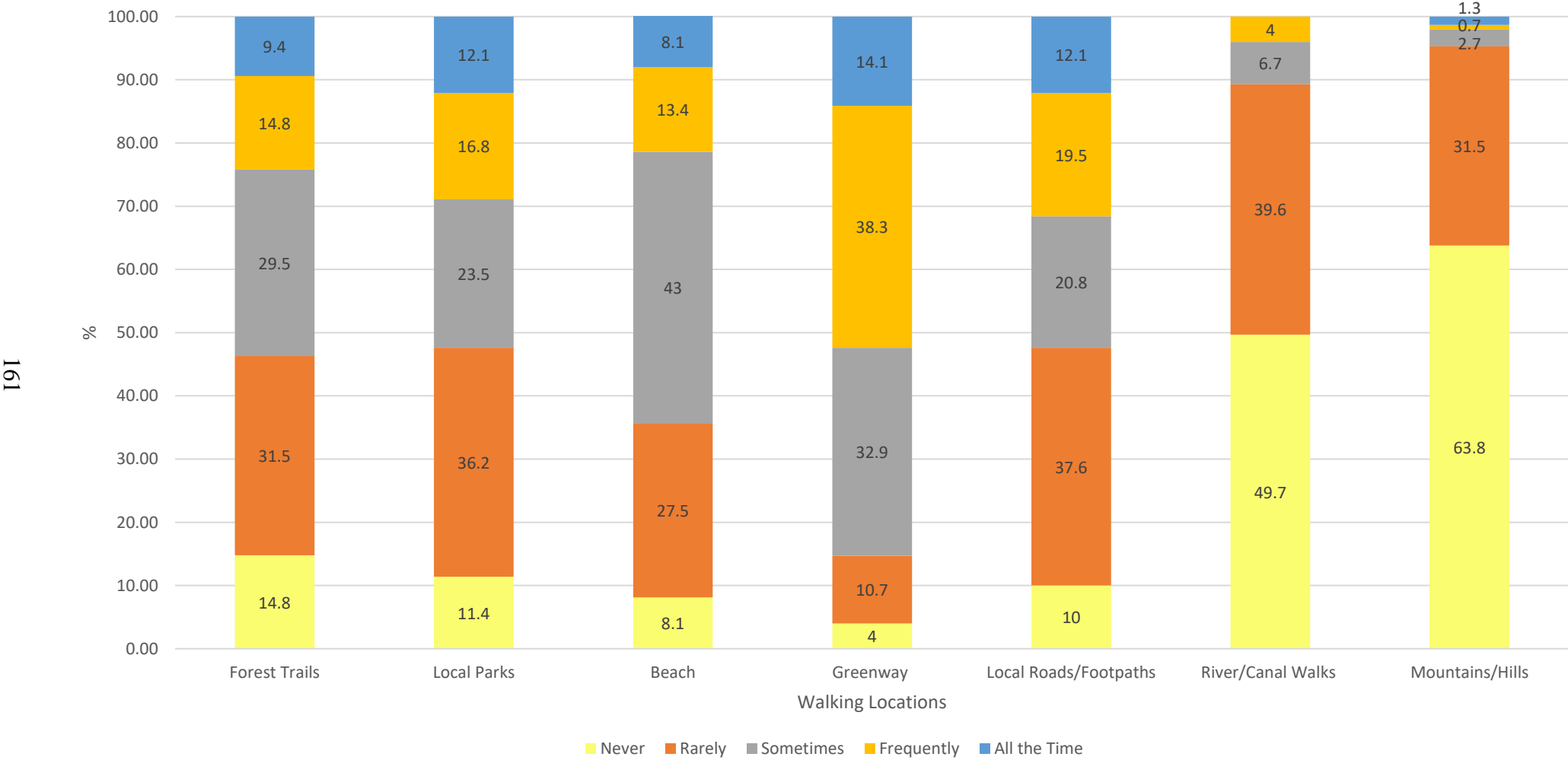


A one-way between groups analysis of variance was also conducted to compare preferred places to go walking and participants ages. There was a statistically significant difference between age groups for local parks ($F(4, 142) = 4.878, p = .001$). The effect size for local parks calculated to a small number using Cohen’s d ($d = 0.1$). There was also a statistical difference noted for river and canal walks ($F(4, 143) = 3.580, p = .008$). There was a very small effect size found for river and canal walks ($d = 0.3$). Post-hoc comparisons using the Tukey HSD test indicated that there was a significant difference for local parks between the age groups of 20-24 and 35-39 ($p = .006$) and 40-44 years and 35-39 years ($p = .007$). Further results showed a significant difference for river and canal walks between the age groups of 35-39 and 25-29 years ($p = .011$) and 35-39 years and 30-34 years ($p = .039$).

4.7.5.5 Frequency of Walking Locations for Active Respondents

This following question was presented in a Likert scale and within SPSS the following values were set for each option: Never (1), Rarely (2), Sometimes (3), Frequently (4), All the time (5). Each participant was asked to report how frequently they visited each of the following locations: forest trails, local parks, beach, greenway, local roads/footpaths, river/canal walks, and mountain/hills. Figure 40 illustrates the frequency at which active respondents visited specific walking locations. Results indicated that the Greenway was the most frequently used place to go walking (38.3%, n = 57), while river and canal walks (4%, n = 6) and the mountains and hills (0.7, n = 1) were the least frequently visited places. Additionally, as outlined in the previous section, whilst the local roads and footpaths were ranked the 5th least favourite place to go walking, the frequency shows some use for them with 19.5% (n = 29) of respondents reporting that they frequently walk on the local roads, while 20.8% (n = 31) stated sometimes and 12.1% (n = 18) said they use the local roads all the time.

Figure 40 - Times Visited Walking Locations for Active Respondents



4.7.6 Factors Affecting Walking Levels – Non-Active Respondents

Similar to the preceding sections, data was analysed to identify the factors affecting non-active respondents, also known as non-walkers. These individuals may engage in physical activity but not enough to meet the national physical activity guidelines of 30 minutes of moderate-intensity physical activity, performed five times per week.

4.7.6.1 Reasons for Taking Part in Physical Activity – Non-Active Respondents

The following results report the main reasons non-active respondents take part in physical activity. It is important to note that even though these participants are regarded as ‘non-active’, they still may be somewhat active, but not enough to meet the physical activity recommendations where they could be regarded as ‘active’ respondents. The percentage of cases based on a multiple response questions is first presented. For non-walkers, findings indicated that to control or lose weight was one of the primary reasons for taking part in PA (57.1%, n = 137). The second-highest recorded reason for taking part in physical activity was to bring children for walks (49.6%, n = 119). Following this was to improve health and fitness (47.9%, n = 115), improve mood (14.2%, n = 34), De-stress (13.8%, n = 33), and to spend time with friends (5.4%, n = 13).

The above reasons for taking part in physical activity were cross compared with age categories. To improve health and fitness was more associated with the lower age categories of 20-24 years (62.9%, n = 22) and 25-59 years (67.7%, n = 21). This variable was low at the ages of 30-34 (28.9%, n = 13) and increased in the older age categories of 35-39 (42.5%, n = 34) and 40-44 (51.0%, n = 25). To control or lose weight was prominent between the ages of 35-39-year-olds (72.5%, n = 58). Participating in physical activity to bring children for walks received higher scores for the ages of 30-34 (86.7%, n = 39) and 35-39 (87.5%, n = 70). Spending time with friends (14.3%, n = 5), de-stress (34.3%, n = 12) and improve mood (37.1%, n = 13) were most associated with 20-24-year olds (see Figure 41).

Figure 41 - Reasons for Taking Part in Physical Activity Compared Against Age (Percentage of Cases)

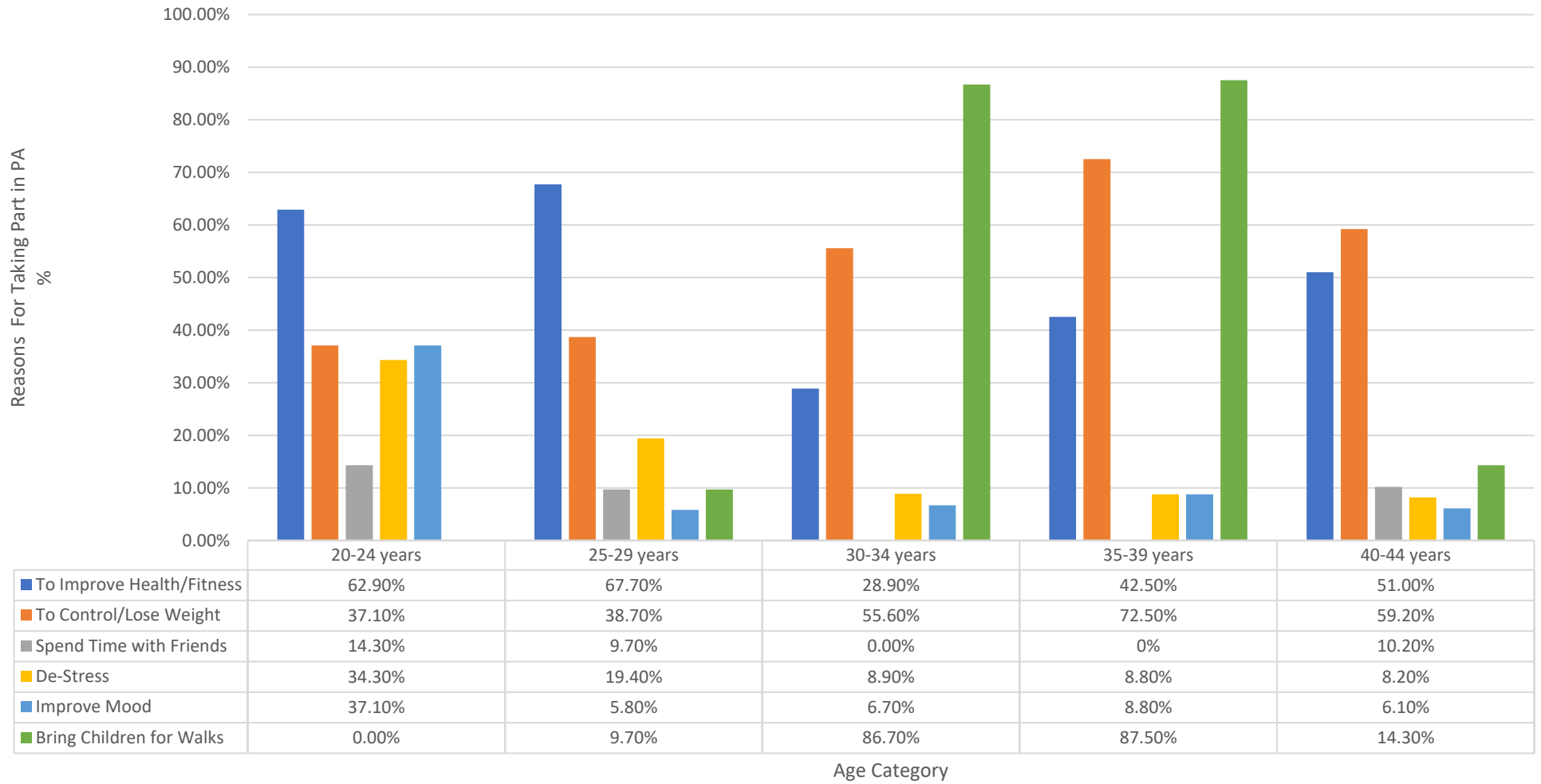
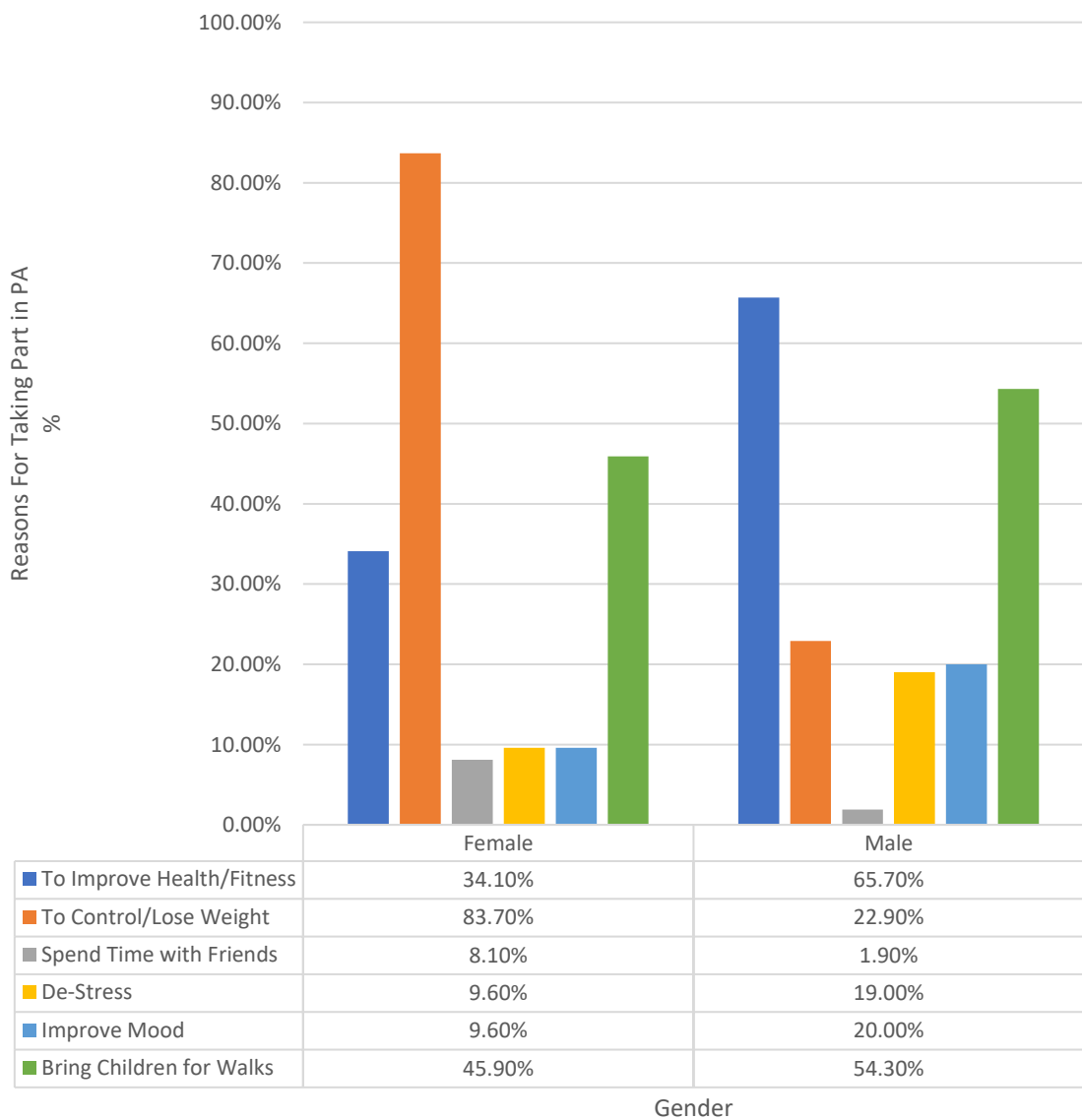


Figure 42 illustrates the differences between non-active males and females and the reasons for taking part in physical activity. To improve health and fitness was more prominent in males (65.7%, n = 69) in comparison to females (34.1%, n =46). Whereas, to control or lose weight was considerably higher in females (83.7%, n = 113) compared to males (22.9%, n = 24). A higher proportion of males reported that they engage in physical activity to improve their mood (20.0%, n = 21) and de-stress (19.0%, n =20) as compared to females. Spending time with friends was more associated with female walkers (8.1%, n = 11). Lastly, more males claimed to participate in PA to bring children for walks compared to females, 54.3% (n = 57), 45.9% (n = 62), respectively.

Figure 42 - Reasons for Taking Part in Physical Activity Compared Against Gender (Percentage of Cases)

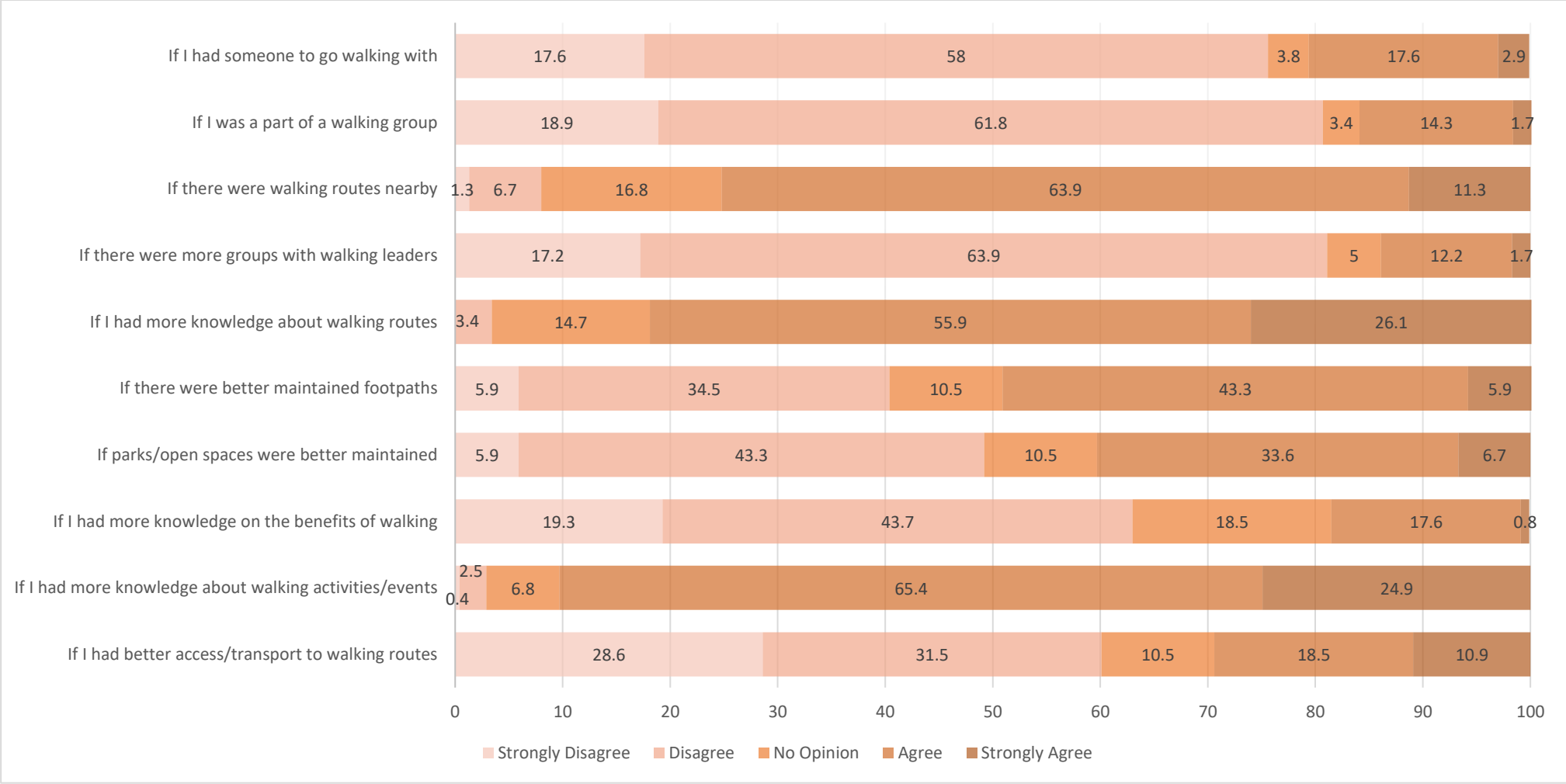


4.7.6.2 Factors that may Encourage Non-Active Respondents to go Walking

Figure 43 presents the factors that may encourage non-active respondents to go walking. This is illustrated in percentages and was conducted using a Likert scale. Within SPSS, the values for each option are as follows: Strongly Agree (1), Agree (2), No Opinion (3), Disagree (4), and Strongly Disagree (5). Overall, the data illustrated that 75.2% (n = 179) of respondents claimed that having walking routes nearby an individual's home location was the greatest influential factor (11.3%, n = 27 strongly agreed and 63.9%, n = 152 agreed). Further analysis showed that a total of 82% (n = 195) of respondents agreed that having more knowledge about walking routes would encourage them to go walking more (26.1%, n = 62 strongly agreed and 55.9%, n = 133 agreed). In relation to wanting more knowledge about walking activities and events, 90.3% (n = 214) of respondents agreed with this statement (24.9%, n = 59 strongly agreed and 65.4%, n = 155 agreed).

A low percentage was found for 'having someone to go walking' with as an influential factor of walking more for recreation, where only 20.5% (n = 49) concurred with this statement (2.9%, n = 7 strongly agreed and 17.6%, n = 42 agreed). In addition to this, only 16% (n = 38) of respondents agreed that being a part of a walking group would encourage participation (1.7%, n = 4 strongly agreed and 14.3%, n = 34 agreed). Wanting more walking groups with walking leaders also received low attention, where 13.9% (n = 33) of participants agreed with this (1.7%, n = 4 strongly agreed and 12.2%, n = 29 agreed). Finally, a total of 63% (n = 150) of respondents disagreed with the statement that having more knowledge on the benefits of walking would encourage them to go walking more.

Figure 43 - Factors that may Encourage Non-Active Respondents to go Walking



After examining the overall results for factors encouraging non-active respondents to walk more, a Mann-Whitney U test was conducted to determine if significant differences exist against gender. Table 13 presents the mean rank for both male and females and provides evidence that there are numerous significant differences across all variables. For instance, there was a significant difference found for 'if I had someone to go walking with', ($U = 4763.5$, $Z = -4.722$, $p = .000$), where females (Mean rank = 102.82) were more likely to state this in comparison to males (Mean rank = 140.63). Using Cohen's d , the effect size was estimated as a medium effect size ($d = 0.6$). Other notable differences highlight that females are statistically more likely to want more walking routes nearby ($U = 5677.5$, $Z = -2.890$, $p = .004$, effect size = 0.3), want more groups with walking leaders ($U = 4887$, $Z = -4.643$, $p = .000$, effect size = 0.5), and want to be a part of a walking group ($U = 5154$, $Z = -3.991$, $p = .000$), contrasted to males. The effect size for this statistically significant difference was a medium effect size (0.5).

Table 13 - Factors that may Encourage Non-Active Respondents to go walking compared against Gender

Influential Factor	Mean Rank		N	Mann-Whitney U			
	Gender			Mann-Whitney U	Wilcoxon W	Z	P-Value
	Female	Male					
<i>If I had someone to go walking with</i>	102.82	140.63	238	4763.5	13674.5	-4.722	.000
<i>If I was a part of a walking group</i>	105.75	136.91	238	5154	14065	-3.991	.000
<i>If there were walking routes nearby</i>	109.69	131.93	238	5677.5	14588	-2.890	.004
<i>If there were more groups with walking leaders</i>	103.74	139.46	238	4887	13798	-4.643	.000
<i>If I had more knowledge about walking routes</i>	111.73	129.34	238	5949.5	14860	-2.184	.029
<i>If there were better-maintained footpaths</i>	113.45	127.16	238	6178	15089	-1.629	.103
<i>If parks/open spaces were better maintained</i>	113.53	127.07	238	6188	15099	-1.607	.108
<i>If I had more knowledge on the benefits of walking</i>	111.07	130.18	238	5861.5	14772.5	-2.244	.025
<i>If I had more knowledge about walking activities/events</i>	114.46	124.70	237	6331	15109	-1.361	.173
<i>If I had better access/transport to walking routes</i>	113.47	127.13	238	6181	15092	-1.570	.116

Following this, a Kruskal-Wallis test was conducted to determine the effect of participants age against the factors encouraging them to go walking more. This question was presented in the form of a Likert scale. Within SPSS, the values for each option are as follows: Strongly Agree (1), Agree (2), No Opinion (3), Disagree (4), and Strongly Disagree (5). This meant the lowest mean rank found in the results would represent the extent to which participants agreed with the statement. For instance, there was a statistically significant difference for individuals claiming that having someone to go walking with would encourage them to walk more ($df(4) = 16.631$, $p = .002$), with a mean value of 103.87 for ages 35-39 years. This statement was most associated with the age category of 35-59-year olds. Further results demonstrated a significant difference for being a part of a walking group ($df(4) = 14.176$, $p = .007$) for 35-39 year olds (Mean rank = 104.49). The same age group again (35-39 years) encountered a significant difference for if there were walking routes nearby ($df(4) = 12.323$, $p = 0.15$, Mean rank = 104.49) and if there were more groups with walking leaders ($df(4) = 13.558$, $p = .009$, Mean rank = 106.41). There was a statistically significant difference noted for if I had more knowledge about walking routes for 40-44-year-olds ($df(4) = 12.524$, $p = 0.14$, Mean rank = 98.33). The last significant difference was for 'if I had better access/transport to walking routes' for 20-24-year-olds ($df(4) = 57.202$, $p = .000$), with a mean value of 49.99. Table 14 presents the mean rank for each age category and the results of the Kruskal-Wallis analysis.

Table 14 - Factors that may Encourage Non-Active Respondents to go Walking Compared Against Age

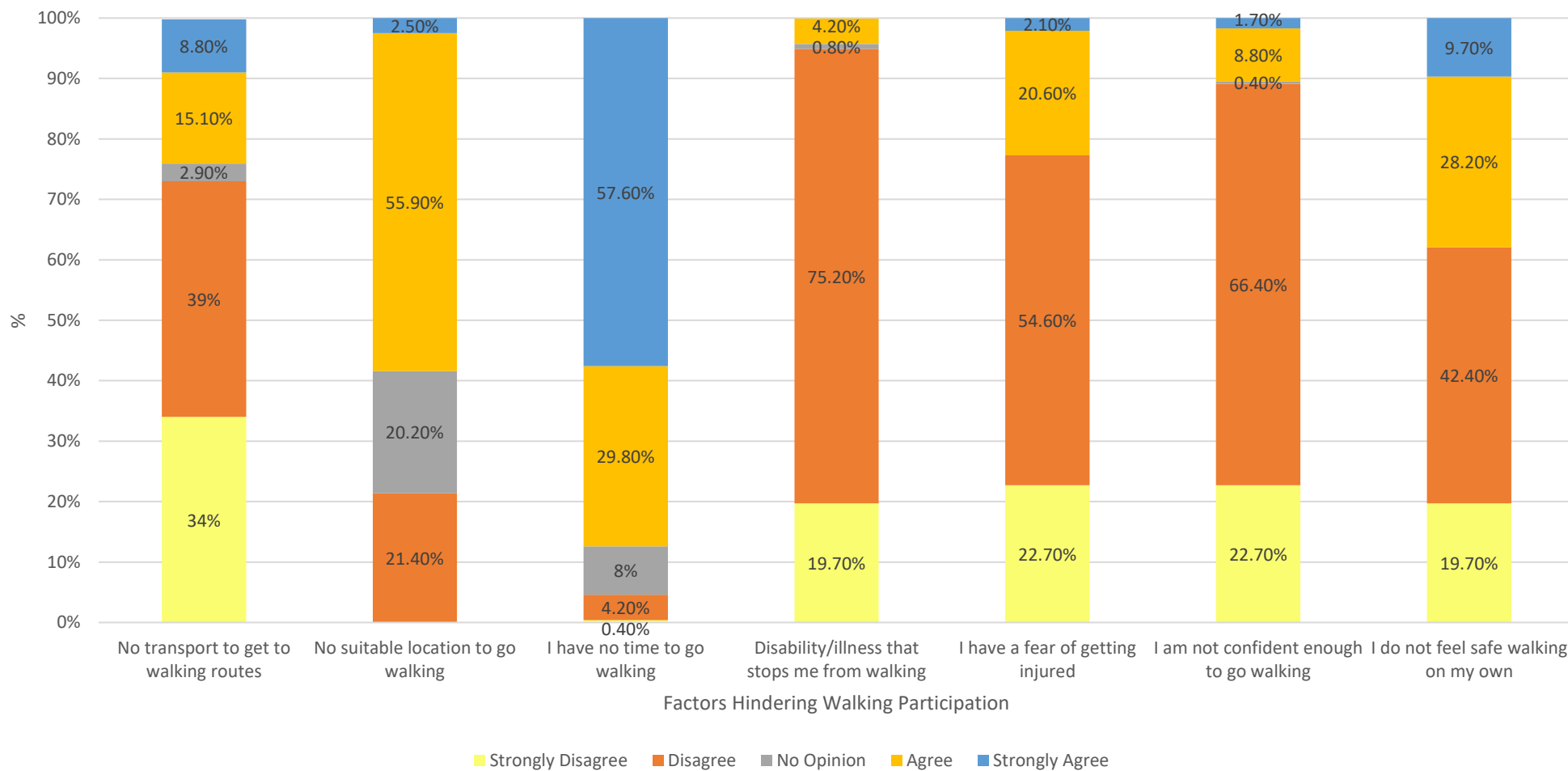
Influential Factor	Mean Ranks					Total N	Kruskal-Wallis Test		
	Age Group						Kruskal Wallis H	Df	P-Value
	20-24	25-29	30-34	35-39	40-44				
<i>If I had someone to go walking with</i>	151.77	128.70	124.49	103.87	111.43	238	16.631	4	.002
<i>If I was a part of a walking group</i>	147.89	129.80	123.57	105.34	112.01	238	14.176	4	.007
<i>If there were walking routes nearby</i>	141.14	127.80	129.89	104.49	113.62	238	12.323	4	.015
<i>If there were more groups with walking leaders</i>	149.49	124.88	120.79	106.41	114.70	238	13.558	4	.009
<i>If I had more knowledge about walking routes</i>	144.33	130.98	118.59	117.79	98.33	238	12.524	4	.014
<i>If there were better-maintained footpaths</i>	134.23	123.70	125.04	113.72	110.64	238	3.849	4	.427
<i>If parks/open spaces were better maintained</i>	133.14	124.03	125.40	114.16	110.17	238	3.650	4	.455
<i>If I had more knowledge on the benefits of walking</i>	138.33	121.20	129.12	108.99	113.11	238	6.436	4	.169
<i>If I had more knowledge about walking activities/events</i>	139.14	131.42	106.56	116.01	113.19	237	8.498	4	.075
<i>If I had better access/transport to walking routes</i>	49.99	109.40	157.29	120.94	138.32	238	57.202	4	.000

4.7.6.3 Factors Hindering Walking Participation in Non-Active Respondents

Figure 44 shows the factors that stop non-active respondents from participating in walking. This question utilised a Likert scale and within SPSS, the values for each option are as follows: Strongly Agree (1), Agree (2), No Opinion (3), Disagree (4), and Strongly Disagree (5).

Findings indicated that 23.9% (n = 57) of respondents agreed that having no transport would negatively impact their walking participation levels (strongly agree = 8.8%, n = 21 and agree = 15.1%, n = 36). A high proportion of respondents claimed that there was no suitable location to go walking and therefore preventing them from walking more, 58.4% (n = 139) concurred with this statement (2.5%, n = 6 strongly agreed and 55.9%, n = 133 agreed). Findings also indicated that 87.4% (n = 208) of participants claimed that they had no time to go walking (57.6%, n = 137 strongly agreed and 29.8%, n = 71 agreed). Further analysis demonstrated that 22.7% (n = 54) of respondents stated that they have a fear of getting injured (2.1%, n = 5 strongly agreed and 20.6%, n = 49 agreed). A low percentage was noted on participants not being confident enough to go walking with 10.5% (n = 25) agreeing with this statement (1.7%, n = 4 strongly agreed and 8.8%, n = 21 agreed). Lastly, a total of 37.9% (n = 90) of participants agreed that they do not feel safe going for a walk on their own, and therefore preventing them from walking more (9.7%, n = 23 strongly agreed and 28.2%, n = 67 agreed).

Figure 44 - Factors Hindering Walking Participation in Non-Active Respondents



Following the overall results, a Mann-Whitney U test was carried out to compare the previous data against gender. This question utilised a Likert scale and the values for each option were allocated in SPSS: Strongly Agree (1), Agree (2), No Opinion (3), Disagree (4), and Strongly Disagree (5). As previously noted for other statistical analysis, the lowest mean rank found in the results would represent the extent to which participants agreed with the statement. Furthermore, as can be seen from Table 15, there are many significant differences across all variables. Of note, females are statistically more likely than males to report having a fear of getting injured ($U = 4674.5$, $Z = -4.843$, $p = .000$), with a mean rank of 102.15 in comparison to 141.48 for males.

Not being confident enough to go walking was also associated more with women in comparison to males ($U = 4303$, $Z = -6.094$, $p = .000$), with females reporting a mean rank of 99.35 and male reporting 145.02. The last statistically significant difference was for 'I do not feel safe walking on my own'. This was more associated with females compared to males ($U = 2175$, $Z = -6.648$, $p = .000$), where the mean rank for females was 83.35 and the mean rank for males was 165.29.

Table 15 - Factors Hindering Walking Participation Compared Against Gender

Influential Factor	Mean Rank		Mann-Whitney U				
	Gender		Total N	Mann- Whitney U	Wilcoxon W	Z	P-Value
	Female	Male					
<i>No transport to get to walking routes</i>	110.29	131.17	238	5757.5	14668.5	-2.453	.014
<i>No suitable location to go walking</i>	118.16	121.20	238	6804.5	15715.5	-.376	.707
<i>I have no time to go walking</i>	122.15	116.15	238	6630.5	12195.5	-.755	.450
<i>I have a disability/illness that stops me going walking</i>	112.09	128.89	238	5997	14908	-2.482	.013
<i>I have a fear of getting injured</i>	102.15	141.48	238	4674.5	13585.5	-4.843	.000
<i>I am not confident enough to go walking</i>	99.35	145.02	238	4303	13214	-6.094	.000
<i>I do not feel safe walking on my own</i>	83.35	165.29	238	2175	11086	-6.648	.000

A Kruskal-Wallis test was also used to determine if there was a significant difference in factors hindering non-active respondents from walking against their age. As noted in the Mann-Whitney U test outlined above, the lowest mean rank found in the results would represent the extent to which participants agreed with the statement. Table 16 outlined the results derived from this test. There was a statistically significant difference for individuals reporting no transport to get to walking routes for 20-24-year-olds ($df(4) = 55.599$, $p = .000$, Mean rank = 57.87). There was also a significant difference noted for 30-34-year-olds not having enough time to go walking ($df(4) = 53.531$, $p = .000$, Mean rank = 88.49). Further results illustrated that individuals between the ages of 25-29 years felt that they had a disability/illness that stops them from going walking ($df(4) = 10.493$, Mean rank = 97.42). The last statistically significant difference noted was for 20-24-year-olds who stated that they did not feel safe enough to go walking on their own when compared against all other age groups ($df(4) = 9.887$, Mean rank = 89.51).

Table 16 - Factors Hindering Walking Participation Compared Against Age

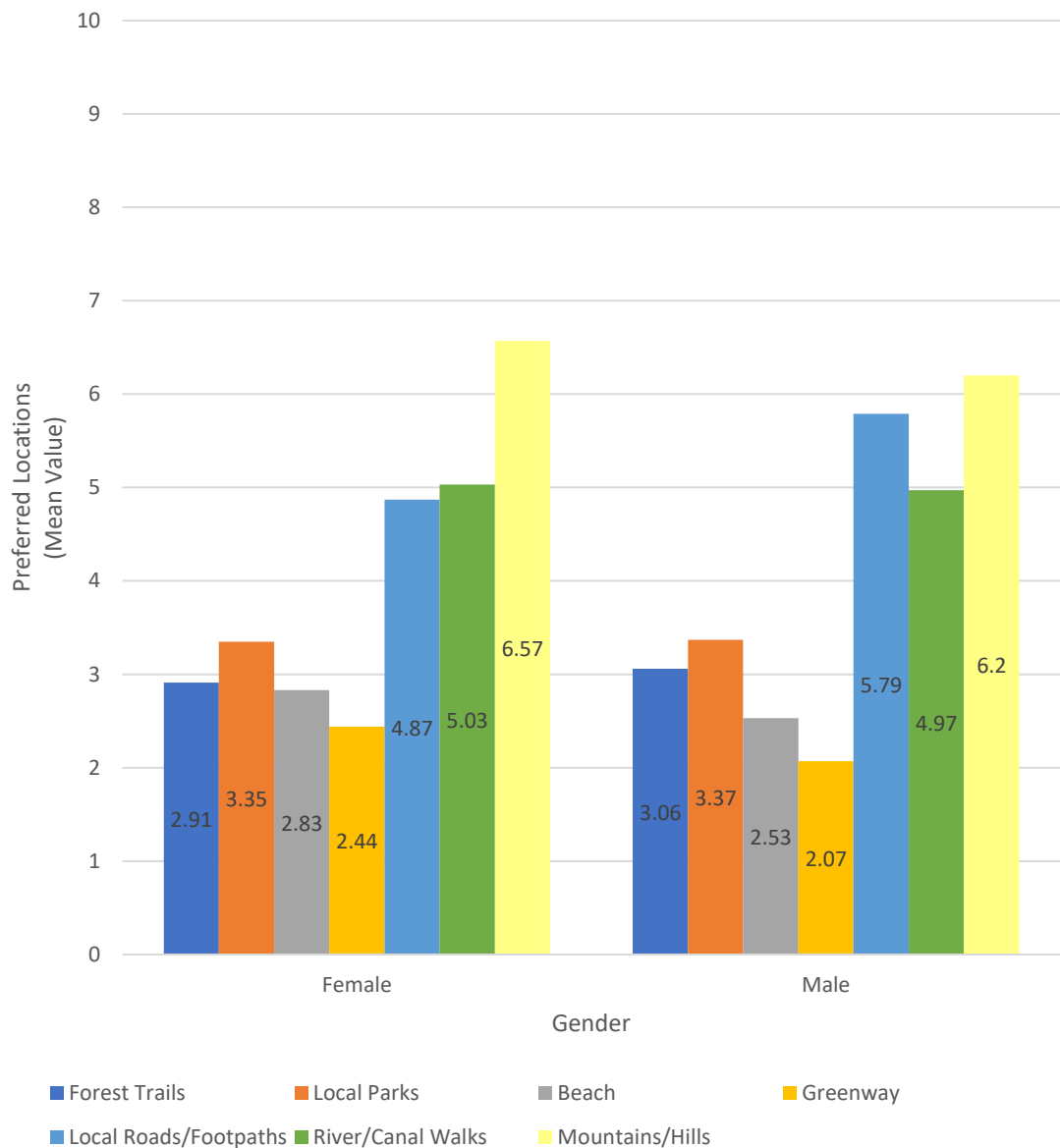
Influential Factor	Mean Ranks					Kruskal-Wallis Test			
	Age Group					Total N	Kruskal Wallis H	Df	P-Value
	20-24	25-29	30-34	35-39	40-44				
<i>No transport to get to walking routes</i>	57.87	106.48	156.84	114.28	145.61	238	55.599	4	.000
<i>No suitable location to go walking</i>	112.66	125.42	129.81	113.70	120.64	238	2.663	4	.616
<i>I have no time to go walking</i>	170.57	158.23	88.49	107.01	107.93	238	53.531	4	.000
<i>I have a disability/illness that stops me going walking</i>	108.46	97.42	132.50	122.94	123.43	238	10.493	4	.033
<i>I have a fear of getting injured</i>	127.39	104.02	123.71	119.82	118.96	238	2.632	4	.621
<i>I am not confident enough to go walking</i>	103.97	101.02	131.02	125.50	121.65	238	8.418	4	.077
<i>I do not feel safe walking on my own</i>	89.51	114.60	125.22	124.34	130.86	238	9.887	4	.042

4.7.6.4 Most Preferred Place to go Walking for Non-Active Respondents

Participants were asked to rank in order their most preferred place to go walking out of the following options: forest trails, local parks, beach, greenway, local roads/footpaths, river/canal walks, and mountains/hills. Within SPSS the subsequent values were set: 1 = most preferred place to go walking, 2 = second more preferred place to go walking, 3 = third-most preferred place to go walking, 4 = fourth most preferred place to go walking, 5 = fifth most preferred place to go walking, 6 = sixth most preferred place to go walking, and 7 – least preferred place to go walking. Descriptive analyses from the data present the mean values for the most preferred place to go walking for exercise or recreation. Results highlighted that the greenway was ranked the most preferred location to go walking (Mean = 2.28, SD = 1.368). Non-active respondents stated that the beach was the second most favourable place to go walking (Mean = 2.70, SD = 1.628), while forest trails place third (Mean = 2.97, SD = 1.298). The fourth most preferred place ranked was local parks (Mean = 3.36, SD = 1.298), while river and canals were ranked 5th (Mean = 5.00, SD = 1.053), local roads and footpaths were sixth with a mean value of 5.28 (SD = 1.757) and finally, mountains and hills were ranked 7th place (Mean = 6.41, SD = .922).

An independent samples t-test was then conducted to compare the above information against gender. Figure 45 illustrates the findings. There was a statistically significant difference found between both groups in the greenway, $t(236) = 2.191$, $p = .029$, with males (Mean = 2.07, SD = 1.154) more likely to state the greenway as a preferred place to go walking, as compared to females (Mean = 2.44, SD = 1.500). The effect size calculated for this statistically significant difference was 0.2, and according to Cohen's effect size estimates, this is regarded as a small effect size. There was also a statistically significant difference found in local roads and footpaths, $t(236) = -4.239$, $p = .000$, where females (Mean = 4.87, SD = 1.844) scored higher than males (Mean = 5.79, SD = 1.498). For this significant difference, there was a medium effect size calculated (0.5). Lastly, there was a significant difference found in mountains and hills, $t(236) = 3.143$, $p = .002$, with males most likely to state this as their favourable place to go walking (Mean = 6.20, SD = 1.051), in comparison to females (Mean = 6.57, SD = .772). The effect size calculated for this significant difference was a small effect size (0.4).

Figure 45 - Preferred Location Compared Against Gender



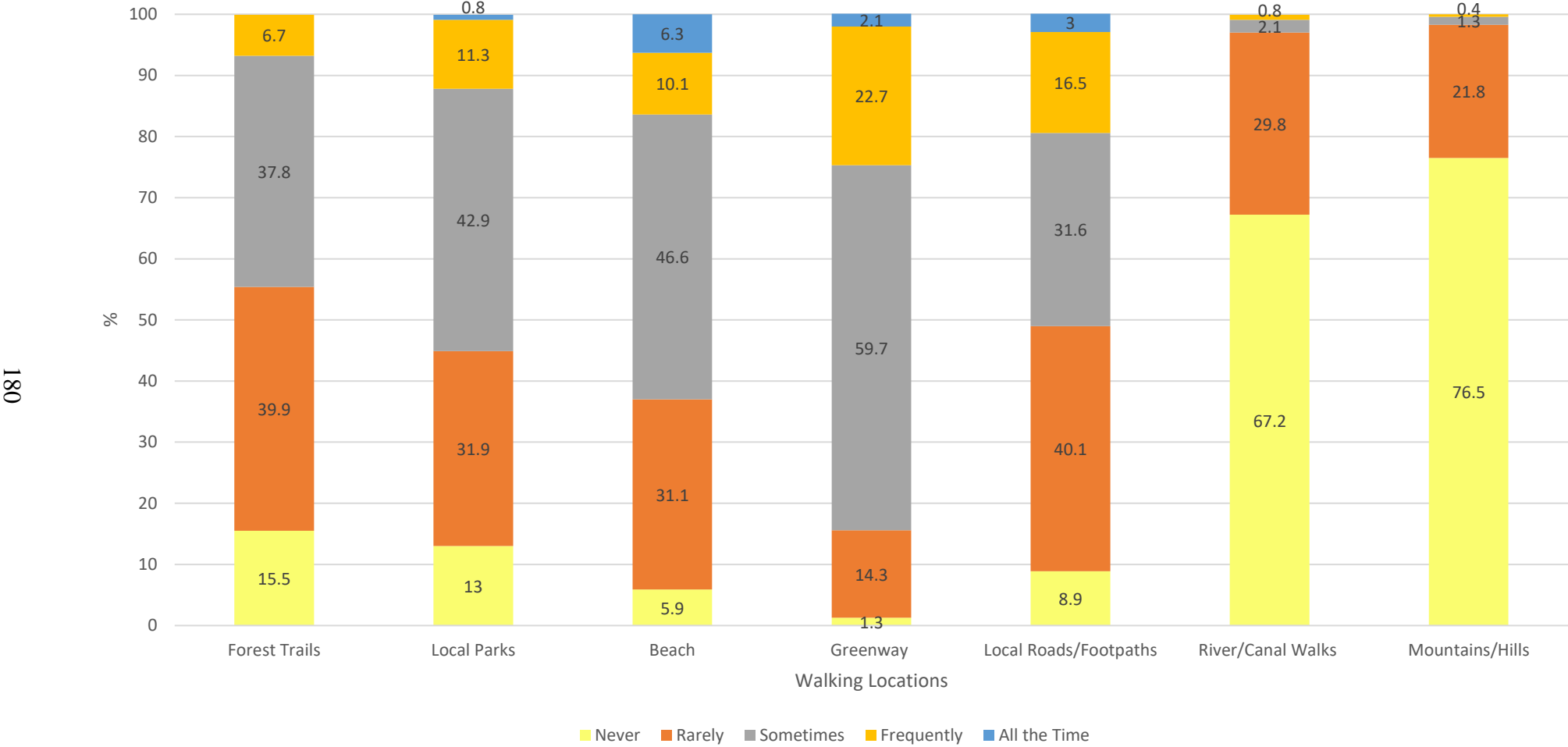
A one-way Anova was conducted to compare preferred places to go walking and participants ages. There were statistically significant differences found between all age groups in local parks ($F(4,233) = 7.414, p = .000$), and river and canal walks ($F(4,233) = 2.844, p = .025$). The effect size for both significant differences was calculated as small according to Cohen's d ($d = 0.3, d = 0.4$, respectively). Moreover, there was also a statistically significant difference found across all age groups in mountains and hills ($F(4,233) = 3.562, p = .008$), where the effect size was regarded as medium ($d = 0.5$). Post-hoc comparisons using the Tukey HSD test indicated that there was a significant difference for local parks between the age groups of 20-24 years and 30-34 years ($p = .002$), 20-24 years and 35-39 years ($p = .000$), 40-44 years and 30-34 years ($p = .009$) and

40-44 years and 35-39 years ($p = .002$). Further results showed a significant difference for mountains and hills between the ages of 30-34 years and 40-44 years ($p = .008$) and 35-39 and 40-44 years ($p = .020$). There was no significant difference for river and canal walks noted in the post-hoc test.

4.7.6.5 Frequency of Walking Locations for Non-Active Respondents

This following question was presented in a Likert scale and within SPSS the following values were set for each option: Never (1), Rarely (2), Sometimes (3), Frequently (4), All the time (5). Each participant was asked to report how frequently they visited each of the following locations: forest trails, local parks, beach, greenway, local roads/footpaths, river/canal walks, and mountain/hills. Figure 46 outlines how frequent non-active respondents walked in each location. Findings highlighted that the greenway was the most frequently used place to go walking by non-active respondents (22.7%, $n = 54$). Moreover, a total of 59.7% ($n = 142$) of respondents claimed that they ‘sometimes’ use the greenway for walking purposes. River and canal walks (0.8%, $n = 2$) and mountains and hills (0.4%, $n = 1$) were the least frequently used places for walking.

Figure 46 - Times Visited Walking Locations for Non-Active Respondents



4.7.7 Additional Findings for Active and Non-Active Respondents

This section provides further analysis of both active and non-active respondents. The questions asked were related the distance they would travel to a suitable walking location, their level of interest for walking more for recreation, their awareness of local walking routes and if they would like to receive more information on walk

4.7.7.1 Distance to Walking Locations and Routes

Participants were asked how far they would be willing to travel to a suitable walking location. This question gave participants the choice to report their answer in either kilometres, miles or minutes. The researcher felt it was necessary to provide all options to participants when they were completing the questionnaire, in order to facilitate all opinions. The mean value for each variable was calculated, as seen in Table 17. Active respondents stated that they would travel on average up to 39.64 km (SD = 73.320), or 2.5 miles (SD = .707), or 25.41 minutes (SD = 18.939) to a suitable location to go walking. Further results noted that non-walkers were prepared to travel up to 15 km (SD = 6.124), or 3 miles (SD = 2.000), or 13.60 minutes (SD = 11.299).

Table 17 - Distance to Walking Locations

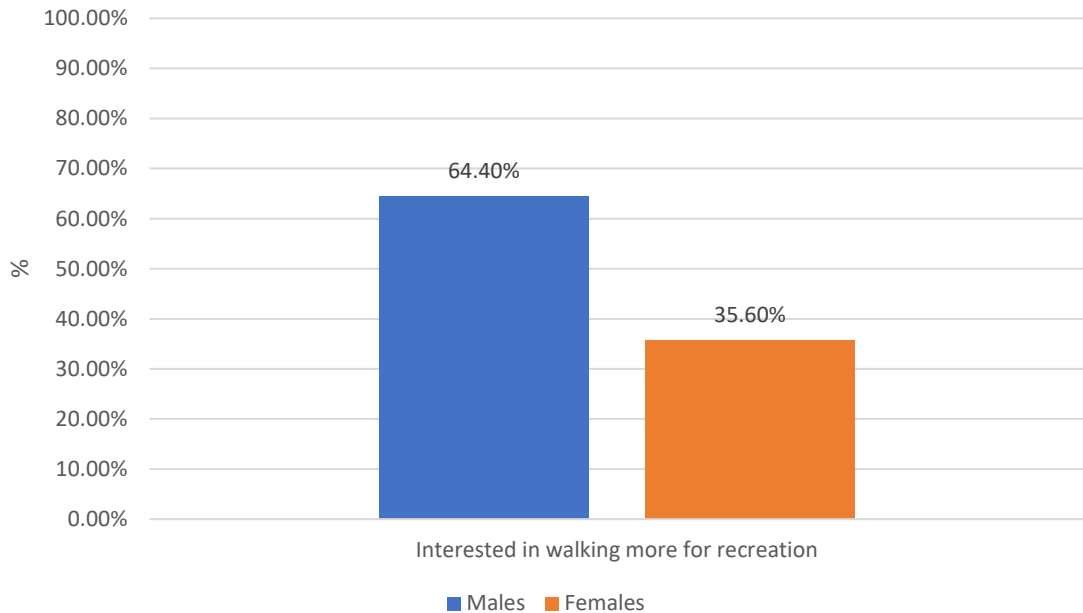
		N	Min	Max	Mean	Medium	Std. Deviation
Walkers	Km	18	5	310	36.64	10.00	73.320
	Miles	2	2	3	2.50	2.50	.707
	Minutes	130	2	100	25.41	20.00	18.939
Non-Walkers	Km	5	10	25	15.00	15.00	6.124
	Miles	3	1	5	3.00	3.00	2.000
	Minutes	231	1	60	13.60	10.00	11.299

4.7.7.2 Interested in Walking More for Recreation

Results showed that a total of 88.5% (n = 354) respondents cited that they would be more interested in walking for recreation, while 11.5% (n = 46) stated that they would not be interested. Figure 47 presents a breakdown of the respondents by gender. It is evident

from the figure that more females (64.4%, n = 228) were interested in walking more for recreation in comparison to males (35.6%, n = 126).

Figure 47 - Interested in Walking More for Recreation



4.7.7.3 Awareness of Local Walking Routes

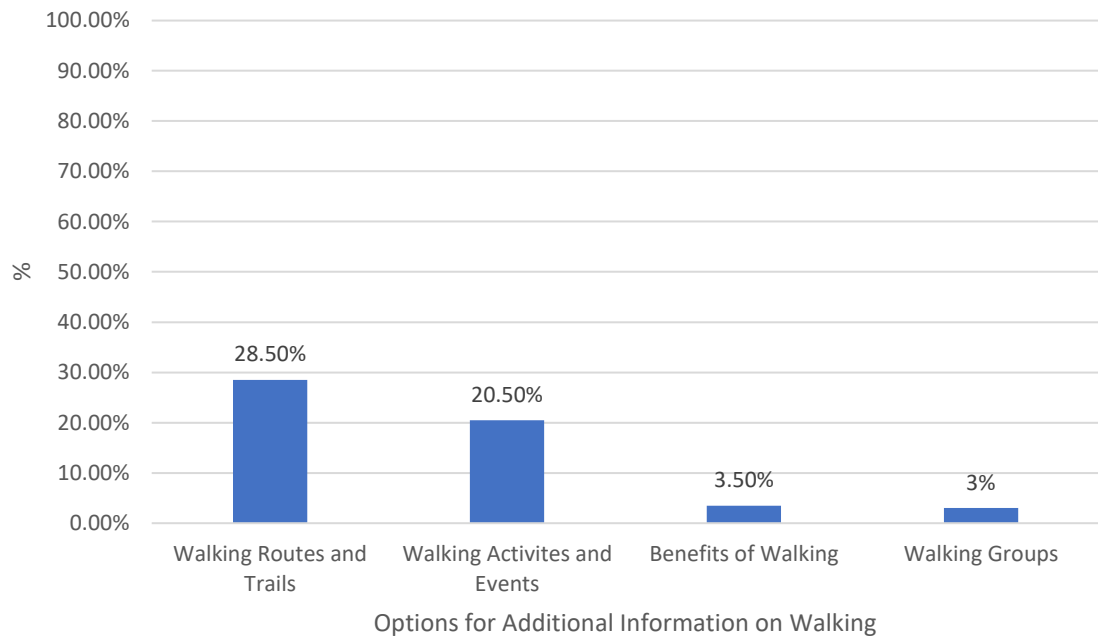
Participants were asked if they were aware of their local walking routes. The data indicated that 55.5% (n = 222) of respondents are aware of local walking routes, while 41.3% (n = 165) of respondents noted that they were not. Further findings showed that walkers (56.75%, n = 126) were more aware of walking routes compared to non-walkers (43.24%, n = 96). This can be expected as walkers are regarded as performing greater levels of physical activity than non-walkers.

4.7.7.4 Additional Information on Walking

Respondents were asked if they would like to receive additional information on the following four options: walking routes/trails, benefits of walking, walking groups and walking activities. A total of 28.5% (n = 114, (n = 65 walkers, n = 49 non-walkers)) of respondents stated they wanted to be more informed of walking routes and trails. The second-highest number accounted for walking activities where 20.5% (n = 82) of participants stated they wanted to hear more about walking activities and events. Only 3.5% (n = 14, (n = 12 walkers, n = 2 non-walkers)) of participants wanted more information on the benefits of walking. These findings might seem counterintuitive that more walkers are seeking additional information on the benefits of walking in comparison to non-walkers, but perhaps this represents that walkers are more interested in reaping the full

benefits of walking thus seeking additional information. Finally, a total of 3% (n = 12, (n = 11 walkers, n = 1 non-walker)) of respondents stated that they would be interested in gaining additional information on walking groups.

Figure 48 - Receiving Additional Information Based on Walking



4.8 Research Question 3: How Effective is a Social Marketing Campaign, using the AIDA Model, on Encouraging 25-45-year-old Male and Females in Waterford to Attend Walking Events?

The following section will outline the impact the social media marketing campaigns had on encouraging the target population to attend walking events. This section is segmented into two parts. The first part presents the results of the Get Ireland Walking and the Mountaineering Ireland campaign. Each stage of the campaigns is summarised using the data obtained from Facebook Business Manager. Following this, part two will outline and present the main findings from the data obtained in the phase three questionnaire.

4.8.1 Social Media Marketing Campaign Effectiveness

Using the data from Facebook Business Manager, a full breakdown of the stages involved in campaign one and two are presented separately. These sections will provide further detail on performance metrics. It is necessary to note that Facebook Business Manager complies with the current EU data protection law, including GDPR regulation to ensure the data protection of all respondents for this study (Facebook, 2020). Anonymisation of

data is already performed by Facebook Business Manager. This is to say, that data is considered to be sufficiently anonymised as it does not relate to an identified person (Data Protection Commission, 2019). The data derived from Facebook Business Manager in relation to the advertisements is known as absolute data. This means, there are no individual responses of the participants and no identifiable personal information collected. Facebook provides overall information on the performance of the advertising campaign but will not show individual data.

4.8.2 Structure of Campaign 1 and 2

As the structure of both campaigns was discussed in previous chapters, it is not necessary to explain it once again (refer to section 2.3.6.1 of the Literature Review chapter for a discussion on the AIDA model and section 2.4.2 for the Social Marketing Benchmark Criteria). Instead, this section will highlight the ad objectives for each stage of both campaigns. It will also reiterate the target audiences for each stage. Table 18 illustrates the aim of each stage, the advertising objective and what was regarded as online ‘engagement’ in each stage. Aligned with the AIDA model (sales funnel), the ad objective for the advertisements changed as the stages progressed.

The first stage of the campaigns was aimed at building awareness and audience interest via. video advertisement. The researcher then noted how many participants engaged with the video advertisement. In stage one, engagement was defined as having watched at least 15 seconds of the video, also known as a Thruplay. As not everyone between the ages of 25-45 years old was reached in stage one, stage two was established to scale the target audience by creating the lookalike audience¹¹⁰. This stage sought to increase the audience but only to those most likely to have an interest in the campaign. Stage one audience was excluded here¹¹¹. The video advertisement utilised in stage one was then delivered to the lookalike audience in stage two, obtaining the same ad objective.

The aim of stage three was to deepen the interests of the individuals who engaged with stages one and two advertisements via. carousel advertisement¹¹². The ad objective for

¹¹⁰ A lookalike audience is created using the original audience from stage one. Facebook identifies the psycho-demographic or behavioural traits of anyone who engaged with the ad from stage one and creates a lookalike audience from that.

¹¹¹ The reason being, stage two lookalike audience aims to be more targeted and scale up the campaigns, if stage one individuals were involved in stage two there would be a duplicate of numbers which is not the aim.

¹¹² A carousel ad is made up of multiple images to deliver the online promotional message.

this stage was link clicks. This represents the number of links clicks on the advertisement that led to destinations on or off Facebook. In this case, the link directed individuals to the IrishTrails.ie page. The aim of stage four was to recapture any potential consumers that engaged with the advertisements in the previous stages via. static image advertisement. This advertisement displayed information about the corresponding walking events for each campaign (campaign one family walk day and campaign two guided walk). The ad objective was the same as stage three (link clicks). However, the link clicks for stage four redirected individuals to the Eventbrite landing page where they could register for the walking events.

Table 18 - Advertising Objectives for Both Campaigns

Stages	Target Audience	Aim of Stage	Engagement Defined
Stage One	Video Ad targeted 25-45-year-old male and females	Building awareness and audience interest	Thruplay: counts for when an individual watches at least 15 seconds of the advertisement
Stage Two	Video Ad targeted Lookalike Audience, while excluding stage one audience	Scale target audience through Lookalike audience	Same as stage one
Stage Three	Carousel Ad targeted anyone who engaged with the video advertisements in stage one and two	Deepen the interests of individuals	Link Clicks: the number of clicks on links within the ad that led to advertiser-specified destinations, on or off Facebook.
Stage Four	Static Image Ad targeted anyone who engaged with the advertisements in stages one, two and three	Recapture potential consumers	Same as stage three

4.8.3 Campaign One – Get Ireland Walking

4.8.3.1 Budget

It is essential to note that the budget for each stage changed as the campaign progressed. A higher budget was required at stages one and two, as there was a higher number of individuals being targeted. The budget set for each stage represents the amount of money spent on showing individuals the advertisements. The higher the target audience, the higher the budget required by Facebook to reach that target audience. For stages one and two, the budget was set at €125. As the target audience became smaller (in accordance with the AIDA model), the budget was reduced to €100 for stage three. The same again for stage four as the budget was set at €75.

4.8.3.2 Campaign 1 Stage 1

Table 19 presents a breakdown of the results for the video advertisement shown in stage one. This advertisement ran for four days from 6:00 am on the 18th of October 2019 to 23:59 pm on the 21st of October 2019. The aim of stage one was to build awareness around walking participation. The video advertisement reached¹¹³ a total of 15,348 individuals from the ages of 25-45 years old living in County Waterford. This figure is broken down to show the reach by gender and age. Out of the 15,348 individuals, a total of 8,856 (58%) females and 6,292 (41%) males were reached. As previously noted, the ad objective for the video advertisement was to achieve as many ThruPlays as possible. A ThruPlay counts for when an individual watches at least 15 seconds of the advertisement¹¹⁴. The video advertisement for this stage was 1 minute 10 seconds long. A total of 1,819 ThruPlays were achieved from the individuals reached. As seen in the table below, more females (63%, n = 1,150) completed or watched the video for at least 15 seconds compared to males (36%, n = 655).

Impressions¹¹⁵ counted for stage one totalled to 36,175. The frequency of stage one calculated to 2.36¹¹⁶. This represents the average number of times that each person viewed

¹¹³ Reach is the number of people who saw the ad at least once. Reach is different to impressions which include multiple views of the ad by the same people.

¹¹⁴ ThruPlay allows advertisers to optimise and choose to only pay for ads that are played to completion, or for at least 15 seconds.

¹¹⁵ An impression is counted as the number of times an instance of an ad is on screen for the first time. (Example: If an ad is on screen and someone scrolls down, and then scrolls back up to the same ad, that counts as one impression. If an ad is on screen for someone two different times in a day, that counts as two impressions.)

¹¹⁶ Frequency is calculated as the number of impressions divided by the reach. It helps to build awareness and recall by showing the ad to individuals multiple times.

the ad. Notably, the link clicks for the video advertisement was 119. This represents the number of people that clicked on the link attached to the ad. This link redirected the individuals to the IrishTrails.ie website where additional information was provided on local walking routes and locations. A total of 85 females accounted for the link clicks, while 33 accounted for males. The age category that made the most link clicks was females between the ages of 35-44 years, accounting for 60 link clicks. The average cost per link click calculated to €1.05¹¹⁷.

Further findings showed that there were 37 post reactions, 3 post comments, 10 post saves and 7 post shares. In relation to video viewing, there were 2,744 people who viewed the video ad for at least 10 seconds. ThruPlays accounted for 1,819 people. A total of 1,101 individuals viewed at least 25% of the video, 472 people viewed 50%, 312 people viewed 75% and 199 individuals viewed 100% of the ad. In each case, females viewed the video more than males.

Facebook's targeting methods work by identifying male and females from the ages of 25-45 years old. However, some individuals may not present their gender on their Facebook personal profiles. Therefore, as the information is unclear, they fall into the 'uncategorized' category. Facebook still targets them as they are between the ages of 25-45.

¹¹⁷ It is important to note that a high cost per link click might indicate that the content of the ad is not resonating with the audience. The more link clicks you get, the less it costs per link clicks

Table 19 - Campaign 1 Stage 1 – Video Advertisement Results

Variables Measured	Overall	Female	Male	Uncategorized	Female	Male	Uncategorized	Female	Male	Uncategorized
		25-34	25-34	25-34	35-44	35-44	35-44	45-54	45-54	45-54
Results	1,819	492	309	4	611	325	9	47	21	1
Reach	15,348	3,976	2,976	40	4,550	3,056	156	320	260	4
Impressions	36,175	9,121	6,964	114	11,205	6,913	268	1,011	562	17
Cost per Result	€0.07	€0.07	€0.07	€0.07	€0.07	€0.07	€0.10	€0.09	€0.09	€0.13
Amount spent	€125	€32.15	€20.77	€0.26	€42.57	€22.27	€0.86	€4.18	€1.81	€0.13
Frequency	2.36	2.29	2.34	2.85	2.46	2.26	1.72	3.16	2.16	4.25
Link Clicks	119	20	7	-	60	25	1	5	1	-
CPC (Cost per link click)	€1.05	€1.61	€2.97	-	€0.71	€0.89	€0.84	€0.84	€1.81	-
CTR (Link click-through rate)	0.33%	0.22%	0.10%	-	0.54%	0.36%	0.37%	0.49%	0.18%	-
Clicks (all)	248	37	17	-	122	50	3	14	4	1
Post Reactions	37	8	4	-	18	5	-	2	-	-
Post Comment	3	1	-	-	1	1	-	-	-	-
Post Saves	10	3	1	-	5	-	-	1	-	-
Post Shares	7	2	1	-	2	1	-	1	-	-
10-second video view	2,744	674	484	6	918	518	14	80	49	1
ThruPlays (15 Seconds)	1,819	492	309	4	611	325	9	47	21	1
Video plays at 25% - 17.5 Sec	1,101	222	157	3	430	227	7	40	14	1
Video plays at 50% - 35 Sec	472	81	57	1	211	97	4	13	8	-
Video plays at 75% - 52.5 Sec	312	52	43	1	133	66	2	10	5	-
Video plays at 100% - 70 sec	199	38	28	-	77	46	1	6	3	-

4.8.3.3 Campaign 1 Stage 2

Stage two of the campaign targeted the lookalike audience that was created. Refer to the Methodology chapter, section 3.4.2.1.2 for an explanation of the lookalike audience. Briefly speaking, the lookalike audience was created to scale and increase the target audience. The lookalike audience was created using the qualities, characteristics and demographic features of anyone who engaged with stage one advertisement. This allowed the researcher to see if the lookalike audience, based on the psycho-demographic characteristics of those who engaged with stage one advert, showed more interest in the advertising campaign. Moreover, as the audience from stage one was excluded here, the lookalike audience allowed the researcher to target anyone who was not involved in the first stage.

This advertisement followed the previous one and ran for four days from 6:00 am on the 22nd of October 2019 to 23:59 pm on the 25th of October 2019. As can be seen in Table 20, the total reach for this video advertisement was 5,042 individuals. This was broken down into 68% (n = 3,420) of females and 31% (n = 1,558) of males. The ad objective for this stage was the same as stage one. There was a total of 738 ThruPlays in this stage. This is represented by 70% (n = 520) females and 29% (n = 213) males. The age categories where ThruPlays were achieved the most was between 25-34 years and 35-44 years old.

The impressions for this stage accounted for 30,243. The average frequency was calculated at 6.00, with the highest reaching to 11.90. This may have resulted in some ad fatigue¹¹⁸. Moreover, there was a total of 81 link clicks on the ad which redirected the individuals to the Irish Trails website. The average click-through rate was calculated to 0.27% and the average cost per link click was €1.54. There was a total of 12 post reactions, 3 post comments, 3 post saves and 1 post share. The video views indicated that 1,222 people watched at least 10 seconds of the video, and 738 accounted for ThruPlays. The figure for the number of video plays at 25% is 537, for 50% is 218, and for 75% is 130. Lastly, the number of individuals that watched 100% of the video was 79.

¹¹⁸ Frequency helps to build awareness and recall by showing the advert to the target audience multiple times. Depending on the allocated budget, audience size and schedule, the frequency number may be high. If there is excess budget allocated to the campaign, the ad may be shown to people too many times resulting in ad fatigue and increased number of frequency. As this stage has a high frequency number, it can be suggested that the budget for this stage could have been reduced.

Table 20 - Campaign 1 Stage 2 - Lookalike Audience Video Advertisement Results

Variables Measured	Overall	Female	Male	Uncategorized	Female	Male	Uncategorized	Female	Male	Uncategorized
		25-34	25-34	25-34	35-44	35-44	35-44	45-54	45-54	45-54
Results	738	246	95	1	262	113	4	12	5	-
Reach	5,042	1,560	740	10	1,760	776	50	100	42	4
Impressions	30,243	9,534	4,835	119	10,505	4,099	232	680	226	13
Cost per Result	€0.17	€0.15	€0.17	€0.39	€0.18	€0.14	€0.26	€0.32	€0.18	-
Amount spent	€125	€38.06	€16.47	€0.39	€47.95	€16.27	€1.03	€3.82	€0.92	€0.09
Frequency	6.00	6.11	6.53	11.90	5.97	5.28	4.64	6.80	5.38	3.23
Link Clicks	81	25	13	1	30	11	-	-	1	-
CPC (Cost per link click)	€1.54	€1.52	€1.27	€0.39	€1.60	€1.48	-	-	€0.92	-
CTR (Link click-through rate)	0.27%	0.26%	0.27%	0.84%	0.29%	0.27%	-	-	0.44%	-
Clicks (all)	179	51	24	1	72	27	-	3	1	-
Post Reactions	12	4	2	-	6	-	-	-	-	-
Post Comment	3	1	1	-	1	-	-	-	-	-
Post Saves	3	1	-	-	2	-	-	-	-	-
Post Shares	1	1	-	-	-	-	-	-	-	-
10-second video view	1,222	378	167	2	457	177	9	24	8	-
ThruPlays (15 Seconds)	738	246	95	1	262	113	4	12	5	-
Video plays at 25% - 17.5 Sec	537	154	70	1	212	84	4	7	6	-
Video plays at 50% - 35 Sec	218	55	26	-	93	37	2	4	1	-
Video plays at 75% - 52.5 Sec	130	33	16	=	53	23	2	3	-	-
Video plays at 100% - 70 Sec	79	21	9	-	34	12	1	2	-	-

4.8.3.4 Campaign 1 Stage 3

Stage three of the campaign involved the delivery of a carousel ad¹¹⁹. Following on from stage two, this advertisement ran from 6:00 am on the 26th of October 2019 till 23:59 pm on the 29th of October 2019 and targeted any individual that engaged with the advertisements in stage one and two. This carousel ad reached 2,814 people. Moreover, 69% (n = 1,817) accounted for females while 34% (n = 969) accounted for males. The impressions on this ad were 26,379. The frequency averaged at 9.37 times.

As previously discussed, the ad objective changed as the campaign progressed. The ad objective for stage three was to achieve as many link clicks on the link attached to the ad¹²⁰. The URL link that was attached to the ad was the same as the preceding stages (IrishTrails.ie). The results for stage three calculated to 292 link clicks. Additional findings indicate that 70% (n = 203) of females and 30% (n = 88) males accounted for the link clicks. The average click-through rate was 1.11% and the cost per click was €0.34. As can be seen in Table 21, more females performed link clicks in comparison to males. Females between the ages of 35-39 performed the most link clicks (n = 109). Further findings demonstrated that there was a total of 36 post reactions, one post comment, seven post saves and five post shares.

¹¹⁹ This is a Facebook/Instagram advertising format that combines multiple pictures into a single advertisement while also promoting 10 different walking locations and attached links respective to the walking trails.

¹²⁰ The number of clicks on links within the ad that led to advertiser-specified destinations, on or off Facebook. In this case, the Irish Trails website. Furthermore, the researcher chose link clicks as the objective instead of the 'conversion' objective as there was no access to pixelated data. The Facebook pixel is an analytics tool that allows you to measure the effectiveness of your advertising by understanding the actions people take on your website.

Table 21 - Campaign 1 Stage 3 - Carousel Advertisement Results

Variables Measured	Overall	Female	Male	Uncategorized	Female	Male	Uncategorized	Female	Male	Uncategorized
		25-34	25-34	25-34	35-44	35-44	35-44	45-54	45-54	45-54
Results	292	43	25	-	147	61	1	13	2	-
Reach	2,814	741	415	7	998	511	20	78	43	1
Impressions	26,379	6,367	3,457	83	10,175	4,828	207	831	429	2
Cost per Result	€0.34	€0.52	€0.38	-	€0.30	€0.28	€0.94	€0.26	€0.80	-
Amount spent	€100	€22.54	€9.48	€0.23	€44.73	€17.04	€0.94	€3.43	€1.60	€0.01
Frequency	9.37	8.59	8.33	11.86	10.20	9.45	10.35	10.65	9.98	2.00
Link Clicks	292	43	25	-	147	61	1	13	2	-
Unique Link Clicks	219	34	22	-	109	41	1	10	2	-
CPC (cost per link click)	€0.34	€0.52	€0.38	-	€0.30	€0.28	€0.94	€0.26	€0.80	-
CTR (Link click-through rate)	1.11%	0.68%	%0.72	-	%1.44	%1.26	%0.48	%1.56	%0.47	-
Clicks on ad (all)	430	73	32	-	211	90	3	19	2	-
CPC All (cost per click)	€0.23	€0.31	€0.30	-	€0.21	€0.19	€0.31	€0.18	€0.80	-
CTR All (click-through)	1.63%	1.15%	0.93%	-	2.07%	1.86%	1.45%	2.29%	0.47%	-
Unique Click (all)	287	57	28	-	133	52	2	12	2	-
Unique CTR (all)	10.20%	7.69%	6.75%	-	13.3%	10.18%	10.00%	16.67%	4.65%	-
Post Reactions	36	8	4	-	18	3	1	1	1	-
Post Comment	1	-	-	-	-	1	-	-	-	-
Post Saves	7	4	-	-	2	-	-	1	-	-
Post Shares	5	-	1	-	3	-	-	1	-	-

4.8.3.5 Campaign 1 Stage 4

Stage four advertisement ran from 6:00 am on the 30th of October 2019 till 23:59 pm on the 2nd of November 2019. This advertisement was made up of a static image ad and provided a link that redirected individuals to a landing page on Eventbrite. The Eventbrite page provides additional information on the family walk day and how to register. This ad based on the event reached 2,034 individuals. This can be broken down into 67% (n = 1,356) females and 32% (n = 658) males. The impressions of the ad totalled to 18,518 and the frequency calculated to 9.10¹²¹.

The ad objective for this stage was to achieve as many link clicks as possible, while also aiming to achieve conversions (conversions work in conjunction with the action stage of the AIDA model). There was a total of 70 link clicks performed in this stage. This figure was represented by 74% (n = 52) females and 26% (n = 18) males. As seen in Table 22, the most link clicks were made by females ages 35-44. As discussed in stage three above, the unique link clicks are important to note. Out of 70 link clicks, there was 66 unique link clicks on the ad. The link clicks for females aged 25-35 accounted for 18 clicks and 10 for males of the same age category. Even though females showed a higher number of link clicks, the click-through rate for males of that age category was slightly greater (0.37%). There were also 25 post reactions on the ad. Females made 20 post reactions, while males made five post reactions. There was one post comment, no post saves and two post shares.

From the 70 link clicks that redirected the participants to the Eventbrite page, there were a further 49 registers for the family walk day. Out of those 49 registrants, there was 16 conversions (16 families). That is to say, 16 families showed up on the day.

¹²¹ Refer to footnote 118. The budget was set too high for this stage of the campaign. A frequency cap should have been included here.

Table 22 - Campaign 1 Stage 4 – Event Advertisement Results

Variables Measured	Overall	Female	Male	Uncategorized	Female	Male	Uncategorized	Female	Male	Uncategorized
		25-34	25-34	25-34	35-44	35-44	35-44	45-54	45-54	45-54
Results	70	18	10	-	28	7	-	6	1	-
Reach	2,034	559	277	5	742	355	14	55	26	1
Impressions	18,518	4,950	2,697	66	6,906	2,958	98	552	285	6
Cost per Result	€1.07	€1.07	€1.01	-	€1.11	€1.51	-	€0.38	€0.92	-
Amount spent	€75.00	€19.29	€10.13	€0.23	€31.03	€10.61	€0.50	€2.28	€0.92	€0.02
Frequency	9.10	8.86	9.74	13.20	9.31	8.33	7.00	10.04	10.96	6.00
Link Clicks	70	18	10	-	28	7	-	6	1	-
Unique Link Clicks	66	17	10	-	26	6	-	6	1	-
CPC (cost per link click)	€1.07	€1.07	€1.01	-	€1.11	€1.52	-	€0.38	€0.92	-
CTR (Link click-through rate)	0.38%	0.36%	0.37%	-	0.41%	0.24%	-	1.09%	0.35%	-
Clicks on ad (all)	145	31	19	-	65	12	3	13	2	-
CPC All (cost per click)	€0.52	€0.62	€0.53	-	€0.48	€0.88	€0.17	€0.18	€0.46	-
CTR All (click-through)	0.78%	0.63%	0.70%	-	0.94%	0.41%	3.06%	2.36%	0.70	-
Unique Click (all)	114	31	19	-	51	9	2	7	2	-
Unique CTR (all)	5.60%	4.83%	5.78%	-	6.87%	2.54%	14.29%	12.73%	7.69%	-
Post Reactions	25	4	3	-	14	1	-	2	1	-
Post Comment	1	-	-	-	1	-	-	-	-	-
Post Saves	-	-	-	-	-	-	-	-	-	-
Post Shares	2	-	-	-	2	-	-	-	-	-

4.8.4 Campaign 2 – Mountaineering Ireland

4.8.4.1 Budget

The budget for each stage changed as the campaign progressed. The budget set for each stage represents the amount of money spent on showing individuals the advertisements. The higher the target audience, the higher the budget required by Facebook to reach that target audience. For stages one and two, the budget was set at €125. Stage three budget was set at €100, due to the target audience decreasing in size. As there were two attempts at stage four advertising in this campaign, there was €75 set for the first attempt and €50 set for the second attempt.

4.8.4.2 Campaign 2 Stage 1

Table 23 outlines the results for stage one video advertisement. This advertisement ran from 6:00 am on the 30th of October 2019 until 23:59 pm on the 3rd of November 2019. The video advertisement based on hillwalking reached a total of 18,312 individuals from the ages of 25-45 years old living in County Waterford. Out of the 18,312 people reached, a total of 48% (n = 8,844) were females and 50% (n = 9,220) were males. The ad objective for the video advertisement was to achieve as many ThruPlays as possible. A total of 2,558 ThruPlays were achieved by the individuals reached. As seen in Table 23, the discrepancy between male and females performing ThruPlays was minimal. In total, 51% (n = 1,312) of females and 47% (n = 1,213) of males achieved a ThruPlay.

Impressions accounted for 56,170. The frequency for this advertisement was 3.07¹²², meaning each individual viewed the ad on average three times. The number of link clicks achieved for the video advertisement was 134. Males (67.1%, n = 91) performed more link clicks than females (29.8%, n = 40). The average cost per link click is calculated to €0.93 and the click-through rate was 0.24%. Further analysis shows that there were 71 post reactions on this ad and a further four post comments, four post saves and 17 post shares. Findings also demonstrate that there were 3,972 ten second video views on the ad. A total of 2,777 individuals viewed at least 25% of the video, 1,277 viewed 50%, 897 viewed 75%, and lastly, 561 people viewed 100% of the video. It is important to note that when it came to video views, females watched the video advertisement for longer

¹²² As previously outlined, if the frequency number is too high it may result in ad fatigue. The budget for this stage could have been reduced to prevent this.

compared to men. In relation to watching 100% of the video, 56.1% (n = 315) of females completed the video ad compared to 42% (n = 236) of males.

Table 23 - Campaign 2 Stage 1 – Video Advertisement Results

Variables Measured	Overall	Female 25-34	Male 25-34	Uncategorized 25-34	Female 35-44	Male 35-44	Uncategorized 35-44	Female 45-54	Male 45-54	Uncategorized 45-54
Results	2,558	519	491	5	721	665	27	72	57	1
Reach	18,312	4,088	4,472	52	4,420	4,372	184	336	376	12
Impressions	56,170	10,904	13,878	154	13,093	15,064	448	1,233	1,372	24
Cost per Result	€0.05	€0.04	€0.05	€0.07	€0.05	€0.05	€0.04	€0.05	€0.06	€0.06
Amount spent	€125	€23.26	€24.90	€0.33	€33.65	€34.86	€1.07	€3.52	€3.35	€0.06
Frequency	3.07	2.67	3.10	2.96	2.96	3.45	2.43	3.67	3.65	2.00
Link Clicks	134	12	32	1	28	52	2	-	7	-
CPC (Cost per link click)	€0.93	€1.94	€0.78	€0.33	€1.20	€0.67	€0.54	-	€0.48	-
CTR (Link click-through rate)	%0.24	%0.11	%0.23	%0.65	%0.21	%0.35	%0.45	-	%0.51	-
Clicks (all)	617	56	121	2	136	250	14	9	27	2
Post Reactions	71	6	6	-	13	41	1	1	3	-
Post Comment	4	-	1	-	1	2	-	-	-	-
Post Saves	4	-	-	-	-	4	-	-	-	-
Post Shares	17	-	1	-	3	12	-	-	1	-
10-second video view	3,972	777	784	7	1,080	1,068	41	118	96	1
ThruPlays	2,558	519	491	5	721	665	27	72	57	1
Video plays at 25% - 13.75 Sec	2,777	552	522	5	789	736	28	78	66	1
Video plays at 50% - 27.5 Secs	1,277	226	234	4	361	371	17	29	34	1
Video plays at 75% - 41.25 Sec	897	159	153	3	258	269	10	21	23	1
Video plays at 100% - 55 Sec	561	118	80	2	183	141	7	14	15	1

4.8.4.3 Campaign 2 Stage 2

The lookalike audience was targeted in stage two of this campaign. As previously noted in section 4.8.3.3, Facebook has some drawbacks in its retargeting methods and did not reach 100% of the individuals from 25-45-year-old in County Waterford in stage one. Therefore, the lookalike audience was created¹²³ to scale and increase the target audience¹²⁴. Furthermore, as the audience from stage one was excluded here, the lookalike audience allowed the researcher to target anyone who was not involved in the first stage.

This advertisement followed the previous one and ran for four days from 6:00 am on the 4th of November 2019 to 23:59 pm on the 7th of October 2019. The same video ad that was utilised in stage one was used in stage two. Table 24 presents the results from this stage. This video reached 3,192 individuals. This can be broken down into 51% (n = 1,617) males and 48% (n = 1,548) females. The ad objective for this stage was the same as stage one. The findings indicated that there were 491 ThruPlays made by the individuals. This figure is represented by 57% (n = 278) males and 43% (n = 209) females. The age category that the most ThruPlays were performed was between 35-44 years old where 103 females and 157 males performed a ThruPlay.

The impressions on this ad calculated to 27,522, while the average frequency was 8.62¹²⁵, meaning everyone saw the ad on their screens at least eight times. Further analysis indicates that there were 101 link clicks made on the ad that redirected people to the Irish Trails website. It was found that more males (n = 58) performed link clicks in comparison to females (n = 42). The average cost per link click was €1.24 and the average click-through rate was 0.37%. Lastly, findings show that there were 20 post reactions, two post comments, two post saves and two post shares). In relation to the video views, 871 individuals watched at least 10 seconds of the video advert, where there were 491 Thruplays reported. A total of 580 individuals watched 25% of the video, 266 viewed 50% of the video, 173 watched 75%, and lastly, 104 individuals watched 100% of the video.

¹²³ This lookalike audience was created using the qualities, characteristics and demographic features of anyone who engaged with stage one advert.

¹²⁴ By doing this, there was an increase in the number of individuals who viewed the ad, online engagement, and conversions.

¹²⁵ This frequency was considerably high, it can be suggested that perhaps the budget allocated to this stage could have been reduced to prevent ad fatigue

Table 24 - Campaign 2 Stage 2 – Lookalike Audience Results

Variables Measured	Overall	Female	Male	Uncategorized	Female	Male	Uncategorized	Female	Male	Uncategorized
		25-34	25-34	25-34	35-44	35-44	35-44	45-54	45-54	45-54
Results	491	93	110	1	103	157	3	12	1	-
Reach	3,192	712	747	4	778	807	23	58	63	-
Impressions	27,522	6,112	6,700	30	6,585	6,983	187	448	477	-
Cost per Result	€0.25	€0.29	€0.25	€0.13	€0.32	€0.20	€0.33	€0.17	€0.23	-
Amount spent	€125	€27.07	€27.46	€0.13	€32.76	€31.75	€1.00	€2.26	€2.57	-
Frequency	8.62	8.58	8.97	7.50	8.46	8.65	8.13	7.72	7.57	-
Link Clicks	101	18	24	1	21	31	-	3	3	-
CPC (Cost per link click)	€1.24	€1.50	€1.14	€0.13	€1.56	€1.02	-	€0.75	€0.86	-
CTR (Link click-through rate)	0.37%	0.29%	0.36%	3.33%	0.32%	0.44%	-	0.67%	0.63%	-
Clicks (all)	318	44	75	2	71	112	-	7	7	-
Post Reactions	20	5	1	-	6	7	-	1	-	-
Post Comment	2	-	-	-	1	1	-	-	-	-
Post Saves	2	-	2	-	-	-	-	-	-	-
Post Shares	3	2	1	-	-	-	-	-	-	-
10-second video view	871	164	194	1	203	259	8	21	21	-
ThruPlays	491	93	110	1	103	157	3	12	11	-
Video plays at 25% - 13.75 Sec	580	106	134	1	127	178	3	17	14	-
Video plays at 50% - 27.5 Sec	266	51	56	1	55	84	1	8	10	-
Video plays at 75% - 41.25 Sec	173	29	33	1	44	52	1	7	6	-
Video plays at 100% - 55 Sec	104	18	22	-	31	27	1	3	2	-

4.8.4.4 Campaign 2 Stage 3

Following on from stage two, this advertisement ran from 6:00 am on the 8th of November 2019 to 23:59 pm on the 11th of November 2019. Stage three targeted any individual that engaged with the video advertisements in stage one and two. The carousel advertisement utilized in stage three reached 2,240 individuals (56% (n = 1,246) males and 43% (n = 959) females). The impressions on this ad accounted for 23,231 which is divided into 60% (n = 13,910) male and 39% (n = 9,074) female. The average frequency of the ad was considerably high at 10.37. This figure indicates that, on average, individuals saw the carousel ad at least ten times.

The ad objective for this stage was to achieve as many link clicks on the link attached to the ad. The link attached to the ad directed people to the IrishTrails.ie website. The analysis showed that there were 172 link clicks performed, where 34% (n = 58) of females and 64% (n = 110) of males performed the link clicks. The table below (Table 25) shows that the highest number of link clicks came from males between the ages of 35-44 years (n = 85). The average link click-through rate was 0.74%, while the cost per link click was €0.58. Notably, males between the ages of 25-34 performed more link clicks (n = 21) in comparison to women in that age category (n = 18). However, the click-through rate for females (1.17%) between the ages of 25-34 performed better than the males (0.94%). Lastly, there were 37 post reactions on the ad. The age category that made the most post reactions was 35-44 years old, where 26 post reactions were made between both male and female. There was one post comment, no post saves and four post shares.

Table 25 - Campaign 2 Stage 3 – Carousel Advertisement Results

Variables Measured	Overall	Female	Male	Uncategorized	Female	Male	Uncategorized	Female	Male	Uncategorized
		25-34	25-34	25-34	35-44	35-44	35-44	45-54	45-54	45-54
Results	172	18	21	1	37	85	3	3	4	-
Reach	2,240	365	494	6	542	688	28	51	64	-
Impressions	23,231	3,079	5,128	52	5,343	8,120	193	652	662	-
Cost per Result	€0.58	€0.66	€0.92	€0.22	€0.66	€0.43	€0.31	€1.15	€0.78	-
Amount spent	€100	€11.89	€19.34	€0.22	€24.55	€36.51	€0.92	€3.45	€3.10	-
Frequency	10.37	8.44	10.38	8.67	9.86	11.80	6.89	12.54	10.34	-
Link Clicks	172	18	21	1	37	85	3	3	4	-
Unique Link Clicks	142	15	20	1	33	65	2	2	4	-
CPC (cost per link click)	€0.58	€0.66	€0.92	€0.22	€0.66	€0.43	€0.31	€1.15	€0.78	-
CTR (Link click-through rate)	0.74%	0.58%	0.41%	1.92%	0.69%	1.05%	1.55%	0.46%	0.60%	-
Clicks on ad (all)	334	36	48	1	76	145	2	9	17	-
CPC All (cost per click)	€0.30	€0.33	€0.40	€0.22	€0.32	€0.25	€0.46	€0.38	€0.18	-
CTR All (click-through)	1.44%	1.17%	0.94%	1.92%	1.42%	1.79%	1.04%	1.38%	2.57%	-
Unique Click (all)	232	22	39	1	59	90	2	6	13	-
Unique CTR (all)	10.36%	6.03%	7.89%	16.67%	10.89%	13.08%	7.14%	11.54%	20.31%	-
Post Reactions	37	1	5	-	10	16	-	1	4	-
Post Comment	1	-	-	-	1	-	-	-	-	-
Post Saves	-	-	-	-	-	-	-	-	-	-
Post Shares	4	-	1	-	-	2	-	-	1	-

4.8.4.5 Campaign 2 Stage 4 – Part 1

The stage four advertisement ran from 6:00 am on the 12th of November 2019 to 23:59 pm on the 15th of November 2019 and targeted anyone who engaged with stage one, two or three¹²⁶. The ad objective for this stage was to achieve as many link clicks as possible, while also aiming to achieve conversions (conversions work in conjunction with the action stage of the AIDA. This ad also aimed to provide individuals with information about the guided walk scheduled for this campaign. A static image advertisement was utilised in this stage and provided individuals with a link click that redirected them to the landing page on Eventbrite.ie. The Eventbrite landing page gave detailed information on the guided walk, how participants could register for the walk and how to avail of the free ticket.

The advertisement used in stage four reached 2,105 individuals which was made up of 43% (n = 904) females and 56% (n = 1,169) males. The impressions for this advertisement were 15,267 (Females: 41%, n = 6,200 and Males: 58%, n = 8,903). The average frequency of the advertisement was 7.25. Further findings also illustrated that there were 9 post reactions. The most post reactions were made by females between the age of 35-44 years. There were no post comments, no post saves or shares. In relation to link clicks, there was a total of 67 link clicks performed on this ad. This figure was represented by 34% (n = 23) females and 60% (n = 40) males. As seen in Table 26, the most link clicks were made by 35-44-year-old males, accounting for 24 of the total link clicks. The click-through rate was 0.44% and the cost per link click was €0.94. From the 67 link clicks that redirected the individuals to the Eventbrite landing page, there were no further registers for the guided walk¹²⁷

¹²⁶ For stage one and two, engagement was defined as viewing at least 15 seconds of the video (Thruplay) and for stage three, engagement referred to a link click performed by an individual

¹²⁷ To reiterate, as no one registered for the guided walk, it did not go ahead. There was a second advertising attempt in this campaign (stage 4 part 2)

4.8.4.6 Campaign 2 Stage 4 – Part 2

Stage four part two refers to the second attempt of the advertising campaign. This advertisement ran from 6:00 am on the 3rd of December 2019 to 23:59 pm on the 6th of December 2019. The latter part of stage four performed much better than part one. As a result of the advertisement in stage four part one not being successful, there were many changes to the advertisement. The image and copy (text) were altered. Refer to section 3.4.2.3.3 of the methodology chapter to view the changes made. There were also changes made to the Eventbrite landing page where participants would have been directed if they performed a link click. The following adjustments were made: the length and time of the walk was greatly reduced in comparison to the first event, this was noted on the landing page¹²⁸. There was more information provided on what the walk entailed¹²⁹, what to bring to the walk and the proper equipment. Following this, there was additional pictures included to illustrate the scenery of the mountains and hills in Waterford.

The advertisement utilised in this stage reached 1,979 individuals, of which 42% (n = 822) were females and 57% (n = 1,128) were males. The ad impressions amounted to 12,159 (Females: 37%, n = 4,463 and Males: 62%, n = 7,521 males). The average frequency for this ad was 6.14. Further results indicated that post reactions performed better in this stage, compared to stage four part one. There was a total of 27 post reactions on this ad. There were no post comments, one post save and two post shares. The ad objective for this stage was the same as stage four-part one (to achieve as many link clicks as possible). The findings show that there were 102 link clicks performed¹³⁰. Out of the 102 link clicks, 57% (n = 58) males and 39% (n = 40) females performed a link click. The highest number of link clicks came from males between the ages of 35-44 years, accounting for 40 clicks. The average click-through rate was 1.36%, which was doubled since part one of stage four. From the 102 link clicks, there was one registrant on the Eventbrite page. From that one register, there was one conversion.

¹²⁸ The researcher and the representative from the affiliated organisation felt the length of the first walk was too long and may have impacted the decision of individuals who portrayed themselves as beginners. The length of the walk was shortened for the second event to make it more appealing.

¹²⁹ There was not a sufficient amount of information provided about the walk for event one, additional information was added to the landing page for event two to add more clarity.

¹³⁰ This was 35 more link clicks than stage four part one

Table 27 - Campaign 2 Stage 4 – Event Advertisement Results – PART 2

Variables Measured	Total	Female	Male	Uncategorized	Female	Male	Uncategorized	Female	Male	Uncategorized
		25-34	25-34	25-34	35-44	35-44	35-44	45-54	45-54	45-54
Results	102	16	13	-	21	40	4	3	5	-
Reach	1,979	305	428	4	467	642	25	50	58	-
Impressions	12,159	1,560	2,844	40	2,569	4,252	135	334	425	-
Cost per Result	€0.49	€0.40	€0.83	-	€0.53	€0.44	€0.19	€0.51	€0.32	-
Amount spent	€50.00	€6.34	€10.76	€0.26	€11.12	€17.63	€0.74	€1.54	€1.61	-
Frequency	6.14	5.11	6.64	10.00	5.50	6.62	5.40	6.68	7.33	-
Link Clicks	102	16	13	-	21	40	4	3	5	-
Unique Link Clicks	86	14	12	-	19	30	3	3	5	-
CPC (cost per link click)	€0.49	€0.40	€0.83	-	€0.53	€0.44	€0.19	€0.51	€0.32	-
CTR (Link click-through rate)	0.84%	1.03%	0.46%	-	0.82%	0.94%	2.96%	0.90%	1.18%	-
Clicks on ad (all)	165	28	19	-	38	66	5	4	5	-
CPC All (cost per click on ad)	€0.30	€0.23	€0.57	-	€0.29	€0.27	€0.15	€0.39	€0.32	-
CTR All (click-through)	1.36%	1.79%	0.67%	-	1.48%	1.55%	3.70%	1.20%	1.18%	-
Unique Click (all)	123	16	17	-	30	47	4	4	5	-
Unique CTR (all)	6.22%	5.25%	3.97%	-	6.42%	7.32%	16.00%	8.00%	8.62%	-
Post Reactions	27	2	3	-	10	12	-	-	-	-
Post Comment	-	-	-	-	-	-	-	-	-	-
Post Saves	1	1	-	-	-	-	-	-	-	-
Post Shares	2	-	-	-	-	2	-	-	-	-

4.8.5 Phase 3 Evaluation Surveys

This section will discuss the results related to the specific events implemented for both campaigns. For campaign one (Get Ireland Walking), a family walk day was hosted in Mount Congreve Gardens on the 3rd of November 2019. There was a total of 16 conversions from this campaign. This meant 16 families registered for the event on the Eventbrite website and attended on the day. The 16 families consisted of 30 adults and 29 children. A designated area was set up by the researcher where the evaluation surveys could be filled out. A teardrop flag was also at the area and displayed the Get Ireland Walking organisation name and logo. The parent/parents of the families were approached in a friendly and polite manner by the researcher. One parent from each family completed the evaluation questionnaire.

For Campaign two (Mountaineering Ireland), the original guided walk was scheduled for McGrath's Cross greenway was scheduled for the 16th of November 2019. However, as previously outlined in the methodology chapter, the event did not go ahead as there was no registrants for the walk. Nonetheless, a second guided walk was scheduled and hosted at Kilclooney Wood Car Park on the 7th of December 2019. There was a total of one conversion for the guided walk. One participant attended and completed the questionnaire.

4.8.5.1 Family's Walking for Recreation Levels

Participants were asked to identify their levels for walking for recreation in a typical month. This question was asked to get a general overview if participants were active or not. These results are derived from both campaigns (16 families from the Get Ireland Walking campaign and one participant from the Mountaineering Ireland campaign). Overall, findings from the data indicated that the mean value for days walking for recreation in a typical month was calculated to 6.62 days (SD = 4.91, Min = 1, Max = 20). The mean value for minutes walking for recreation in a typical month was 175.3 minutes (SD = 119.9, Min = 60, Max = 540). It is important to note that as the question asks on how many days and minutes families go walking for recreation, it is difficult to distinguish if physical activity requirements are met as the guidelines for children and adults are different. Furthermore, there are no distinctive guidelines set for families. In the context of this study, this question predominantly focused on walking for recreation and does not take into consideration other forms of physical activity and exercise that

families perform. Nonetheless, as all participants reported some form of walking for recreation in a typical month they can be regarded as somewhat active, but perhaps not enough to meet the physical activity guidelines.

Table 28 - Family’s Walking for Recreation Levels

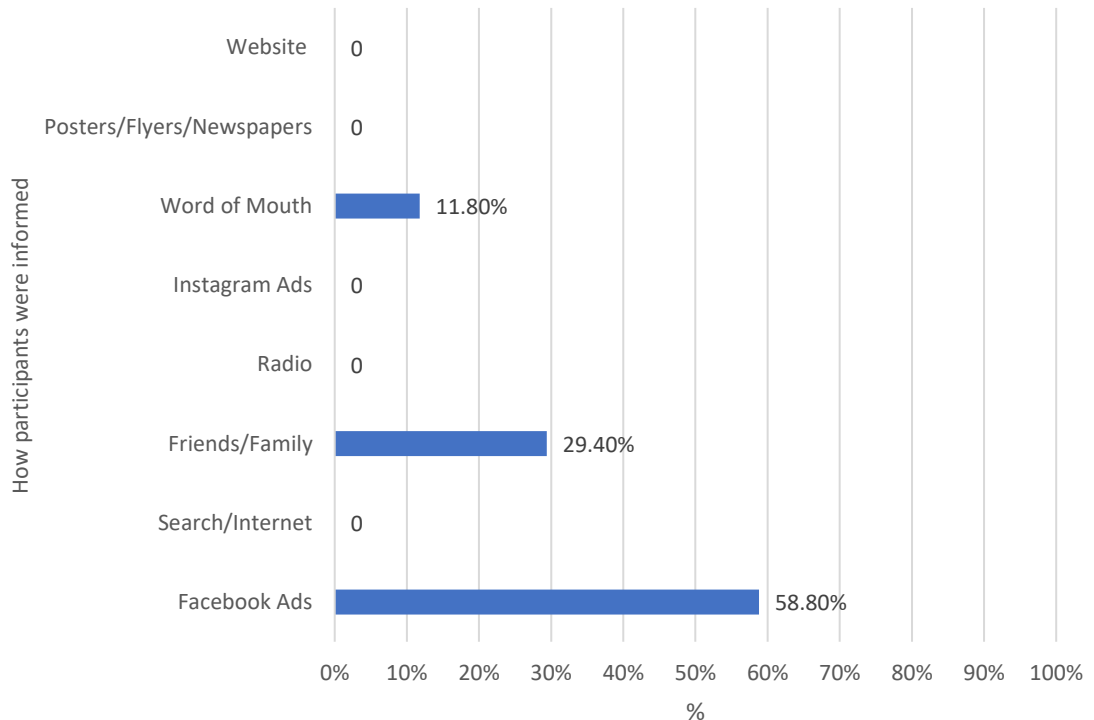
	N	Min	Max	Mean	Std. Deviation
Days Walking for Recreation	16	1.00	20.00	6.6250	4.910
Minutes Walking for Recreation	13	60.00	540.00	175.38	119.90

4.8.5.2 How Participants were Informed about Walking Events

Figure 49 indicates the findings of how participants found out or heard about the events. Most of the participants heard about the events from Facebook advertisements. This accounted for 58.8% (n = 10) of the respondents. It is inferred that those 10 participants were targeted in the social media marketing campaigns for this study. Furthermore, they viewed stage four advertisement about the event, registered on the Eventbrite page and as a result of that attended the event. The second-highest percentage of how the participants hear about the event was from friends and family (29.4%, n = 5). It may be possible that these 5 participants were not targeted in the campaigns. The same applies to word of mouth where 11.8% (n = 2) claimed that they heard about the events through other individuals¹³¹. This again may mean that they were not targeted in the campaigns. Nonetheless, this information is still useful to the researcher, suggesting that word of mouth from others, friends and family still influences people’s decisions to attend walking events.

¹³¹ It is important to note that additional information was provided to the researcher on the day of the event by one of the participants. The participant stated that they were informed about the event through a friend. Both families linked up and attended the event together.

Figure 49 - How Participants were Informed about Walking Events



4.8.5.3 Advertisement Recall

The researcher asked participants if they had noticed any promotional advertisements about walking on their social media platforms via Facebook and Instagram. A total of 41.2% (n = 7) of respondents claimed that they noticed promotional advertisements about walking on their social media accounts, particularly Facebook and Instagram, while 58.8% (n = 10) stated they did not. For campaign one (Get Ireland Walking), of the participants that responded 'yes', they were asked to recall the content of the advertisements they saw. Two of the respondents indicated that they could recall a video advertisement based on walking trails in Ireland. A further 5.9% (n = 1) recalled a video advertisement based on kids exploring local trails, having fun and making memories together. It can be implied that this was the video advertisement utilized in campaign one stage one and two for this current research. Further analysis showed that 29.4% (n = 5) of participants recalled an image advertisement that was based on local trails, routes to go walking in County Waterford. It can be suggested that they viewed the carousel ad in stage three of campaign one. Lastly, 5.9% (n = 1) of respondents recalled an image advertisement on the health benefits of walking. It is evident that this advertisement was not associated with the current campaigns, as the researcher did not deliver an advertisement based on the health benefits of walking.

For campaign two, the participant that attended the guided walk stated that they did notice promotional advertisements on their social media platforms and that they could recall a video advertisement based on walking trails in Ireland. There is a possibility that this individual was targeted in the online campaign for Mountaineering Ireland and attended the walking event as a result of that.

4.8.5.4 Experience with Promotional Advertisements

Individuals noted their experience they had with the online advertisement about walking. Out of the seven participants that noticed promotional advertisements on their social media accounts, 85.7% (n = 6) claimed that they had a positive experience of the advertisements about walking, while 14.3% (n = 1) claimed they have a neutral experience.

4.8.5.5 Impact of Advertisements on Encouraging Walking

Findings from the data demonstrated that 28.6% (n = 2) of respondents stated that the advertisements about walking encouraged them to get out and be active. A further 57.1% (n = 4) also agreed that the promotional advertisements influenced them to participate in walking. There was one participant (5.9%) that gave no opinion on this statement. Nonetheless, these findings still provide an indication that the social media advertising campaign had some influence on encouraging the target population to attend walking events.

4.8.5.6 Participant's Interest in Receiving Additional Information

For both campaigns, participants were asked if they would like to receive more advertisements based on walking routes and trails nearby via. Get Ireland Walking and Mountaineering Ireland's Facebook page. Findings indicated that 88.2% (n = 15) of respondents would be interested in receiving more information related to walking while 11.8% (n = 2) did not. These findings reveal that there is an interest in individuals wanting to know more about physical activity and walking.

4.9 Conclusion

This chapter outlined the main findings derived from phase one, two and three of this study. These findings were broken down into three respective sections structured around the research questions. It is evident from the results of phase one questionnaire that there are a number of correlates of physical activity in the target population. There are many factors that both encourage and discourage the physical activity levels of these adults. It

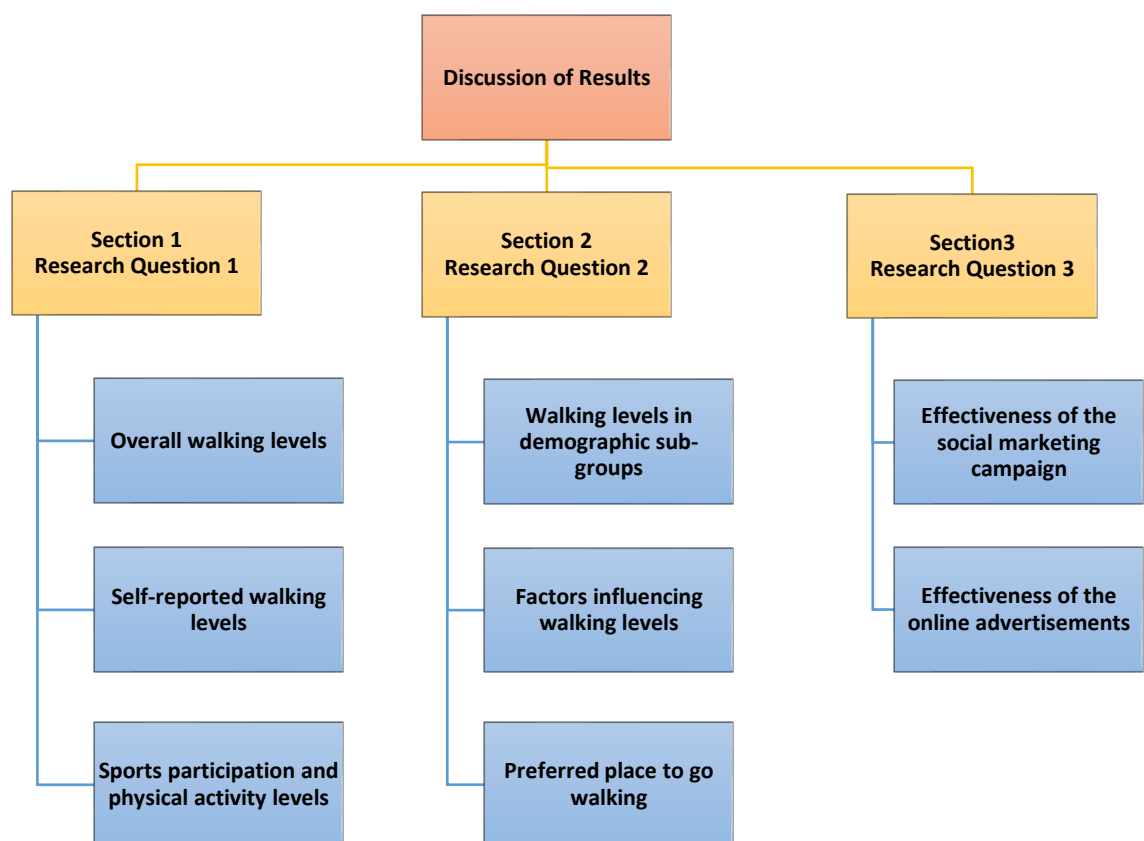
is also apparent from phase one that active respondents walked more for recreation when compared against non-active respondents. However, it is important to note that non-active respondents reported higher levels of utilitarian walking. In relation to the social media marketing campaign, there were a number of performance metrics that performed better over other ones, for example, the reach and engagement for campaign two was higher than campaign one. Lastly, this section concluded with the results from phase three survey which sought to evaluate the social media marketing campaign. The following chapter will delve more into the comparison of this current study with previous literature. A discussion is developed on the success of both campaigns, the limitations to this study and future recommendations for further research.

Chapter Five: Discussion

5.1 Introduction

This study aimed to examine the effectiveness of a social marketing campaign using digital marketing techniques to promote walking amongst 25-45-year-old male and females. This chapter will discuss the main findings presented in this study as it relates to previous research carried out in the area. The discussion of these results are presented in relation to each research question. To conclude this chapter, the limitations and future recommendations are outlined. Figure 50 provides an outline of what is to follow in this chapter.

Figure 50 - Overview of Discussion Chapter



5.2 Research Question 1: What are the Current Walking Levels of 25-45-year-old Male and Females in Waterford?

The general picture emerging from research question one was that active respondents walked more for recreational purposes when compared to non-active respondents. However, it must be noted that the levels of walking for recreation still remain low in some participants in the sample population. It was reported that only 149 (37.3%) participants met the national physical activity guidelines through walking, out of a sample

population of 400. Therefore there is still a high proportion of respondents that are classified as 'inactive' as they do not meet the guidelines. Despite low levels of recreational walking, non-active participants accumulated higher levels of utilitarian walking when compared to active respondents. Examples of utilitarian walking that these participants may have engaged in would be walking for transport, walking from one location to another, and walking in work or for daily duties. However, levels of utilitarian walking were not used to determine if the participants met the national physical activity guidelines, only the levels walking for recreation were utilised to determine this. It can be suggested that some participants were not meeting the guidelines through recreational walking but perhaps through utilitarian walking. However, what is noted in the subsequent section is that the questionnaires conducted in phase one were self-reported. This may have impacted the results of the study as overestimation may have occurred, due to social desirability. However, the author of this study discusses the actions that were taken to mitigate this issue and therefore report reliable results. Finally, concerning research question one, it was also found that sports participation may have affected the levels of physical activity that were reported. Some participants reported being a part of a sports club and may have accumulated high levels of physical activity here. This may have contributed to the likelihood of them meeting the national physical activity guidelines through sport and not recreational walking. The following sections will discuss these findings in further detail.

5.2.1 Overall Walking Levels

The research findings showed that active respondents accumulated higher levels of walking for recreation when compared to non-active respondents. The average total time walking for recreation was 269.22 minutes per week for active participants when compared to 87.23 minutes per week for non-active participants¹³². In addition to this, non-active respondents accrued higher levels of utilitarian walking compared to active respondents. The total time walking for utilitarian for non-active respondents was 859.64 minutes per week compared to 641.71 minutes per week for active respondents. This finding confirms that people were walking more for utilitarian purposes in comparison to walking for recreational purposes. This result does not correspond with previous research.

¹³² These measurements were assessed to distinguish if participants met the national physical activity guidelines or not. In this study, the guidelines used were 5 days of at least 30 minutes PA, accumulating to 150 minutes per week

In a study by Hekler et al. (2012), it was reported that participants accumulated higher levels of leisurely walking when compared against utilitarian walking levels. However, Hekler et al. (2012) stated that participants who wanted to meet the physical activity guidelines engaged in both leisurely and utilitarian walking. To offer some explanation to the finding from the current study, it can be suggested that some respondents were meeting the national physical activity guidelines through utilitarian walking but not recreational walking. These findings are less surprising if we consider that adults have work, care and family commitments and perhaps do not have enough time to go walking for recreation but are still accumulating high levels of utilitarian walking.

However, for the purpose of the current study, only ‘walking for recreation’ was used to determine whether participants met the national physical activity recommendations. If participants accumulated over 150 minutes of recreational walking per week or 30 minutes of walking, five times per week then they met the guidelines. However, as noted above, walking for recreation levels remained low for a high proportion of the participants included in this study. Only 149 (37.3%) participants met the national physical activity guidelines through walking, out of a sample population of 400. Despite this finding, utilitarian walking levels were high for some of the participants in this study and may be useful information for future campaigns. Perhaps utilitarian walking can be incorporated into future campaigns as it is a contributing factor to meeting the guidelines. This statement is backed up by research by Jin et al. (2019), where high levels of utilitarian walking were reported as having a significant impact on individuals meeting the national physical activity guidelines.

These findings confirm the differences in recreational walking and utilitarian walking. The reasons why recreational walking levels were lower in some participants is explained in research question two below. There is an array of factors that both positively and negatively impacted the walking levels of this cohort.

5.2.2 Self-Reported Walking Levels

The findings that are discussed above illustrate that active respondents walked more for recreation when compared to non-active respondents. However, it must be noted that these findings were gathered using a self-reported questionnaire where bias and overestimation of physical activity levels commonly occurs. A study by Dyrstad et al. (2014) found that participants reported higher levels of vigorous physical activity and

lower levels of sedentary time when a questionnaire was used to collect data, in comparison to objectively measuring physical activity levels, for instance, using an accelerometer. Dyrstad et al. (2014) stated that it is a common observation in health-related research that respondents will overestimate their physical activity levels when a survey is utilised (Dyrstad, Hansen, Holme, & Anderssen, 2014).

The reliability of the data collected from the questionnaire is dependent on the quality of answers given by respondents. Participants may have answered questions with what they 'think they should say' as opposed to 'what they feel', resulting in answers being somewhat arbitrary (King and Bruner, 2000; Steene-Johannessen et al., 2016). However, the author of this study aimed to eliminate the degree of bias from the respondents by working in conjunction with the guidelines for data processing and analysis based on the International Physical Activity Questionnaire (IPAQ, 2005). This meant when conducting the presentation of the results chapter, any outliers that were present were re-coded in accordance with the IPAQ statistical analysis guidelines. Therefore, overestimated answers were mitigated for. This discussion would be particularly useful for future research that attempts to use questionnaires as a data collection method when assessing walking levels. As bias and overestimation may be presented as a barrier in research, there are solutions to overcome them, like the one presented above.

5.2.3 Sports Participation and Physical Activity Levels

In relation to the current study, it was confirmed that 21.7% of all respondents were a member of a sports club. Notably, sports participation was most associated with 20-24-year olds and 25-29-year olds. This finding is similar to the Irish Sports Monitor report conducted in 2019, where 63% of people under the age of 35 were involved in sports. According to the Irish Sports Monitor report 2019, approximately 1.78 million people (46%) in Ireland participate in sports at least once a week. These results correspond with the general conclusion in this field of research. For example, in a study conducted by Eime et al. (2016), it was found that sports participation decreased with age and was most associated with younger adults. To offer some explanation for this discrepancy, it may be suggested that the transition from early adult to late adulthood can affect an individual participating in sports. It is possible that adults between the ages of 30-39 do not have enough time to participate in sport due to work, care, and family commitments or perhaps have lost interest in playing sport. Moreover, results from the current study showed that only 3.4% of adults between the ages of 30-39 participated in a sport (2.3% for 30-34

years and 1.1% for 35-39 years). However, for younger adults, there is a wide variety of alternative sports or activities to choose from. This may be particularly relevant in an Irish context where there is a strong community developed within the GAA, soccer and rugby association. It could be suggested that sports participation was also contributing to the accumulated levels of physical activity, but not walking levels. However, what is unknown is the amount of physical activity levels that were accumulated by these participants involved in sports. Whilst participants were asked if they were a part of a sports club, what was not directly investigated was what type of sport and the intensity. This would hugely impact whether they met the national physical activity guidelines or not.

These results suggest that younger adults may have different interests when compared to older adults in terms of participating in physical activity. The author of this thesis would encourage researchers to thoroughly consider the interests and behaviours of their target audience when developing social marketing campaigns. From the findings that occurred in this study, it may be proposed that it is more difficult to promote walking amongst a younger age category when there are alternative physical activities that they may enjoy participating in, for example, sport.

5.2.4 Research Question One Conclusion

In the past two decades, physical inactivity has increasingly become a global burden and public health challenge. The trend of physical inactivity has been portrayed in the current study. Furthermore, levels of walking for recreation remain low for over half of the sample population (62.75%) involved in this research. Most importantly, this percentage of participants are not meeting the national physical activity guidelines in Ireland. This finding is important for future researchers to note. It shows that notwithstanding the efforts of the National Governing Bodies of Ireland and the well-documented guidelines, there is still room for individuals to be physically inactive. Perhaps, the efforts and promotion of the national physical activity guidelines are not strong enough and warrants more attention.

What lacks in the national physical activity guidelines is the recognition to acknowledge factors affecting participation levels. The guidelines are presumptuous that all adults can participate in physical activity. All factors that affect an individual's physical activity levels need to be identified and addressed as this will aid in an effective social marketing

campaign. These factors are discussed in further detail in the subsequent section. The findings of research question one and results that follow are aligned with the social marketing theoretical framework where one of the key elements is customer orientation. This involves designing an intervention centred around the sample population's needs, wants, habits, concerns and behaviours. In doing this, the likelihood of delivering a successful social marketing campaign is increased. This provides potent information for future researchers who attempt to change human behaviour. It is essential that the campaign is supported by a theoretical framework and gathers important information of the participants first. After acknowledging the issue of physical inactivity, it was then appropriate to identify the factors affecting participation levels.

5.3 Research Question 2: What Factors are Influencing 25-45-year-old Male and Female Walking Levels in Waterford?

Overall findings from research question two showed that there was an array of factors that influenced walking levels in the specific cohort. Firstly, some of the primary factors that affected walking levels were broken down into various demographic sub-groups, for instance, age, gender, parenthood, working hours, and car and pet ownership. Linked to these factors was also many other confounding variables that may have affected walking levels, for example, socioeconomic status, time constraints, pressures and commitment of studying, motherhood and maternity, confidence and body image, not feeling safe enough to go walking, social support, interests and pursuits and home location.

The current study found that age was not a factor that influenced walking levels in the sample population. The impact of gender was an important factor affecting recreational walking levels, but more so for females when compared to males. In addition to this, parenthood and the number of children did not affect levels of walking for recreation. However, when this study examined the relationship between time walking for recreation and having a child, based on age and gender, then there was a significant difference noted in males 30-34 years old. In relation to pet ownership, respondents that owned a dog were 1.6 times more likely to meet the recommendations when compared to those who did not. Further findings showed that there was no difference found between work commitments and the likelihood of participants meeting the national physical activity guidelines. What is more, there was also no difference between car ownership and a participant's total time walking for recreation.

Several factors that encouraged walking levels were worth noting in this discussion. These factors included: enjoyment, enjoying the outdoors, suitable activity to do with family, level of interest in walking and the promotion of walking routes and trails in Waterford. While these factors inspired people to go walking more for recreation, numerous factors discouraged or hindered participation in walking. The most striking factor was that participants stated that they did not have enough time to go walking. Further findings showed that participants claimed there was no suitable location to go walking and that this would prevent them from walking more for recreation, despite a wide range of walking routes located in Waterford, for example, the Greenway. Lastly, results related to research question two showed the most preferred places to go walking. However, while some participants highlighted their most preferred place to go walking, that did not necessarily mean that it was the place they walked most frequently. Some participants may have gone walking in routes and locations that were of easy access but not their favourite place to walk. The following section will discuss these findings in further detail.

5.3.1 Walking Levels in Demographic Sub-Groups

5.3.1.1 Age and Walking Levels

Findings from the current study confirm that there was no correlation between participants age, recreational walking levels and meeting the national physical activity guidelines. Therefore, it is clear from these results that age was not an associated factor that influenced walking levels of the sample population. However, when comparing this finding to previous literature, there were some differences noted. In relation to previous studies, age was found to be the most consistent correlate of physical activity. Age was reported as being an inverse association of physical activity. This meant, when adults got older, physical activity levels decreased (Choi et al., 2017). Previous literature also examined the relationship between age and physical activity from a broader sample population base. In the systematic review by Choi et al. (2017), the sample populations of all studies included in the review ranged from 18-65 years old. Many studies in the review focused on adolescents or older adults. Perhaps, this is a reason why the current study did not correspond with previous research. It can be suggested that age did not influence levels of walking in the current study due to the defined and different sample population. What is more, the main focus of the current study was to examine a more specific sample group whilst adding to the body of literature in this field of study. As

previously discussed, the sample population of this study was 24-45-year-old male and females. It can be suggested that if the population sample exceeded beyond that age category to over 60's or perhaps examined adolescents, then there would have been a correlation between age and walking. However, there is extensive literature that has already focused on physical activity campaigns on adolescents and older adults (King, 2001; Huhman et al., 2004; Kamada et al., 2013; Fujihira et al., 2015; Scarapicchia et al., 2015; Komatsu et al., 2017; Zubala et al., 2017). Revisiting these population samples would perhaps provide little to academia. Therefore it was important to assess a more defined sample group.

While there was no statistically significant difference between age and recreational walking levels, the trend of total time walking for recreation is still noteworthy. The total time walking for recreation for 30-34-year-olds was 183.67 minutes per week. Findings saw a decline in the minutes walking for recreation after this age category (151 minutes for 35-39-year-olds and 135 minutes for 40-44-year-olds). It was difficult to draw on a comparison study for this finding that was specific to the population sample (25-45-year-olds). To get an insight into this work, the researcher needed support from a similar field of study in an attempt to compare results. Previous research that examined the relationship between age and physical activity focused more on the transition from childhood to adolescents, or adults to older adults (American College of Sports Medicine, 2015; Milanovic et al., 2013; Shaw et al., 2014). These studies showed a decline in levels across the different populations.

Whilst these studies focus on different population samples, the researcher had to draw on findings from the current study. The decline noted in the current research may be due to several influential factors. Individuals in the age category of 35-44 years were more likely to state that being apart of a walking group or having more walking groups with leaders would encourage them to go walking more. This was least associated with the younger adults in the sample population. Perhaps, it can be proposed that there is not enough walking groups or walking associations available in County Waterford for these individuals. What is more, participants from the ages of 35-44 claimed that more knowledge about walking routes, the benefits of walking, walking activities and events, would encourage them to walk more for recreation. This is perhaps an indication that there is not enough promotional activity about walking in Waterford. These findings stress the importance of promoting walking, if these individuals were more aware of local

routes and trails and had more opportunities to walk in groups, then their levels of walking may be increased (Rawl, 2020).

5.3.1.2 Gender and Walking Levels

This research showed that females total time walking for recreation was higher when compared to male counterparts. Results highlighted that females were 2.3 times more likely to meet the national physical activity guidelines. This directly correlates with previous findings from the World Health Organisation (2018). This report found that 34% of Irish women were meeting the national physical activity guidelines while only 31% of males were sufficiently active. What is more, the finding from the current study is consistent with previous research by Pollard and Wagnild (2017), where females walked more for leisure, fun, and exercise, when compared to males. However, it is important to note that the overall finding of females walking more than males has provided mixed results when compared against previous literature. There have been some differences reported. In a systematic review by Choi et al. (2017) for example, males had accumulated higher levels of physical activity when compared against females. There may be several explanations for this discrepancy between gender and physical activity. Firstly, it was highlighted in the current study that there was a strong association between social support and walking for recreation for females. Several female participants claimed that having someone to go walking with or being a part of a walking group was a positive influence on their physical activity. More females claimed that spending time with their friends was a reason to participate in physical activity when compared to males. Perhaps females had accumulated higher levels of walking due to social support.

A further reason for this disparity may be due to the fact that the current study only aimed to assess walking levels of participants and did not take into consideration other forms of exercise like running or cycling. Indeed, perhaps the male participants included in this study had different preferences when it came to participating in physical activity. The current study confirmed that female participants were more likely to state that they would go walking to control or lose weight when compared to males who would take part in physical activity for health and fitness purposes. This finding is consistent with the work of Craft et al. (2014) where women were more likely to participate in exercise for weight loss reasons. In Craft et al. (2014) study, it was highlighted that male participants were more inclined to state that they engage in physical activity for health and fitness reasons.

Another reason why females may have accumulated higher levels of walking for recreation is due to the ease and accessibility of walking. Findings from the current research showed that females were more likely to state that they go walking because they can go at their own pace, indicating that walking is used for leisurely or recreational purposes and not for strenuous activity. While the current study adds to the body of literature on the gender difference in recreational walking, perhaps more research attention is needed to confirm why males are not as attracted to walking when compared to their counterparts.

5.3.1.3 Work Commitments and Walking Levels

In Ireland, the average hours for full-time employment are 40 hours per week. In relation to the current study, when participants worked longer hours, then their walking for recreation levels decreased. That is to say, when participants worked between 30-40 hours per week, they had less time for walking. Despite over 87.4% of respondents claiming that they do not have enough time to go walking, the current study found no statistically significant difference between work commitments and the likelihood of participants meeting the national physical activity recommendations. This finding conflicts with former research in this area where Kirk and Rhodes (2011) found that individuals who worked long hours did not engage in regular physical activity, due to high demanding occupations. Further research by Morrissey (2013) highlighted that pressures of work commitments have been a serious impediment on exercise behaviours. No correlation was found between the average working hours and the levels of walking. This finding was contrary to the researcher's expectations as it was expected that working longer hours would limit the amount of time participants give to walking. However, it must be noted that this finding only states that work commitments do not affect walking levels. A reason why this finding may have occurred in the current study may be due to the variable that was measured, for instance, walking levels. Although not directly investigated in this study, it is likely that work commitments could have impacted participants overall physical activity levels, for example, running, cycling, or going to the gym. Furthermore, this was the general consensus found in Morrissey's (2013) study.

While the above finding discusses the relationship between work commitments and walking levels, it must be noted that perhaps the same issues are linked to the younger age category who may be in full-time education or indeed employment. Morrissey (2013) refers to time pressures and study commitments as a barrier to exercise participation in a

young adult sample population. Thus, similar to the previous literature on work commitments discussed above. Both Ebben and Brudzynski (2008) and Arzu et al. (2006) found that full-time education and studying was associated with lower physical activity levels. This was due to lack of time, lack of energy, feeling tired, and no motivation. Whilst this was not directly investigated in the current study, it could be proposed that the same findings may have occurred. The average total time walking for recreation for the 25-29-year-olds was 138.91 minutes per week. This is below the levels recommended for the national physical activity guidelines. Perhaps this age category was not walking enough due to time constraints and feelings of exhaustion. However, for the participants in this age category that did participate in walking (active respondents), one of the main reasons for doing so was to de-stress (79.5%) and improve mood (87.80%). It could perhaps be suggested that the active participants were using walking as a form of stress relief or management. This would coincide with the work of Morrissey (2013) where individuals would engage in exercise to gain mental refreshment.

The above finding states that walking levels decreased when people worked from 30-40 hours per week. However, an additional finding from the current study showed that walking levels increased again once individuals worked over 40 hours per week. Previous research in this field showed that people who work over the average hours per week are deemed to be highly successful people and see exercise or physical activity as an integral part of their success (Goldsby et al., 2005). Furthermore, there is extensive literature on the health benefits of physical activity, where increased energy levels occur, along with increased creativity and concentration levels, all contributing factors to one's success. Perhaps, the individuals in the current study who worked over 40 hours deemed themselves as highly successful motivated people who incorporated physical activity into their lives, hence, the reason why walking levels increased.

Another reason for this finding may be due to the socioeconomic status of participants. There is much literature on the relationship between physical activity and socioeconomic status. Most studies claim that those who have higher incomes, have higher education, work longer hours in a higher status job and live in more affluent areas are more likely to be physically active when compared to individuals in less advantaged situations (Ball et al., 2015; Stalsberg & Pedersen, 2018; Talari et al., 2013). It can be suggested that those individuals who worked more than 40 hours were perhaps in a higher status job and earning a higher wage than others. This would help towards the cost of equipment for

walking, and in particular, if they were engaging in hill-walking where specific hiking boots are needed. However, for those individuals that may be from a lower socioeconomic background may experience financial constraints where the cost of walking becomes a barrier. It can also be suggested that participants who are parents and are working the typical weekly hours of 40 hours have more financial costs than others, for example, childcare and transportation costs. Therefore, this may negatively impact the levels of walking. These findings may impact how future social marketing campaigns are designed. Perhaps, when promoting walking, it should be framed as an activity that is suitable and achievable even for people working between 30-40 hours per week. Walking for recreational purposes should also be portrayed as an easy and low-cost activity for parents, families and people of lower socioeconomic status.

5.3.1.4 Parenthood and Walking Levels

The current research confirmed that there was no correlation between participants total time walking for recreation and the number of children in a household, across most age categories. This meant that whether participants had one, two, three or more children, then the levels of walking would not be affected. This trend had shown to be inconsistent with previous research (Eyler et al. 2002; Hull et al., 2010; Prince et al. 2016; Choi et al., 2017). Both studies conducted by Eyler et al. (2002) and Prince et al. (2016) reported that changes in family structure were a negative correlate of physical activity levels, meaning, once children were introduced into the family then physical activity levels would decrease. Furthermore, research conducted by Hull et al. (2010) showed that parents with one or more children had lower levels of physical activity. This may be due to time constraints and care commitments of the children.

In relation to the current study, it is difficult to come to a definite answer on why the number of children did not impact the levels of walking for recreation. However, it could be proposed that levels of recreational walking did not change as the majority of the sample population (62.7%) were already non-walkers when surveyed. Perhaps participants had no intention to change levels of walking regardless of the number of children in a household. While the finding shows children did not impact recreational walking, what was not directly investigated was the impact children had on utilitarian walking. It could be suggested that perhaps levels of utilitarian walking increase with the number of children in primary school, as there is much promotion on ‘walking to school’ by the national governing bodies of Ireland (Get Ireland Walking , 2018).

Despite the finding discussed above, when the current study examined the relationship between time walking for recreation and having a child, based on gender and age, there was a significant difference found. The difference occurred in male participants aged 30-34, where their levels of walking increased. Walking levels amongst females aged between 30-34 were not as high as these male participants. One possible reason for this discrepancy could be due to age, time and stage of life that these females are at. Giving the average age of motherhood is 32.8 years of age in Ireland (Central Statistics Office, 2017), then these females may not have been participating in walking due to motherhood and maternity. These results correspond with previous research. For example, in a systematic review by Bellows-Riecken and Rhodes (2008), it was found that mothers were less physically active when compared to fathers. This trend exacerbated for new mothers. In a study by Brown et al. (2000) and Segar et al. (2002), having children was confirmed as a barrier to physical activity participation for women and mothers. Further research in this area showed that mothers are less active due to their increased parenting responsibilities (Drago, 2001; Nomaguchi & Bianchi, 2004; Han & Jun, 2013). Despite some of the previous findings being over a decade old, they are still relevant today and consistent with the findings in the current thesis. As the same results from previous studies have been portrayed in the current study, the trend of mothers being less physically active still exists today in females between the ages of 30-34.

It could also be suggested that walking for recreation levels were not as high here as some females stated that they were not confident enough to go walking. In previous literature, the link between confidence and body image has shown mixed results. In a systematic review by Choi et al. (2017), there was no correlation between psychological factors such as body image and confidence and physical activity. However, Rawl (2020) found low self-esteem and poor self-image to be a barrier to participation. Nonetheless, it could be proposed in the current study that females may have had low self-esteem or did not feel comfortable enough to go walking. In addition to this, several females stated that they did not feel safe enough to go walking on their own. This could have negatively impacted their walking levels and in particular, if they were bringing children for a walk too. What is more, results from the current study indicated that females in this particular age category stated that they would walk more if footpaths were better maintained and if parks and open spaces were too. Perhaps, the combination of not feeling safe enough to go

walking and the need to have better-maintained footpaths was impacting their decision to go walking (Rawl, 2020).

Perhaps when designing a walking campaign, it must be considered that a proportion of females between the ages of 30-34 may be mothers at maternity or have more than one child. Therefore, they may have no time or may not want to participate in walking at this stage of their life. Perhaps, once the children become less dependent on mothers, then females may have more time to engage in physical activity. This statement may be backed up with an additional finding from the current study where there was an increase in walking levels in 35-39-year-old women. Female participants between the ages of 35-39 were more likely to state that they were looking for more opportunities to go walking or having someone to go walking with or being a part of a walking group. These findings are important to note when selecting a target audience for walking or physical activity campaigns. Perhaps, when targeting mothers (of any age, not just 30-34 years) walking should be portrayed as an activity that is not strenuous, is fun and accessible.

5.3.1.5 Pet Ownership and Walking Levels

The likelihood of an individual meeting the national physical activity recommendations increased when they owned a dog. Indeed, if they owned a dog, then they were 1.6 times more likely to meet the national physical activity recommendations (30 minutes of moderate physical activity, five days per week) when compared to participants who did not own a pet. A similar finding from the Irish Longitudinal Study on Ageing (2019), showed that 33% of dog owners over the age of 55 reported higher levels of physical activity in comparison to 24% of non-dog owners (Donoghue, McGarrigle, & Kenny, 2019). The finding from the current study is also directly congruent with the work of Cutt et al. (2008) where individuals who owned a dog were 57% more likely to reach sufficient physical activity levels and 77% of participants were more likely to reach sufficient walking levels when compared to those who did not own a dog. Furthermore, Brown and Rhodes (2006) allude to the point that dog owners walked on average 300 minutes per week in comparison to individuals who did not own a dog and walked 168 minutes per week. The findings from the current study are consistent with previous literature show the potential and positive impact that owning a dog could have on an individual's physical activity levels.

The previous finding (if they owned a dog, then they were 1.6 times more likely to meet the national physical activity recommendations) was backed up with a further result from

this study which showed that 26.8% of walkers and 42.8% of non-walkers stated that walking their dog was a reason to take part in physical activity, thus potentially increasing levels of participation. It must be noted however that the current research found that individuals between the ages of 20-24 were most likely to prefer walking over other activities because they could walk their dog. A similar finding from Machova et al. (2019) showed an increase in physical activity duration in young females (21 years) due to pet ownership. To offer some explanation, it can be suggested that younger adult's preferences and choices in physical activity differ from other age groups. Perhaps, it can be suggested that 30-34-year-olds who have children prefer to engage in family walk days or activities instead. The current study confirms that different age categories may have unique preferences when it comes to participating in physical activities. These findings show the value of market research before implementing a social marketing campaign. It is important to gather information on the target audiences wants, needs, habits, concerns, and existing physical activity behaviours. By doing this, researchers can tailor the campaigns around the target audience's interests and provide a more relevant campaign to them. This may increase the likelihood of behavioural change.

5.3.1.6 Ownership of a Car and Walking Levels

The current study shows that there was no significant difference between a participant's total time walking for recreation and car ownership. There was also no correlation found between car ownership and the likelihood of an individual meeting the national physical activity guidelines. This finding was contrary to the expectations of the researcher as a high percentage of Irish citizens use their car to get from one location to another, for example, to get to work. According to the Central Statistics Office (2016), a total of 61.4% of commuters in Ireland use a car to get to work, which accounts for 1,152,631 individuals. The finding observed in the current study conflicts with research in this area. Many studies have highlighted that there is a negative association between physical activity and car ownership, where owning a car would negatively impact physical activity participation (Douglas et al., 2011; Shoham et al., 2015). In a study carried out by Shoham et al. (2015), individuals that owned a car engaged in 20.7 minutes of daily moderate physical activity compared to those who did not own a car and accumulated 45.1 minutes of daily moderate physical activity.

It can be suggested that the reason for this discrepancy in the current study is due to the variables being measured, for instance, only walking for recreation levels were assessed

and used to determine if participants met the national physical activity recommendations. Therefore, car ownership was not found to have an impact on recreational walking. However, what was not objectively measured in this study was overall physical activity levels accumulated through different activities like running, cycling, and swimming. It could be presumed that car ownership would affect overall physical activity levels, as the studies noted above have found this to be true. Moreover, while not directly investigated in this study, it can also be suggested that car ownership would negatively impact levels of utilitarian walking, for example, walking to work. This perhaps could be due to the location of jobs. It could be proposed that any participants included in the current study that were travelling to work had to travel outside of County Waterford or Waterford City, and perhaps walking was not an appropriate option. When compared to a different county like Dublin, there were 512,449 people working in Dublin in 2016, where there are an abundance of job opportunities. However, there were only 24,375 people whose jobs were located in Waterford city in 2016 and possibly had to travel elsewhere (Central Statistics Office, 2016).

Whilst the above finding showed no correlation between car ownership and walking levels, it may still be important to note that 23.9% of non-active respondents stated that they had no transport to get to walking routes and that this prevented them from walking. This finding was most associated with the younger age categories in the sample population. A study by Rawal (2020) found that inadequate transportation to physical activity facilities was closely linked with physical inactivity. This was particularly the case for people living in remote areas. It can be proposed that a combination of home location and the accessibility of resources can impact the levels of walking. Perhaps, those individuals from the current study that stated they had no transport to get to walking routes, lived in the countryside or remote areas and had no car. Therefore, the inaccessibility of resources hindered walking participation in these participants.

5.3.2 Factors Influencing Walking Levels

This section will first outline the factors that influenced the participant's walking levels, along with discussing the reasons why participants preferred walking over other activities and the reasons for engaging in walking. Secondly, a review of the factors that hinder walking participation in the chosen population is provided. Lastly, the most preferred places and frequency of places to go walking is discussed.

5.3.2.1 Factors Encouraging Walking Levels

One of the main reasons why participants reported preferring walking over other activities was for enjoyment and enjoying the outdoors. This finding coincided with past studies, where Allender et al. (2006) found that enjoyment was reported as a motivation for adults to participate in physical activity. Despite Allender's et al. (2006) study being over a decade and a half old it still shows relevance as that trend still exists today. It can be proposed that engaging in walking or physical activity in an outdoor setting is more appealing than going to the gym or leisure centres which are typically indoor activities. It can also be suggested that physical activity campaigns or interventions must show an element of enjoyment in order to change individual behaviours.

Noteworthy, another primary finding in relation to why active respondents preferred to go walking over other activities is that it is a suitable thing to do with the family. This finding was most associated with individuals from the ages of 30-34. Perhaps this result was most associated with this age category as it is the most common time to have a family or children. To back this statement up, findings from the Central Statistics Office (2017) found that the average age of motherhood in Ireland is 32.8 years of age. These results corroborate with general conclusions in this field of research. For example, in a study by Milton et al. (2011), it was highlighted that family activities are important factors for increasing physical activity levels. Milton et al. (2011) stated that in order for a family-based walking intervention to be successful, it must be in a controlled environment along with other families to provide social interaction. Findings from the current study show the importance of choosing walking over other activities when designing campaigns targeted at families, as walking was favoured as a suitable thing to do with children. Perhaps families would be more inclined to engage in walking activities with their children as opposed to other physical activities, thus increasing the likelihood of behavioural change. The results from the current research added to the rationale of the Get Ireland Walking campaign and the family walk day event. The researcher acknowledged this finding and designed the event based on that result.

What was particularly striking from the findings of the current study was the level of interest participants showed into hillwalking. A total of 16.3% (n = 24) of respondents were interested in knowing more about hiking and hillwalking opportunities. In addition to this, 6.8% (n = 10) of respondents wanted more knowledge about nearby hillwalking routes. The previous two findings were more prominent in male participants when

compared to their counterparts. When compared to previous literature, this area of study has shown mixed results. In a study carried out by Schamel (2017), it was reported that more males visited the Berchtesgaden National Park in Germany, in comparison to females. This national park is typically visited by hikers. However, contrary to Schamel (2017) study, Kling et al. (2018) found no gender differences associated with outdoor recreation participation like hiking. In relation to the current study, it is difficult to determine why more males are interested in hillwalking when compared to females. However, as it was previously noted that more females walk for leisurely purposes then perhaps females assume that hillwalking is not 'leisurely' walking and is seen to be a more difficult type of walking.

In addition to this, the above findings reported in the current thesis were most associated with the older age categories of the sample population (30-34, 35-39, and 40-44 years). This finding directly correlates with Schamel's (2017) study where older individuals were more likely to visit the Berchtesgaden National Park. Visiting this National Park was particularly popular between the ages of 40-49-year olds. It could perhaps be inferred from Schamel's study that hillwalking is not deemed appealing or enticing to younger adults. Perhaps, this is why the same finding was observed in the current research. It can be suggested that younger adults may prefer to participate in alternative physical activities or sport. This may be particularly relevant in an Irish context where there is a strong community developed within the GAA, soccer and rugby association. It can also be suggested that transport or access to hillwalking locations is an issue more associated with younger people. This discussion is important for future campaigns as there are clear gender and age differences noted in the current study. This needs to be considered when deciding on what target audience to promote hillwalking to.

A finding from the current study that is worth discussing was that non-active participants wanted more knowledge about walking routes in their local area. Furthermore, from the overall sample population, 41.3% of respondents were unaware of the local walking routes within their area. Moreover, in the Get Ireland Walking Strategy and Action plan for 2017-2020, it explicitly states that individuals may be unaware of their local environments and the amenities that are offered. This report highlights the importance of connecting individuals with relevant information about local environments, for example, walking locations and walking trails. Despite existing walking trails in County Waterford, participants included in the current thesis were unaware of the local walking routes and

trails. These findings shed light on the issue that there is not enough promotional activity about walking and walking activities to the individuals living in Waterford. If participants are unaware of the walking routes, then physical activity levels might remain low. Awareness of local amenities must not be ignored in future campaigns. The above finding also supported the rationale and need for both campaigns in the current study.

5.3.2.2 Factors Hindering Walking Participation

This research established that a high proportion of participants do not have enough time to go walking. This finding was predominantly associated with participants between the ages of 30-34. As noted, what was linked to the levels of walking was the issue of time and availability. The findings of the current study are consistent with previous research where a link was made between time constraints and physical activity levels (Morrissey, 2013). Morrissey (2013) reported that commitments to study or occupations can negatively impact exercise behaviour, where people do not have enough time to engage in physical activity. The National Physical guidelines do not take into consideration family, work or care commitments that adults are faced with daily. Perhaps adults find it difficult to incorporate physical activity into their weekly routine due to time constraints and other commitments. However, contrary to the researcher's expectations, there was no association between the number of working hours and meeting the national physical activity guidelines. There was also no link between the number of children and the total time walking for recreation. Nonetheless, it is important to consider that the current study only measured walking levels based on self-reported measures. Moreover, there were no tests conducted for participants that did not engage in regular walking but perhaps performed vigorous levels of exercise or played sport, as this was not the aim of the study. Despite the current results, the efforts put in place to increase physical activity and the well-documented guidelines, physical activity rates for Irish adults remain low. The researcher suggests that the link between the current physical activity guidelines and adult's participation warrants further discussion. What lacks in the national physical activity guidelines is the recognition to acknowledge factors affecting participation levels, and different environments surrounding everyday lives. Furthermore, the guidelines do not take into consideration family, work or care commitments that adults face daily. The guidelines are presumptuous that all adults can participate in physical activity.

In the present research, several non-active respondents suggested that there is no suitable location to go walking and that this would prevent them from engaging in higher levels

of physical activity. However, as previously noted there are several well-established walking locations around County Waterford like the greenway. There are also many walking trails and local footpaths that are frequently utilised by the active respondents in this study. Despite this, the non-active respondents still claimed that there is no suitable place to go walking. This may be linked to an additional finding where 43% of non-walkers claimed that they were unaware of walking routes within their locality. This warrants further consideration whereby local walking routes and trails need to be openly promoted more.

It was also illustrated that more females compared to males claimed they did not feel safe to go walking on their own. This is congruent with the work of Elyer (2002) who highlighted that neighbourhood safety was a negative correlate of physical activity. Individuals who felt unsafe in their neighbourhood would not engage in regular physical activity. Furthermore, high crime rates in the area where individuals lived were also associated with physical activity levels (Duncan, 2005).

5.3.2.3 Preferred Places and Frequency of Places to go Walking

As previously noted in the presentation of the results chapter, both active and non-active participants claimed that the Greenway ranked the most preferred place to go walking. The Waterford Greenway is 46km long and runs from Dungarvan to Waterford City offering easy access for many towns along the way. This finding perhaps works incongruently with the work of Troped et al. (2011), where 59% of 2,873 users of trails stated that they made use of local trails to participate in physical activity. Furthermore, the Centres for Disease Control and Prevention (2014) suggests that an individual will be more encouraged to engage in PA if they have access to a place or resource.

It is important to note that while some participants highlighted their most preferred place to go walking, that did not necessarily mean that it was the place they walked most frequently. For example, when controlling for active and non-active respondents, local roads and footpaths were ranked sixth least favourite place to go walking, however, they were still frequently used by participants. For non-active respondents, local roads were the second most frequent place participants went walking. Non-active females were also likely to state that local roads and footpaths were their favourite place to go walking when compared to males. An explanation for this discrepancy may be due to the easy access to local roads and footpaths. Perhaps, local roads and footpaths are more used for leisurely walking and do not require strenuous effort. Therefore, more appealing to non-active

females who are looking for an easy ‘stroll’ or walk. This finding is consistent with a study conducted by Pollard and Wagnild (2017), where women walked more for leisurely purposes when compared to males.

Previous Authors have highlighted that people use parks that are located within their neighbourhood for physical activity and the proximity to residents in communities determines the use for them (Cohen et al., 2007; Cohen et al., 2014). Despite local parks being ranked the third most preferred place to go walking, almost half of the participants (47.6%) claimed that they never or rarely used the local parks for walking. Furthermore, females were more likely to state that local parks were their most preferred place to go walking compared to males. This finding does conflict with previous research carried out by Derose et al. (2018) where females reported fewer park visits in the past week and shorter durations in a typical park visit. It was also noted that men were more likely to meet the national physical activity guidelines and to exercise in the park compared to women.

Further findings from the current study showed that both active and non-active males were more likely to state that the mountains and hills were their most preferred place to go walking when compared against females. There may be some explanations for this finding; one may be that people perceive hill-walking as a form of walking that is only suitable for ‘advanced’ walkers and not for beginners. It is also possible that mountains and hills may not be within reach of people living within towns and cities and that transportation to these locations may not be available. This may coincide with additional findings from the current study where active participants claimed they would travel 2.5 miles to a suitable walking location and non-active respondents stated they would travel 3 miles. Contrary to the author’s expectations, non-active participants were willing to travel more miles to a suitable walking location compared to active participants. However, when controlling for kilometres or minutes, active respondents were willing to travel further.

Previous research by Krizek et al. (2007) notes that distance matters when it comes to users travelling to walking locations. The results from this study (Krizek et al., 2017) showed that users would only travel 1.5 miles or less to access a trail or walkway. Any further, saw a decline in trail usage. Further findings demonstrated that cyclists would travel on average, a total of 2.6 miles to reach a trail or walkway for cycling. In another study carried out by Goodman et al. (2014), individuals who live 0.6 miles away from a

bikeway were getting 45 minutes more of walking and exercise biking compared to individuals who lived 2.5 miles away.

5.3.3 Research Question Two Conclusion

As inactivity was shown as an issue that arose from research question one, it was important to identify the factors that were affecting activity levels. Whilst the findings from research question two add to the existing body of literature, they also provide an important guide for future researchers developing evidence-based public health interventions in Irish adults (Pan et al., 2009). Furthermore, motivating adults to participate in physical activity by understanding why some are active and some are inactive will aid to mitigate the global burden of inactivity.

The findings from research questions two showed that there was an array of factors that influenced walking levels in the specific cohort, both from a positive and negative perspective. These findings are particularly important for future campaigns and research to note. When selecting a target audience for a walking campaign or intervention, attention to the interests, habits and behaviours of the specific target audience is needed. For example, the current study showed that perhaps when targeting females, walking should be portrayed as an activity that is not strenuous, is fun and accessible for females, including mothers. Moreover, when a campaign aims to target individuals that work long hours per week, perhaps walking should be framed as a suitable and achievable activity to do despite time constraints. This links to the use of the social marketing framework. The current study showed the importance of using a theoretical framework in order to design and implement a behavioural change campaign. More specially, customer orientation was focused on, this is an important element to a successful campaign. This involves gathering information on the target audiences wants, needs, habits, concerns, and existing physical activity behaviours. By doing this, researchers can tailor the campaigns around the target audience's interests and provide a more relevant campaign to them. This may increase the likelihood of behavioural change.

To avoid over-generalisation of results, it must be noted that the findings from research question two are only specific to the population of this study. Perhaps if future studies are aiming to generalise these findings beyond the study's parameters, then the same methodology can be adopted to achieve so.

5.4 Research Question 3 - How Effective is a Social Marketing Campaign, using the AIDA Model, on Encouraging 25-45-year-old Male and Females in Waterford to Attend Walking Events?

This section will review the effectiveness of the social marketing campaign on encouraging the target population to attend walking events. The two campaigns involved in this study are compared against each other to show their effectiveness. Overall findings from the study showed that campaign one (Get Ireland Walking) performed better when compared against campaign two (Mountaineering Ireland). The success of these campaigns was primarily determined by the number of people that attended the associated walking events, but not limited to these, as other confounding variables contributed to their success. There are several explanations for this discrepancy which are described in detail below. For example, perhaps there was more motivation for parents to bring their children for a walk when compared to an individual going walking on their own. A further reason for this discrepancy may be due to people's perceptions of how difficult or accessible hill-walking is. Noteworthy, it is important to consider the content of the advertisements in both campaigns which may have influenced the decision of the participants to attend the walking event. While campaign one played off human emotions, campaign two portrayed a more generic advertisement showcasing the walking routes in Waterford. Perhaps campaign one performed better due to its advertising content. Finally, results from the current study showed the effectiveness of each online advertisement on both Facebook and Instagram, provided by Facebook Business Manager. These results are related to the online engagement of each advertisement and are examined by performance metrics. The following section will discuss these results in further details.

5.4.1 The Effectiveness of the Social Marketing Campaigns

Previous studies in the field of social marketing that have aimed to increase physical activity participation have heavily relied on traditional forms of marketing (Wray et al., 2005; Merom, Miller, Lymer, & Bauman, 2005; Peterson et al., 2005; Reger-Nash et al., 2006; Beaudoin, Fernandez, Wall, & Farley, 2007; Huhman et al., 2007; Reger-Nash et al., 2008; Abioye et al., 2013; Scarapicchia et al., 2015). Furthermore, studies that have used social media platforms to increase physical activity levels focused more on awareness of physical activity, online engagement or online social support to increase physical activity levels (Rote et al., 2015; Zhang et al., 2015; Wilson et al., 2016). However, there is recent research that has employed the use of social media in a social

marketing context (Mehmet et al., 2020; Blair et al., 2020), but not from the perspective of using the AIDA Model in a social media campaign for behaviour change purposes. The overall findings from the current study are unique in that no other study to date has utilised this methodology, specifically in phase two, to promote walking in an Irish context. Therefore, it was difficult to draw on comparisons, particularly on the success of the campaigns and their effectiveness. For the purpose of this discussion, the researcher determined the success and effectiveness of the campaigns by drawing on the following factors examined below.

The overall finding from both campaigns was that the Get Ireland Walking campaign was deemed more successful when compared to the Mountaineering Ireland campaign. This was primarily determined by the number of participants that attended the walking events. To reiterate from the presentation of the results chapter, there was a total of 16 families (29 adults and 30 children) that attended the Get Ireland Walking event, where there was only one individual who attended the Mountaineering Ireland guided walk. There may be several explanations for the discrepancy shown between both campaigns.

To offer some explanation, it is possible that there was more motivation for parents to bring their children for a walk, in comparison to an individual going for a walk on their own. Previous research in this field of study highlights that changing behaviour like physical activity, is a complex and multifaceted phenomenon with a wide range of internal and external influences (Kotler and Zaltman, 1971; Andreasen, 1994; Prochaska et al., 2008; French, 2010; Liu et al., 2018). In a study carried out by Kelly and Barker (2016), it was highlighted that when attempting to change health-related behaviour, it is not just the individual's behaviour that needs consideration. It is important to investigate the political, environmental, economic, and social environments that surround and influence an individual's decisions. For example, not being motivated enough or not having an interest (behavioural factor). This also links to the AIDA Model that was utilised in the current thesis. As previously noted, this model describes the four steps in which an individual goes through to reach the desired behaviour. Perhaps as the individuals targeted in the Mountaineering Ireland campaign progressed through the sales funnel, there was less motivation, desire or interest for these individuals to engage in hillwalking. It could be possible that attempting to influence individuals to attend guided walks may be a longer process, as opposed to promoting a family day event. The finding

from the current study is particularly important for future research when attempting to promote a behavioural change that may in fact be more complex than it appears.

Another reason why the above result may have occurred may be due to people's perceptions of the family walk day and guided walk. In a study by Wakefield (2010), it was concluded that social marketing campaigns face frequent barriers whilst attempting to encourage behavioural change. These factors may include pervasive marketing by others, perceptions, social norms, and behaviours driven by habit. In relation to the Mountaineering Ireland campaign, perhaps it could be suggested that there is a negative perception about hillwalking, particularly by the individuals that were involved in the current study. Perhaps the perception people had was that the guided walk was not for beginners, or it required a certain type of equipment for the hills or was designed for advanced hikers. This perception may have negatively impacted the decision of these individuals to register for the event. It is important to reiterate that the current study had to make two attempts at encouraging the sample population to attend the guided walk hosted by Mountaineering Ireland, due to the first attempt failing. After the first attempt (the first online advertisements), the researcher felt there was a need to portray hillwalking as an easy, more accessible, and enjoyable activity to do. Therefore, there were several changes made to the landing page on Eventbrite (see Appendix J – Landing Page for Campaign 2 Kilclooney Woods). As a result of that, there was one register for the guided one and one conversion on the day of the event. It is also important to consider the time in which the social media marketing campaigns were conducted. This may have influenced the decisions of the individuals attending the walking events. The family walking event for Get Ireland Walking took place on the 3rd of November 2019, while the guided walk for Mountaineering Ireland took place on the 7th of December 2019. As the Mountaineering Ireland guided walk was conducted closer to the Christmas period, this may have impacted the participant's decisions to turn up to the events as this period can be quite a busy time for people. Moreover, an uncontrollable variable like the weather may have had an impact on people turning up to the guided walk as the December months were colder. It can be suggested that if both walking events were hosted in the summer months, then perhaps there would have been a higher conversion rate as poor weather may negatively impact the participant's decision to go to the walking events. These findings stress the importance of eliminating negative perceptions of 'health behaviours' or 'health activities. In particular, mountaineering or hill-walking should be portrayed as

a safe and accessible activity even for beginners. These results may impact how future campaigns promote hillwalking and particularly in an Irish context where hillwalking may be viewed as strenuous activity.

To determine the difference between the success of both campaigns, it is important to consider the online engagement that each advertisement received as this may show that some individuals had an interest in the specific content. This may have influenced their decision to attend the walking events. Findings showed that in the Get Ireland Walking campaign, stage one video advertisement received the highest online engagement in that campaign. This may be due to the levels of emotions that were portrayed in this advertisement¹³³. This statement is supported by the work of King et al. (2013), where it was found that advertisements that portray human emotions receive more awareness when compared to a more generic advert (Lee et al., 2018). The campaign conducted by King et al. (2013) focused its advertisements on human emotion but taking a more 'fearful' approach. The campaign showed an advertisement about a father who was overweight trying to play and run with his daughter. However, the man fails to keep up, stops and loses his breath. The tag used was 'The more you gain, the more you have to lose'. The findings from this campaign indicated that 90% of respondents said that they were aware of the campaign. Further analysis showed that 82% stated seeing an ad based on 'waistline and risk'. When compared to a more informational advertisement promoting physical activity, only 36% of participants claimed to be aware of a campaign six-month post-launch (Scarapicchia, 2015).

In relation to the current study, it could be suggested that the Get Ireland Walking campaign received high levels of online engagement as it played-off a range of human emotions that both parents and children could relate to. Perhaps this contributed towards the decision of attending the family walk day. Findings showed that 41.2% (n = 7) of respondents noticed promotional advertisements about walking on their social media accounts. One of the respondents that noticed the promotional advertisements on their social media account provided the researcher with additional information stating they could recall a video advertisement based on kids exploring local trails, having fun and making memories together. Perhaps this was in relation to stage one of the Get Ireland

¹³³ A number of messages were incorporated into this video advertisement, like promoting walking as a healthy activity for you and your family, making memories exploring the woods with kids and family, stop wasting time in front of the TV, children learning about their surrounding environments, and children having fun in the outdoors

Walking campaign. When compared to the Mountaineering Ireland campaign, there was also high levels of online engagement on the advertisements that showcased walking routes and mountains in Waterford. However, as discussed above, attempting to influence individuals to attend hillwalking events may be a longer process when compared to a family walk day, hence the reason why fewer people attended the guided walk. This discussion is noteworthy as it shows the importance of creating content that is relevant to the target population involved in the study (Get Ireland Walking campaign). It also shows the need for campaigns to be developed using theory-based frameworks in order for them to be effective. Furthermore, the current study utilised the social marketing principles and practices by first surveying the target population and developing the campaigns based on those survey results. This helped towards the effectiveness of the Get Ireland Walking campaign and therefore potentially influenced individuals to attend the family walk day. While the social marketing principles were utilised for the Mountaineering campaign too, there were other confounding variables that hinder its success.

Taking the above finding into consideration and the use of social marketing principles, this discussion must note the use of tailored advertising and how it may have contributed to the success of the campaigns. Findings from the current study showed that 85.7% (n = 6) of participants claimed that they had a positive experience of the online advertisements about walking. This may be because the online advertisements were tailored and relevant to the target population involved. A study conducted by O'Donnell and Cramer (2015) highlighted that individuals are more likely to have a positive experience with online advertisements when it is tailored around personal preferences and taste of the participants. Moreover, in a study by Kelly et al. (2010) people are more likely to avoid online advertisements that are not relevant to them or that they do not take an interest in the content of the advertisement. Previous research in this field of study suggests that marketers and researchers need to be conscious of the multifaceted nature of people's decisions when they are delivering online advertisements (Lambrecht & Tucker, 2013). Therefore, previous literature sways heavily in the favour that online advertisements must be tailored in order for a campaign to be effective. These findings directly correlate with the current study where the results of phase one survey dictated the design and implementation of the campaigns. This method may have positively impacted the effectiveness of the social marketing campaign on encouraging the target population to attend walking events.

As previously noted, the Get Ireland Walking campaign was deemed more effective at encouraging behavioural change as it had a higher number of individuals attend the walk day. Findings indicated that 28.6% (n = 2) of respondents claimed that advertisements about walking encouraged them to get out and be active. A further 57.1% (n = 4) also agreed that the promotional advertisements influenced them to participate in walking. These findings may provide an indication that the social media advertising campaign had some influence on encouraging the target population to attend walking events. However, it is imperative to consider other confounding variables that may have influenced these individuals to attend the walk day. Results indicated that 29.4% (n = 5) of participants heard about the event from friends and family. It may be possible that these five participants were not targeted in the campaigns. One participant for example stated that they were informed about the event through a friend. Both families linked up and attended the event together. Whilst these attendees may not have been targeted in the advertising campaign, this information is still useful to the researcher, suggesting that word of mouth from others, friends and family still influences people's decisions to attend walking events. In the context of this study, electronic word of mouth is also relevant. Joshi and Singh (2017) state that electronic word of mouth has been prominent in developing consumer perception through online activity on social media platforms like Facebook and Instagram (Joshi & Singh, 2017). In addition to this, positive electronic word of mouth has a great impact on purchase intention (Nasiruddin, Hashim, & Yusof, 2016). This finding may be important for future researchers to note as it may help dictate the way walking campaigns are framed. Whilst 'word of mouth' was not an aim of the current study, then perhaps it is an element that should be focused on more in future campaigns. It is also essential for future campaigns to acknowledge the factors that contribute to a successful advertisement that potentially influence an individual's decisions. The success of the online advertisements in this current study can be determined in the context of online engagement. The following section will now review the effectiveness of these promotional advertisements.

5.4.2 The Effectiveness of the Online Advertisements

As previously noted in the methodology chapter, Facebook Business Manager was used to examine the effectiveness of each online advertisement on Facebook and Instagram. This was primarily assessed by examining online engagement. Research conducted by Tobey and Manore (2014) emphasise the importance of tracking engagement on online

advertisements, which will help towards distinguishing the success of a campaign. Each performance metric that is discussed in this section is a standard digital marketing variable that is used to measure the effectiveness of campaigns and ads, thus potentially encouraging the target population to attend walking events.

Findings from the current study confirmed that more females engaged with the online advertisements from the Get Ireland Walking campaign when compared against male participants. This was in relation to the number of link clicks that were performed on the advertisements. Furthermore, the highest age category that performed the most link clicks was 35-44-year-old females. It was difficult to draw on a comparison study for this finding. To get an insight into this work, the researcher needs support from a different field of study in an attempt to compare results. To do this, McMahan (2005) found existing gender differences in how male and females engage online. This study (McMahan, 2005) found that men typically engage in athlete information, games, and videos, while females engage in news, jobs, and events. However, this study is over a decade old and since then trends in online engagement may have changed. Nonetheless, an interpretation of the finding from the current study may be that more mothers are interested in finding places to bring their children walking as opposed to male participants. Perhaps, family status had impacted this finding. As previously noted, the average age of motherhood is 32.8 years of age in Ireland (Central Statistics Office, 2017). It can be suggested that mothers may have increased parenting responsibilities. There seems to be ample evidence that this is the case (Drago, 2001; Nomaguci and Bianchi, 2004; Han and Jun, 2013). This may be why more females showed higher levels of online engagement. A further explanation for this finding may be that women walk more for leisure, recreation and fun when compared to their counterparts. In a study by Pollard and Wagnild (2017), there was empirical evidence to show that women walked more for leisure. Therefore, in the current study, females may be naturally more interested in online advertisements about recreational walking and walking activities, hence, the greater online engagement.

In regards to the above finding, it must be noted that there were opposing results found in the Mountaineering Ireland campaign. Furthermore, more male participants showed higher levels of online engagement (link clicks) on the advertisements when compared to females, particularly in the age category 35-44. These findings are less surprising when we take into consideration previous research that has suggested that outdoor recreational

activities are more male-dominant (Warren, 2015). Both Dooley (2016) and Khajavei (2017) allude to the point that women experience barriers to participation in outdoor recreation as it has been portrayed as a male-dominated activity. Perhaps, this is why the gender discrepancy occurred in campaign two.

Further findings from the current study reported a high frequency on the online advertisements in both campaigns (9.37 in campaign one and 10.37 in campaign two). This finding shows that the frequency of both campaigns was too high, which meant the individuals involved in the campaign may have seen the advertisements at least nine or ten times. Previous research in this field of study suggests that the frequency is an important performance metric that advertisers should be aware of in order to optimise advertising effectiveness (Facebook, 2016; Arrate et al., 2018; Raudeliuniene et al., 2018). On this point, Lawrance (2018) found that individuals become less responsive to advertisements when the frequency is too high and have viewed them too many times. This can lead to ad fatigue. Ad fatigue naturally occurs in all ad campaigns, however, if it occurs too quickly after the ad is launched then the ad objective may not be achieved (Lawrance, 2018). Cosway (2018) further elaborates the need for marketers to avoid ad fatigue and irrelevant ads. The frequency of the campaigns in the current study may have been too high due to an excess budget allocated. As this study utilised the AIDA model, it meant as the stages progressed the audience number got smaller as well as the allocated budget. However, the budget of the latter stages was still too high and therefore contributed to the high frequency of the campaigns. These findings suggest that the budget does not need to be set as high when utilising the AIDA model (sales funnel) and should have been reduced as there were not as many individuals being targeted in the final stages. This can help future campaigns to be cost-effective.

With regards to the use of the lookalike audience in the current study, findings showed that for campaign one, there was an additional reach of 5,042 from the lookalike audience and in campaign two there were 3,192 more individuals added to the target audience. While some authors suggest that social media advertising campaigns largely overlook the use of a lookalike audience in their campaigns (Chambers, 2019; Patel, 2020), other studies have highlighted the benefits of incorporating the lookalike audience in a marketing campaign (Yu & Houg, 2014, Andreou et al., 2019). This approach helps marketers to increase their target audience size and improve online engagement on advertisements. However, these studies do not state whether the lookalike audience has

an impact on the overall performance of online advertisements. One study that successfully integrated the lookalike audience into a recruitment process for an online study was by Akers and Gordon (2018). This study utilised the lookalike audience to scale the number of individuals they needed for a clinical trial, totalling the sample population to 1,145 individuals. Akers and Gordon (2018) allude to the fact that the lookalike audience helped them to reach new people and save on advertising spend as they were targeting people who were most relevant to their study.

The current study coincides with the previous work of Akers and Gordon (2018), where stage two of the campaigns was constructed to scale the target audiences and reach more people. There is no definitive way of calculating the success of a lookalike audience, however, the researcher examined the performance metrics and reach of the lookalike audience to gain an overall perspective on its success. For both campaigns, in stage two, both the reach of the target audience and the online engagement increased. Initially, the lookalike audience was adopted into the campaigns to scale the target audience. The rise in figures in the overall reach suggests that the lookalike audience was successful in terms of increasing the audience. While a lookalike audience is typically used within a business setting or for markets and advertisers, this study demonstrates the use of the lookalike audience in a health-promotion campaign. It clarifies the use of digital marketing techniques in a social marketing campaign. The lookalike audience utilised in the current study helped scale the target audience of the campaigns to reach new people. It also provided a cost-effective technique that targeted individuals that were more likely to be interested in the campaigns. It appears viable for National Governing Bodies in Ireland to replicate this methodology to aid in future campaigns attempting to promote walking or physical activity in general.

It is also important to revisit the content design of the advertisements as the content may have influenced the overall effectiveness of the campaigns. As previously discussed through out the methodology chapter, the results from phase one that shaped the content design of the advertisements. It was noted in the presentation of the results chapter that families had no time for walking but had the desire to go walking and looked for locations to bring their children for walks. These results translated into the content design for campaign one, stage one and two. These advertisements promoted walking as a healthy use of family time where kids can be seen playing, making memories and exploring the woods. The aim of this stage was to attract the attention of families and build awareness

around the idea that the quality of their children's lives would be improved by walking in comparison to being sedentary and watching TV. When compared to previous literature, King et al. (2013) conducted research prior to launching the 'measure up' campaign, where they found an appeal for information on healthy waist circumference and the consequences for weight gain over time. This information shaped the advertisement of the measure up campaign. This campaign focused its advertisements on human emotion but taking a more 'fearful' approach. The campaign showed an advertisement about a father who was overweight trying to play and run with his daughter, however, the father fails to keep up. This advertisement message identified that parental behaviour like this is likely to have a negative impact on their children's lifestyle. It is important to note that the content design of both the current study and King et al. (2013) study was designed based on previous research. This also relates to the social marketing benchmark criteria, where a campaign is deemed to be more successful when market research is carried out to gather information about the target audience, prior to launching a campaign based on those results.

5.4.3 Research Question Three Conclusion

In order to bridge the gap between using digital marketing in a social marketing context to increase walking levels, a social media marketing campaign was conducted to promote walking participation and encourage the population sample to attend walking events in Waterford.

The results from research question three show the difference between the success of both campaigns. The success of these campaigns was primarily determined by the number of people that attended the associated walking events. Campaign one (Get Ireland Walking) performed better when compared against campaign two (Mountaineering Ireland). The findings noted above discussed the possible reasons for this discrepancy. It was suggested that there was more motivation for parents to bring their children for a walk when compared to an individual going hill-walking on their own. It was proposed that changing behaviours like hill-walking would be a longer process when compared to family walk days. This finding is particularly important for researchers aiming to change human behaviour in a social marketing context. Future studies must be aware that human behaviour change is much more complex and multifaceted than it appears. They must also take into consideration that a behavioural change campaign is much more effective if it is underpinned by a theoretical framework like the social marketing principles.

The findings of research question three are also important to future campaigns as they demonstrate the importance of tailoring the content of the online advertising specific to the interests of the target population. While campaign one played off human emotions, campaign two portrayed more generic advertisements showcasing the walking routes in Waterford. Perhaps campaign one performed better due to its advertising content. The findings from research question three also provide evidence that ‘perceptions’ of the behaviour need to be eliminated from the study. Specifically, for campaigns aiming to increase hill-walking, the perception of hill-walking being ‘too difficult’ or ‘too strenuous’ need to be removed. In the current study, more emphasis should have been placed on portraying hill-walking as an easy activity. Overall, research question three has provided support for the use of digital marketing in a social marketing campaign aimed at promoting walking levels. These results derived from using a specific and unique methodology, in which National Governing Bodies of Ireland can replicate to promote walking on a national scale.

As this chapter discusses the main findings of the study and provides useful information into the impact of a social marketing campaign, it must be noted that some limitations were encountered. While most studies inherent limits and restrictions, the areas that could not be fully examined are outlined in the subsequent section.

5.5 Limitations

The following section will discuss the limitations that have occurred during the process of this research. There are a number of limitations that were already outlined in the methodology chapter. However, it is necessary to further elaborate on them as this thesis draws to a close.

The first limitation is the inexperience of the researcher in certain areas of the study. While this thesis was on-going, the researcher had to learn new skills related to advanced digital marketing methods and social media marketing campaigns. Furthermore, the researcher also had to create the content for the online advertising campaigns and therefore had to make use of photography and video editing. Lastly, the researcher had no previous experience implementing the use of a lookalike audience in the advertising campaign. Nonetheless, despite the limitations noted above, the researcher developed and learned the skills required to correctly implement this thesis. That was to attend educational classes and training within Waterford Institute of Technology, complete online digital marketing courses, and gain knowledge from the primary supervisor

involved in this research as they supported the learning and developing of digital marketing skills.

A further limitation of the study was social desirability bias, which may have occurred due to the questionnaires being self-reported. It is possible that this may have occurred during the data collection of phases one and three questionnaires. The participants that completed the questionnaires may have answered the questions with what they think they should say as opposed to what they feel. This may have occurred particularly when answering the questions of current walking levels. Perhaps, participants overestimated or underestimated their answers due to peer influences. They also may have perceived themselves as being physically active when in fact they are not. Despite this limitation, utilising a questionnaire was deemed the most appropriate data collection method due to several reasons already discussed in chapter three of this study.

Following on from the previous limitation, there was no qualitative data collected during the process of this current study. Perhaps, due to the low number of attendees at the walking events, a focus group could have been conducted when all participants had arrived. While gathering more in-depth information would have added to the results of the study (Woodson et al., 2005), this was not deemed the most suitable approach for the aim of this research, specifically in phase three. Using qualitative methods in phase three would have been more difficult to achieve due to the nature at which the researcher had to approach participants attending the walking events. Furthermore, the researcher had set up a designated area where the phase three questionnaires could be completed by participants. It was deemed more suitable for participants to fill out a short survey and continue on their walk day, in comparison to completing an interview which may have taken much longer.

What is more, the findings of phase one of this study are not generalisable beyond the specific population sampled. Furthermore, the correlates of physical activity that were examined in phase one only apply to 25-45-year-old male and females. It can be suggested that the factors that influence physical activity participation in children and older adults vary from the current study. However, while this may be deemed as a limitation, it still adds to the body of literature.

Another limitation of the study was that there was little evidence to show that health promotion and social marketing studies have made use of the AIDA Model in a social

media marketing campaign in the context of increasing physical activity levels. While there is existing literature on the history and development of the AIDA model used from a business perspective in social media fields (Budiawan et al., 2018; Poyraz & Cetinturk, 2017; Prathapan & Sahadevan, 2018), there is little evidence to show that a social media advertising campaign aimed at increasing walking levels is underpinned by the AIDA model from a social marketing context. The researcher found it difficult to locate existing social marketing studies utilising the AIDA model similar to the current methodology. This is particularly notable from the perspective of National Governing Bodies in Ireland aiming to promote physical activity. However, to overcome this limitation and to increase the scope of the current literature review, the researcher had to draw upon blogs written by the world's top marketing professionals. These blogs whilst not peer reviewed added important information.

Whilst the social media marketing campaign allowed the researcher to target a specific and defined group of individuals, it was not possible to distinguish the difference between active and non-active or walker and non-walker in the initial targeting stage. This is an issue associated with Facebook Business Manager. Furthermore, both active and non-active individuals were targeted during the campaign. It is possible that this may have resulted in 'active' people attending the walking events. While it is still important to encourage all individuals to be more active, the main focus was to attract as many non-active individuals as possible.

A further limitation of the study was the time in which the social media marketing campaigns were conducted. The campaigns ran between the months of October and December 2019. As these campaigns were conducted in the weeks leading up to Christmas, this may have impacted an individual's decision to turn up to the events as this period can be quite a busy time for people. Furthermore, it was unfortunate that the campaigns were not delivered during the summer months. An uncontrollable variable like the weather may have had an impact on people turning up to the family walk day and the guided walk. If both campaigns and events were conducted in the summer months, perhaps there would have been a higher conversion rate as poor weather may negatively impact the participant's decision to go to the walking events.

It is important to note the complexities of the Mountaineering Ireland campaign. Due to resources and time, the campaigns only ran for approximately 16 days each. Whilst there is no definitive time frame for how long an advertising campaign for behavioural change

should run, it could be suggested that it was not enough time to promote the Mountaineering Ireland campaign, as there was only one conversion made. In comparison to the Get Ireland Walking campaign, perhaps promoting hill-walking may be a longer process. Maybe there was more intrinsic motivation for parents to bring their children walking in comparison to motivating an individual to go hill-walking. As previously noted, it is assumed that the 'text' or 'copy' that was used in the first attempt may not have attracted individuals to the online advertisement. The text that was used included words like 'mountains and hills'. It is possible that these words negatively impacted people's decision as they assumed it was not for 'beginners'. As a result of only one conversion for the Mountaineering Ireland campaign and 16 families for the Get Ireland Walking campaign, the percentages included in the presentation of the results chapter may be a limitation due to the low number involved.

A final limitation of this study is that there was no follow-up conducted post campaign to examine if families had continued to use facilities or trails for recreational walking. This was primarily due to time, resources and the overall aim of the study. Therefore, to the knowledge of the researcher, it is difficult to state whether the physical activity participation was sustainable or not. However, if participation was not sustained, it does not discourage the use of the current methodology as this still influenced human behaviour.

Notwithstanding the limitations discussed above, the current study and its findings contribute to the understanding of promoting physical activity in an Irish context whilst using digital marketing techniques. What is more, the methodology utilised in this research can be utilised as a precedent for guiding future research aiming to promote physical activity. This study also adds to the existing body of literature on the factors that influence walking behaviours and habits in Irish adults. Moving beyond the limits of this study, the researcher has developed many new skills whilst completing this thesis and also gained much experience in the area of academic research. Despite the challenges and limitations to the study, it was indeed a notable journey for the author of this thesis. As a result of that, the researcher had to offer further recommendations for future studies. The subsequent section will outline these recommendations.

5.5.1 Future Research Recommendations

There are several future recommendations that have surfaced from completing this thesis. These recommendations relate to future research and practices and are outlined and discussed below.

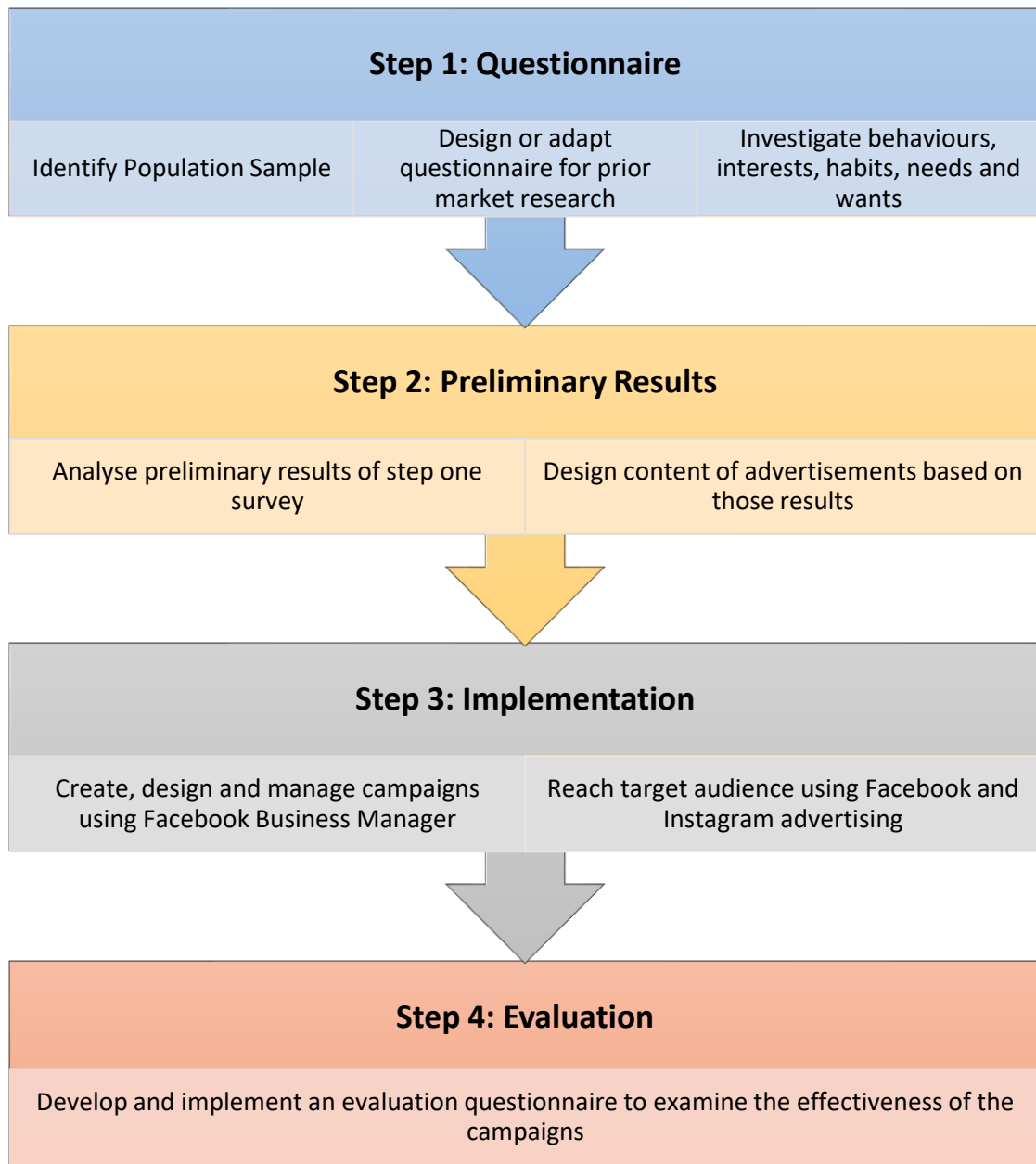
- When constructing a social media marketing campaign, it is important to thoroughly consider what is being promoted. For instance, promoting hill-walking is considered a longer, more complex process and more difficult to influence individuals into engaging in it, in comparison to family walk days. Perhaps future research should take more time and consideration when aiming to promote a more complex activity.
- Whilst the current study examined a specific target population, this was only done in one county of Ireland, mainly due to resources and time. Therefore, this was not a representation of a national sample. Future research can replicate the methodology used in this study but on a national scale over a longer period of time. This will help to achieve more accurate findings. This can also be applied to National Governing Bodies of Ireland aiming to promote physical activity levels. What is more, this methodology may not be limited to promoting physical activity. Further research should consider adapting the current methodology and applying it across different health behaviours. It is possible that the digital marketing techniques used can be tailored to encourage people to stop smoking etc.
- An additional recommendation for future studies would be to thoroughly consider which online platform should be used to promote the online advertisements. While the current study only made use of Facebook and Instagram targeting strategies. It could be suggested for further research that using YouTube or Google Display ads should be incorporated into the methodology as this adds to potent analysis and improved targeting techniques. What is more, the use of a lookalike audience in a retargeting campaign should be carefully considered for future campaigns. As the lookalike audience can scale and increase the number of people the advertisements are shown too, it also increases the budget requirements, which may have been unnecessary. Perhaps, more understanding of when and why a lookalike audience is utilised is needed for future research.

- In relation to the online advertisements, research should carefully consider the ‘text’ and ‘copy’ that is created for the ads. Compelling copy is particularly important to gain the attention of the target audience (Taneja & Vij, 2019; Digital Marketing Institute, 2020). It is essential to first understand the target audience and create ‘copy’ or ‘text’ that is relevant and of interest to them.
- Lastly, findings from this study showed that a high proportion of non-active participants (43%) stated that they were unaware of their local walking routes. Perhaps, this warrants further consideration where local walking routes and trails need to be promoted more effectively. It could be suggested that there is a need for more online advertising to be conducted in County Waterford as trails are not openly promoted. Future research could measure the effectiveness of the online promotion on the awareness of a sample population.

5.5.2 Conclusion

The aim of this research was to examine the effectiveness of a social marketing campaign using digital marketing techniques to encourage 25-45-year-old male and females to attend walking events. This thesis was conducted using a three-phase methodology to bridge the research gap identified throughout the previous chapters. In phase one of this study, the author used an adapted questionnaire to investigate the current walking levels of the sample population and the factors that influenced their walking behaviours. In the next phase, two specifically designed social media marketing campaigns were conducted using a quantitative experimental research design. Facebook and Instagram were used to implement these campaigns. The online advertising campaigns were underpinned by the social marketing principles and based on the results of phase one. Both campaigns aimed to promote walking activities and the associated walking events (the family walk day for Get Ireland Walking and the guided walk for Mountaineering Ireland). To conclude, the researcher used a self-designed questionnaire to evaluate the two social media marketing campaigns. The figure below (Figure 51) demonstrates the steps involved in implementing a social media campaign and reaching a desired target audience.

Figure 51 - Process of Implementing a Social Media Marketing Campaign



This study has shed light on key issues related to social marketing campaigns aimed at promoting physical activity. Few campaigns have used advanced digital marketing re-targeting strategies to promote walking in a social marketing context. This limitation is also in existence in National Governing Bodies that aim to promote physical activity in Ireland. Furthermore, the World Health Organisation Global action plan on physical activity 2018-2030 highlighted the need for more research on the effectiveness of social media interventions aiming to increase activity levels.

Findings from this research indicated that there is an array of factors that affect participant's walking levels. The primary findings stated that parents who worked for 30-

40 hours per week had no time for walking and some were unaware of local walking routes, despite their existence in County Waterford. Further results illustrated that some participants were interested in hill-walking, while others wanted more knowledge about nearby hillwalking routes and challenging walks. These results dictated the design of the online advertising campaigns that promoted the associated walking events. In regard to the number of attendees at each walking event, the campaigns had varied success. For the Get Ireland Walking, a total of 16 families (30 adults and 29 children) attended the family walk day and for the Mountaineering Ireland guided walk, only one individual attended.

This thesis has contributed to the existing body of literature on the factors affecting Irish adult's physical activity participation, thus, supporting the design and implementation of a successful social marketing campaign. What is more, this work has provided support for the use of a social media marketing campaign aimed at promoting walking levels in the context of social marketing. This research provides scope into the potential uses of digital marketing and re-targeting strategies for walking campaigns. It is clear from this study that the AIDA model can be used as a foundational structure for social marketing campaigns aimed at promoting walking. It is viable for National Governing Bodies to replicate the methodology employed in this study on a national scale to promote and increase walking participation in Ireland. Whilst these findings can be of benefit to Irish National Governing Bodies, marketers seeking to design more effective physical activity campaigns can also reproduce these methodologies. The findings of this study addresses the literature gap in an Irish context by providing robust information in the area of digital technologies in social marketing behavioural change campaigns.

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Appendices

Appendix A – Memorandum of Understanding



Memorandum of Understanding

between

Róisín Hurley, Dr. Patrick Delaney & Dr. Mary Cowman of Waterford Institute of Technology

and

Mountaineering Ireland (Represented by Ruth Whelan) & Get Ireland Walking
(Represented by Jason King)

This memorandum of understanding (MOU) sets the terms of agreement between **Róisín Hurley, Dr. Patrick Delaney & Dr. Mary Cowman of Waterford Institute of Technology** and **Mountaineering Ireland (Represented by Ruth Whelan) & Get Ireland Walking (Represented by Jason King)**.

Purpose

The purpose of this MOU is to spell out the terms of use for which **Róisín Hurley, Dr. Patrick Delaney & Dr. Mary Cowman of Waterford Institute of Technology** can gain access to and use the Facebook and Google accounts of **Mountaineering Ireland & Get Ireland Walking**. The MOU also outlines the manner in which advertisements can be created and distributed through the **Mountaineering Ireland** and **Get Ireland Walking** online channels. It specifies the maximum cost that **Mountaineering Ireland (Represented by Ruth Whelan) & Get Ireland Walking (Represented by Jason King)** are willing to spend on these advertisements, the duration of this agreement and conditions of authorship for publication.

Funding

Mountaineering Ireland (Represented by Ruth Whelan) & Get Ireland Walking (Represented by Jason King) will fund the intervention advertising cost for **Róisín Hurley's** Masters project titled "*An Examination of the Effectiveness of a Social Marketing Campaign using Digital Marketing Techniques to Promote Walking among 25-40-year-old Males and Females*". The funding will come to a cost of no more than €2,000. All costs associated with advertising will be handled through the **Mountaineering Ireland** and **Get Ireland Walking** Facebook Business Manager and Google Ads accounts. Any increase in this funding will have to be agreed with **Mountaineering Ireland (Represented by Ruth Whelan) & Get Ireland Walking (Represented by Jason King)** and a new MOU generated to honour this agreement.

Access to Social Media Channels

Róisín Hurley, Dr. Patrick Delaney & Dr. Mary Cowman of Waterford Institute of Technology will be given advertiser access to the **Mountaineering Ireland** and **Get Ireland Walking** Facebook page. Likewise, they will also be given admin access to their Google Ads account. Both access types limit the aforementioned access of **Róisín Hurley, Dr. Patrick Delaney & Dr. Mary Cowman of Waterford Institute of Technology** to **Mountaineering Ireland** and **Get Ireland Walking** Facebook and Google accounts. Personal information, private messages and other correspondence will be hidden to **Róisín Hurley, Dr. Patrick Delaney & Dr. Mary Cowman of Waterford Institute of Technology** to **Mountaineering Ireland**. Likewise, **Róisín Hurley, Dr. Patrick Delaney & Dr. Mary Cowman of Waterford Institute of Technology** will be unable to make changes to the **Mountaineering Ireland** and **Get Ireland Walking** Facebook pages.

Nature of Advertising Content

The nature of the advertising content will be in keeping with the research project goals. All advertising material produced from **Róisín Hurley, Dr. Patrick Delaney & Dr. Mary Cowman of Waterford Institute of Technology** will be sent for prior approval to **Mountaineering Ireland (Represented by Ruth Whelan) & Get Ireland Walking (Represented by Jason King)** before being used.

Publication

In any publication that arises from the research project titled “*An Examination of the Effectiveness of a Social Marketing Campaign using Digital Marketing Techniques to Promote Walking among 25-40-year-old Males and Females*”, **Mountaineering Ireland (Represented by Ruth Whelan) & Get Ireland Walking (Represented by Jason King)** will be acknowledged as supporting funding agencies for the research. The authorship of any potential papers will be listed as **Róisín Hurley, Dr. Patrick Delaney & Dr. Mary Cowman of Waterford Institute of Technology**.

Duration

Access to the **Mountaineering Ireland** and **Get Ireland Walking** Facebook and Google accounts will be limited to the duration of the research project titled “*An Examination of the Effectiveness of a Social Marketing Campaign using Digital Marketing Techniques to Promote Walking among 25-40-year-old Males and Females*”. The project is currently being submitted for Masters by research. However, there is potential that the project may transfer to a PhD. In which case, access will be prolonged until completion.

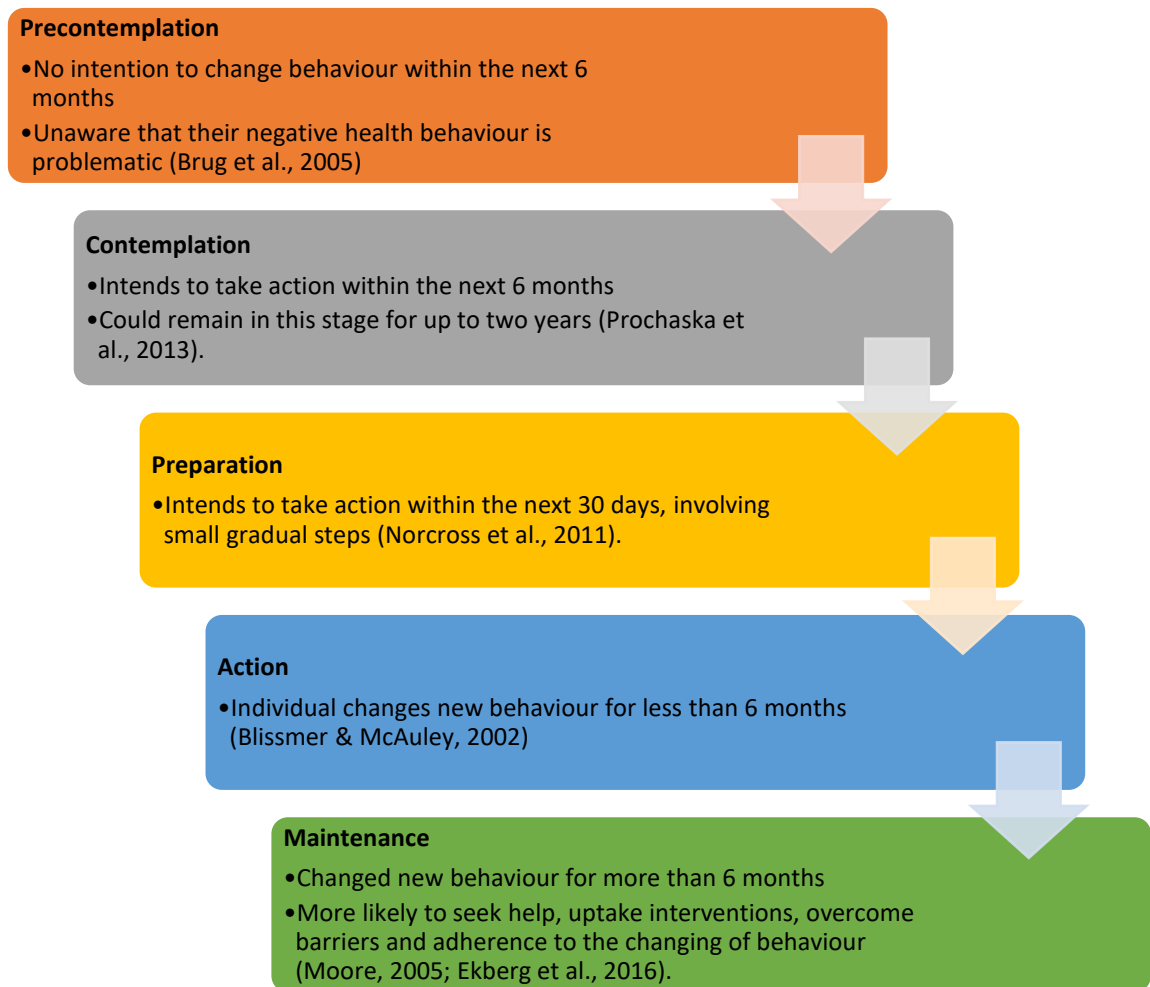
Appendix B – Theories and Models for Physical Activity Interventions

Transtheoretical Model (TTM)

The transtheoretical model is aimed at understanding complex human behaviour and is founded on the assertion that individuals go through a cyclical process of behavioural change¹³⁴ (Prochaska et al., 2015; Liu et al., 2018). The stages occur in a cyclical process as individuals need to meet their goals on the current stage before moving onto the next (DiClemente et al., 1991). It is possible for an individual to go backwards in these stages rather than pursuing forward (DiClemente et al., 1991; Prochaska et al., 2008). As every person is unique, individuals may have different techniques and strategies to move from each stage of the model (Lee et al., 2006). An individual's goals and motivation to participate in physical activity will determine how far they get in the stages of behavioural change model (Prochaska & Marcus, 1994). Moreover, the stages reflect a person's readiness to change (Spencer et al., 2006). The five stages of change are summarised in Figure 52 below. The TTM was established to aid the development of effective social marketing interventions to promote health-related behaviours (Prochaska, Fava, & Velicer, 1995; Han, Gabriel, & Kohl, 2017). Initially, Prochaska and DiClemente developed the model in order to seek 'intentional change' by individuals who smoked (DiClemente & Prochaska, 1982). The model then expanded in scope to examine a wide range of health-related behaviours such as alcohol, dieting, substance abuse and physical activity (Migneault, Adams, & Read, 2005; Vakili et al., 2015; Pizadeh et al., 2017).

¹³⁴ This means an individual can move from stage one to three, or stage two to four and vice versa rather than a linear process where they move from stage one to two, to three, to four.

Figure 52 - Stages of Behaviour Change



The transtheoretical model identifies 10 self-regulation techniques that help individuals move from one stage to the next (Pirzadeh et al., 2017), and segmented into experimental processes¹³⁵ and behavioural processes¹³⁶. The experimental processes are associated with the first three stages of behaviour change and aid in the individual's development of 'intention to change'. However, behavioural processes tend to support change in the final two stages where individuals are more willing to change behaviours. The concept of decisional balance was established by Jannis and Manns in 1977. The model consists of the 'gains and losses' of changing behaviour. The individual will weigh up the benefits and costs of the new behaviour and then make a decision (Prochaska and DiNoia, 2010; Pope et al., 2015). The theory of decisional balance is that if the benefits outweigh the costs, then an individual will take action to change their behaviour (Prochaska &

¹³⁵ Including consciousness raising, dramatic relief, social liberation, environmental and self-re-evaluation

¹³⁶ Made up of self-liberation, reinforcement management, helping relationships, stimulus control, counter-conditioning

Prochaska, 2011). In the final stages of change, the individual will need self-efficacy to avoid temptation and relapse¹³⁷. Self-efficacy is defined as an individual's belief in their own ability to complete and execute tasks or change behaviour (Bandura, 1982; Bandura, 1994). Individuals with higher levels of self-efficacy tend to try and work harder towards their own goals. For instance, an individual may not have the correct skills to complete a certain task but with high levels of self-efficacy they can overcome obstacles and challenges and persist to achieve their goals.

Transtheoretical Model Interventions

Following the development of the transtheoretical model, there has been much effort to reduce unhealthy behaviour habits, particularly in smoking. These efforts came in the form of bans in public and work-places, taxation, restrictions, advertising, eliminating the sales of cigarettes to underage people, group support, and smoking cessation programs (Pierce et al., 2011). These actions by local Governments and marketers have not taken into consideration the 'readiness' of a person to change their health behaviour. Likewise, as these actions to reduce smoking consumption benefit to some degree, smoking cessation programs only assume that the individuals attending are immediately ready to begin in the program and will be a non-smoker once they finish (Prochaska, Fava, & Velicer, 1995). Furthermore, it has been evident from an early stage in research, that people who smoke are not in a homogenous state but rather all different in regards to them being ready to quit smoking (Prochaska & DiClemente, 1983; Prochaska, DiClemente, Velicer, Ginpil, & Norcross, 1985).

The transtheoretical model has been employed in many studies from an array of perspectives. Examples of these studies aimed to: (1) investigate the impact of the processes of change on predicted physical activity (Romain et al., 2017), (2) determine if the TTM provided a useful basis for a social marketing intervention aimed at promoting fruit and vegetable consumption (Horwath et al., 2013), (3) examine the relationship between the processes of change and the stages of change among overweight adults (Romain et al., 2016), (4) investigate the relationship between self-efficacy, decisional balance and exercise enjoyment (Castillo et al., 2017).

Marshall and Biddle (2001) carried out a meta-analysis to examine the effectiveness of the TTM on exercise and physical activity. Within this meta-analysis, studies were

¹³⁷ Temptation is the urge to relapse in difficult situations such as emotional stress and cravings

included if the application of one core construct of the TTM (stages of change, self-efficacy, decisional balance or processes of change) was present in their research and applied to the behaviour of physical activity or exercise. In total, seventy-one reports were used. Findings from the meta-analysis demonstrate that levels of physical activity increased as individuals moved to a higher stage of change. Additionally, higher levels of self-efficacy in an individual was positively associated with physical activity. Furthermore, the person's confidence in their ability to be active increased with each stage of the model.

Research conducted by Woods et al. (2002) examined the effectiveness of a transtheoretical model-based intervention designed to help sedentary young adults become physically active. The pre and post randomised control trial included 459 Scottish students (n = 229 experimental, n = 230 control). The intervention consisted of the processes of change and strategies that encouraged participants to work towards changing their physical active behaviours. The strategies included reading the materials they receive based on physical activity, consider the benefits, commit to becoming active in small steps, be active with friends and use rewards to praise themselves for effort. Results identified that the experimental group improved their stages of change from baseline and increased their physical activity levels in comparison to the control group. Individuals who improved on the stages of change scored higher on all the behavioural processes and four out of five on the experimental processes. The two most frequently used processes of change were self-liberation and self-re-evaluation. Findings from the study also discovered that social liberation was utilised more in the experimental group, in comparison to the control group.

The transtheoretical model is often embraced in Social Marketing as an underpinning theory in many health-related interventions and campaigns. This model is widely used from an array of perspectives. The transtheoretical model has been applied to several studies to: (1) develop a transtheoretical model-social marketing intervention to increase physical activity in an elderly population (Dahl et al., 2013); (2) implement a transtheoretical model based intervention designed to help sedentary young adults become active (Woods et al., 2002); (3) examine the effectiveness of a computer-tailored intervention based on the transtheoretical model for reducing depression (Levesque et al., 2011); (4) implement a self-management program in primary care based on the transtheoretical model (Crespo, 2007); (5) application of the transtheoretical model and

social marketing to anti-depression campaign websites (Levit et al., 2015). The transtheoretical model has also influenced the development of other models such as the Community Readiness Model (Kelly et al., 2003). Emdadi et al. (2007) study on the application of the TTM in understanding exercise behaviour amongst female college students provides empirical evidence that supports the use of the TTM in health-related interventions, specifically physical activity.

Health Action Process Approach (HAPA Model)

The health action process approach is a theoretical framework used to understand and explain human behaviour change. The HAPA model was developed by Schwarzer to assist him in examining a set of psychological constructs that intend to explain what motivates people to change their behaviour. The HAPA model is one of the many models that focus on health behaviour problems and issues like physical activity (Parschau et al., 2014; Hagger and Hattar, 2016). This model is made up of two major components; the motivational phase and the volitional phase (Schwarzer, 2008). The motivational phase is also defined as the goal setting stage and the volitional phase is referred to as the goal pursuit stage.

The motivational stage involves the individual forming an ‘intention’ to change behaviour. However, it is important to note that if an intention has been developed, there is no guarantee that action to change will be taken. When intention to change is developed, risk perception can be seen as an antecedent. An antecedent is a stimulus that prompts a changed behaviour. Moreover, an individual might say ‘I am at risk for developing obesity’. However, risk perception alone is deemed insufficient to motivate a person to form an intention to change (Schwarzer & Renner, 2005). Instead, it may assist the individual into the contemplation stage where they begin thoughts on the consequences of their behaviour.

Another predictor is outcome expectancy and is considered vital in the motivation stage. Outcome expectancies can be referred to as the belief an individual has about the behaviour bringing a desired outcome (Williams, 2010). If an individual is expecting to change their behaviour and has high efficacy, then a more positive outcome will occur. However, if an individual expects to fail or not change their behaviour then a more negative outcome will arise (Bandura, 2015). Many individuals may say ‘If I exercise, then I will reduce my risk of becoming obese’. This involves an individual weighing up

the pros and cons of a behaviour change and that outcome. Similarly, this is the equivalent to decisional balance in the transtheoretical model.

The final predictor is self-efficacy. Self-efficacy is the belief or confidence an individual has about their capability to change behaviour (Bandura, 1977). Bandura (1994) elaborated further by stating that self-efficacy regulates how individuals think, how they feel, how they motivate themselves or behave in a certain way. In relation to the HAPA model, an individual may say 'I am capable of exercising five times per week even though I would rather sit and watch TV'. Both self-efficacy and outcome expectations work in conjunction to lead an individual to forming an intention to change. An important element of self-efficacy is action self-efficacy where an individual does not yet act on the behaviour change but develops the motivation to do so. It is an optimistic belief during the pre-action stages (Schwarzer, 2016).

After forming an intention to change behaviour, the volitional stage occurs. According to Parschau et al. (2012) the volition stage can also be subdivided into three groups. These three groups are non-intenders, intenders, and actors. Specifically, non-intenders have been found to have smaller amounts of self-efficacy than intenders. They are less motivated to prepare goals and attempt to achieve them. Intenders are regarded as people who have not yet translated their intentions into action. Finally, actors can be referred to as individuals who have acted on their intentions (Lippke & Plotnikoff, 2014). An intender in the volition phase may be motivated to change their behaviour but lack necessary skills to do so. If these individuals acquired the correct skills they would be able to move from intention to action (Schwarzer & Renner, 2000).

Planning can be separated into coping planning and action planning. Action planning is regarded as the when, where and how to act on an intended action. Whereas, coping planning refers to the how to cope with barriers and the temptation of alternative options (Schwarzer, 1992).

After changing behaviour, individuals enter a different psychology state of mind. The switch of mind-sets is represented by the term's 'motivation' and 'volition'. When forming an intention, people are in the motivation stage. Afterwards they move onto the volition stage. An individual may form a positive intention to change and will then transform into their desired action. However, this is not performed with one single step. An individual needs self-regulatory constructs in order to aid the transition of intention

into action. In addition to this, every individual is different and will have a different mind-set when passing through the different phases of behaviour change. Therefore, it is important that interventions tailor to the different mind-sets. When designing an intervention, it is important to note and identify where the individuals are located in the model, either the motivation stage or volition stage. This will allow each group to obtain a specific treatment that is tailored and designed for them (Schwarzer, Lippke, & Luszczynska, 2011).

HAPA Model Interventions

Within the area of human behaviour change, an ‘intention behaviour gap’ can occur. This represents the long process from intending to change behaviour to actually taking action to change and can particularly occur in physical activity changes (Rhodes & DeBrujin, 2013). However, the HAPA model have factors to overcome this gap; for instance, planning (Zhang, et al., 2018). Planning is vital as it works as a mediator to bridge the gap between intention and behaviour. Being able to plan will allow the individual to move from the intention phase to action.

A study carried out by Parschau et al. (2014) tested the applicability of the HAPA model in a sample of adults (n = 484) living with obesity in the context of physical activity. This study assessed the physical activity levels, motivational variables and volitional variables in the sample population (including self-efficacy, outcome expectancies, risk perception, intention, planning, social support). A number of relationships between different variables were observed. Motivational, self-efficacy, outcome expectancy and social support were linked to intention to change. Social support and self-efficacy were strongly associated with physical activity levels. However, there was no relationship found between planning and physical activity. This finding was also demonstrated in Barg et al. (2012) study where planning did not predict physical activity behaviour in a sample group of women aged between 40-65 years old. This study constitutes a framework for designing and implementing physical activity interventions in adults living with obesity. Similarly, research observed by Hagger and Hattar (2016) investigated the predicted outcomes in physical activity with adults living with obesity. This study assessed the psychological, body composition, and cardiovascular risk outcomes of a sample group of adults who were overweight or obese (n = 74). Participants were assessed at baseline, again at six and twelve weeks. The research identified a number of ways to reach positive

physical activity behaviours. The strongest association between physical activity behaviour and intentions was action self-efficacy. Further results showed that action self-efficacy affected maintenance self-efficacy, and maintenance self-efficacy affected intentions. Individuals intentions to engage in physical activity were affected by psychological factors (quality of life, depression, anxiety, stress) and body composition. This study aids in the development of physical activity and behaviour change interventions as a number of components of the HAPA model were directly linked to physical activity intentions and behaviours.

Gaston and Prapavessis (2014) combined the protection motivation theory (PMT)¹³⁸ and the health action process approach to encourage exercise behaviours in women during pregnancy. This sample population included sixty pregnant women from Canada, who were randomly assigned to one of the three experimental groups; The first experimental group was PMT only (PMT¹³⁹ and attention control¹⁴⁰), the second group was action planning (PMT and action planning¹⁴¹), and the third group was combined planning (PMT and action and coping planning¹⁴²). At baseline, self reported exercise was measured, along with accelerometer measures at week one and four post intervention. Findings from the study indicated that all participants increased their levels of physical activity from baseline to week one post intervention. Moreover, participants that received the planning treatments were more active than those who did not by the four week post intervention measurements. However, the initial data that was collected was self-reported which may cause concerns of participants reporting perceived exercise levels instead of actual exercise levels. Nonetheless, an accelerometer was utilised which should present true data. Gaston and Prapavesis (2014) highlights that a limitation to the study was there was no adherence to the use of digital medias such as smartphones and that the role of mobile devices in the delivery of effective exercise interventions should be explored.

¹³⁸ The Protection Motivation Theory represents a useful social cognitive model of individuals' motivation to engage in protective behaviours.

¹³⁹ The PMT element included a slide show aimed at educating the participants on the benefits of exercise.

¹⁴⁰ Attention control involved a slide show on the importance of proper diet and nutrition during pregnancy.

¹⁴¹ Action planning involved participants completing a planning sheet of how long they would exercise over the next week.

¹⁴² The combined planning consisted of participants identifying barriers to exercise and approaches to overcome them.

Appendix C - Tailored Advertising Studies

Tailoring has been employed into advertising strategies in attempt to persuade and influence consumer choices. Moreover, Tam and Ho (2005) reported that matching user's preference is vital when attempting to influence their choice. Research conducted by Matz et al. (2017) highlighted that persuasive marketing messages tailored to a target audience's psychological characteristics is more effective in influencing their behaviour to perform more clicks (CTR¹⁴³) and conversions¹⁴⁴ for a beauty retailer. The campaigns employed in this study assessed psychological traits of individuals through their digital footprints and Facebook 'likes'. Campaign one targeted individuals based on their traits of extraversion¹⁴⁵. An ad tailored to social, enthusiastic, outgoing people was delivered online along with a separate ad targeting people who were regarded as reserved, shy and quiet. This campaign achieved 10,346 clicks along with 390 conversions. Campaign two replicated campaign one. However, the advertisements were designed for a crossword app and delivered to individuals based on their level of openness¹⁴⁶.

Figure 53 presents the ads shown to people regarded as intellectually curious, imaginative, and unconventional and the second ad delivered to individuals who were conservative and traditional. The results for this campaign achieved 1,130 clicks and 500 app downloads. Findings from this study provide evidence that tailoring advertisements based on psychological profiles enable marketers to influence consumer choices and behaviours.

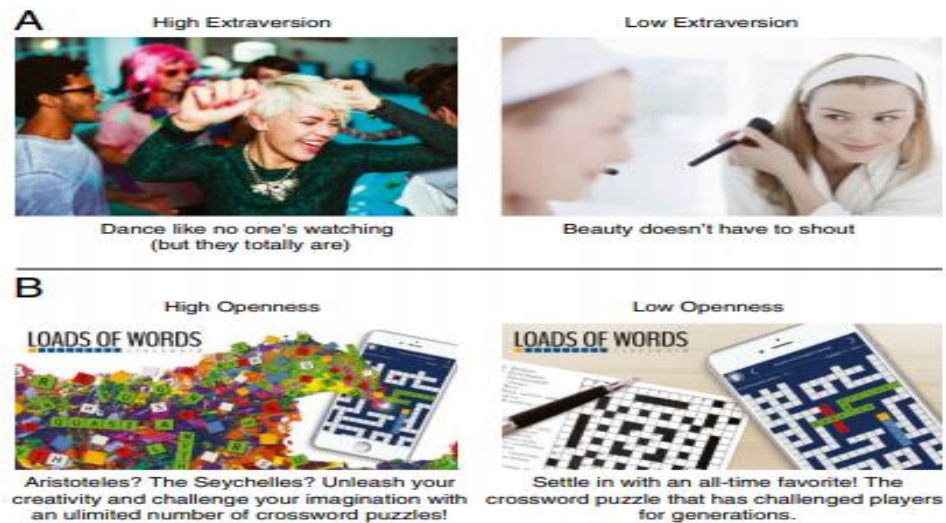
¹⁴³ Click through rate refers to a digital marketing performance metric that identifies the ratio of people who clicked on a specific link, to the number of total users who viewed the advertisement

¹⁴⁴ The number of conversions refers to the number of purchases made by consumers

¹⁴⁵ A personality trait regarding the extent to which they seek and enjoy company, excitement, and stimulation

¹⁴⁶ A personality trait referring to the extent to which people prefer novelty over convention

Figure 53 - Sample Advertisements



Further research carried out by Maslowska et al. (2013) demonstrated the effect of tailored advertising in a comparative study between Poland and the Netherlands. The sample population for this study included 116 participants (n = 59 Polish respondents, n = 57 Dutch respondents) that took part in an online experiment about a face-cream brand. The online experiment involved an initial survey that collected information about the participant. Findings from the study indicated that tailoring the advertisements had a more positive effect on brand attitudes and purchase intentions in comparison to the generic advertisement. Further results demonstrated that the impact of tailored ads is facilitated by an individual's involvement with the ad content. This meant that when an individual is exposed to an ad that is based on personal information then they are more likely to perceive the message as relevant. It can be suggested that their technique works better towards converting customers in comparison to cold advertisements that they show no interest in.

Appendix D – Studies Utilising Re-targeting Techniques

Sahni et al. (2016) conducted an online experimental design aimed at examining the effects of retargeted advertising and how it affects consumers behaviour. This study worked in conjunction with an online seller for home improvement products. An online marketing campaign was conducted for four weeks with different advertisements being delivered to consumers on each week. These advertisements were provided to consumers who had already visited the website looking for home improvement products. Results demonstrated that retargeting does positively affect consumer engagement by increasing the likelihood of the consumers returning to the website, particularly returning more frequently. A total of 14% of consumers returned to the website post-campaign. Any individual who engaged with the advertisement in the first week were more likely to have a positive response to the ad in week two. The findings from this study indicate that retargeted advertising reminds consumers of the products they previously viewed online. Thus, increasing the likelihood of them revisiting the website where they viewed the products. Notwithstanding this, the Sahni et al (2016) study does not examine the effectiveness of retargeting on conversions.

Research by Semwal and Panwar (2019) measured the effectiveness of online retargeting advertisements on consumer behaviour. This study also investigated the consumer's perception of retargeting ads. This included a sample population of 100 males and females from Dehradun City. A questionnaire was established to identify demographic data, online user habits and perception of retargeting ads of the participants. Findings from this study demonstrated that 17% of participants found the retargeting advertising relevant to them. A total of 12% found the advertising motivating and 16% found them useful. However, 9% of the participants found the retargeting advertisements to be irritating. Nonetheless, retargeting ads affected consumer buying behaviour. Though, a limitation to the study is that the sample size was too small, which may not be a representation of the sample population. This study also identifies the consumer's perception of retargeting ads. However, it does not inform if retargeting ads lead to conversions of products.

Appendix E – Models used in Digital Marketing Studies

Hierarchy of Effects Model

The hierarchy of effects model refers to a series of steps that affect a consumer's decision to purchase a product or service. This marketing model is a further development of the AIDA model discussed above. Marketers and advertisers must encourage consumers to go through each step of the model and influence them to purchase products. There are 6 steps in this model that helps understand the decision-making process of consumers: Awareness, Knowledge, Liking, Preference, Conviction and Purchase. This model is also referred to as a sales funnel, where consumers move in a downward sequence from awareness to purchase (see Figure 54). It is important to note that each step must be achieved with fulfilment so that the progress to the following step becomes possible.

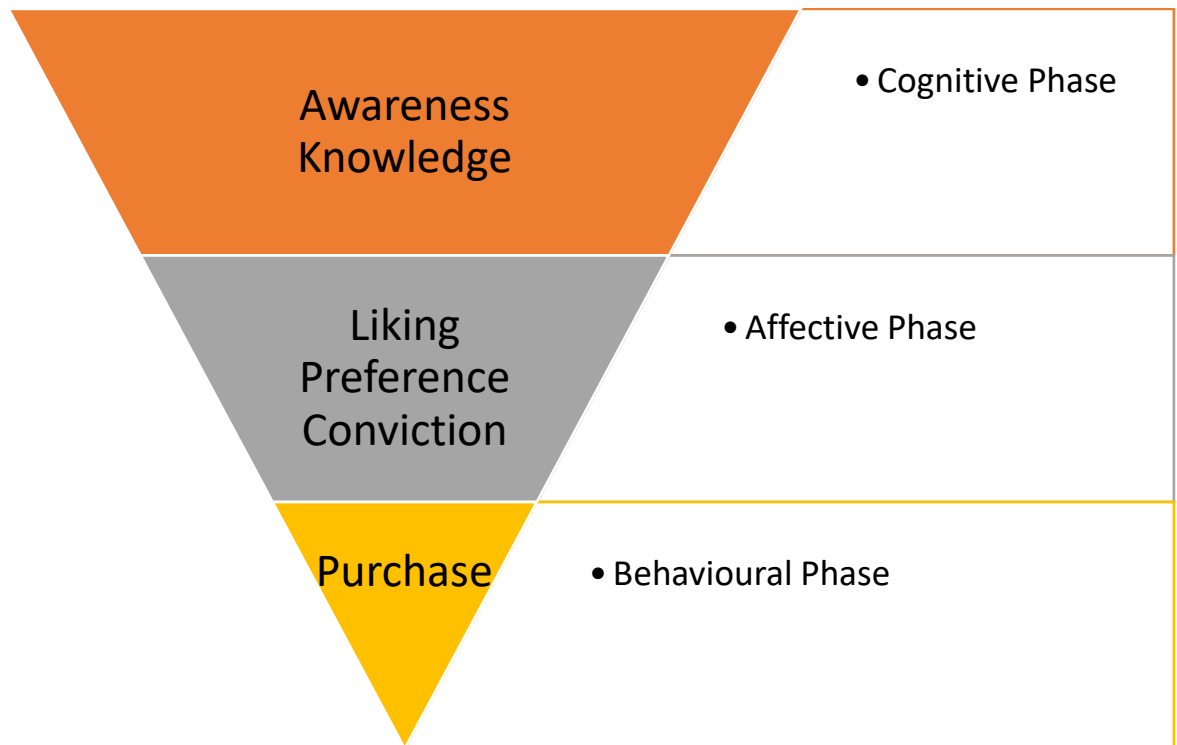
The first stage is awareness. Similar to the AIDA model, the marketer will advertise and promote products and services in order for potential consumers to realise and become aware of them (Clow & Baack, 2007). This stage can be difficult to achieve by the marketers as not all consumers will become aware of the products or service after they have viewed the promotional advertisements. The second stage is knowledge. Consumers will begin to obtain knowledge of the products and service being promoted through communicating and advertising (Kotler, Armstrong, Wong, & Saunders, 2008). It is vital for marketers to provide as much information as possible about the products to the consumers. A lack of information will result in consumers moving to competitors to see products and information elsewhere.

Liking is the third stage of the model. Consumers develop a sense of liking towards the product and begin to think much more about wanting, needing and purchasing it. Marketers can advertise the best features of their products to ensure consumers take a liking to them.

The fourth stage is preference. This involves a consumer developing a personal preference to a product or service. The consumer often forgets about competitor products and focuses on just one. This is a good time for marketers to promote the features and characteristics of their products to these consumers. Marketers should aim to promote the quality, value and performance of their products and service. Conviction is the fifth stage of the model. This involves the consumer developing the desire to purchase a product (Sadeghi, Khani, & Hosseini, 2013). Marketers can aid in the creation of conviction by offering free

samples to their consumers. Lastly, the final stage of the hierarchy of effects model is purchase. The consumer will go through each stage of the model to reach the purchase stage. This is where an individual makes the decision to purchase a purchase (Omar, Sarif, & Shiratuddin, 2015). Companies can aid in the decision-making of the consumer in the final stage of the model by offering discounts, buy one get one free, or by offering premiums and samples.

Figure 54 - Hierarchy of Effects Model



It is easier for a consumer to complete the stages at the top of the pyramid as opposed to the bottom. As consumers move through the stage, the number of consumers decreases. This is because more time, thought and decision-making are needed in the final stages. It is important for marketers to implement strategies to aid the consumer through the stages (Frost & Strauss, 2016). The easier it is for a consumer to purchase a product, then the more products sold. Strategies and tools used may include social media channels, sales promotions and online advertisements.

Hierarchy of Effects Model Studies

A study conducted by Sadeghi et al. (2013) investigated the effectiveness of fire insurance advertising in an insurance company based on the hierarchy of effects model. The investigated variables were the effectiveness of awareness, knowledge, liking, preference,

conviction and attracting clients. The population sample of this study involved the individuals who were insured by the fire insurance company and made up a sample of 132 individuals. The findings of this research identified the advertisements utilised by the insurance company were successful in relation to the hierarchy of effects model. Findings indicated that the advertisements had a positive effect on client's awareness, knowledge, liking, preference, and conviction. The final result showed that fire insurance advertising had a positive effect on attracting consumers.

The aforementioned research identified the hierarchy of effects model as having a positive influence on consumer behaviour. However, a study undertaken by Yoo et al. (2004) highlighted that the hierarchy of effects model could not be applied to the banner advertising environment. This study examined the effects of animated banner ads on each stage of the hierarchy of effects model and identified if the hierarchy of effects models is applicable in the banner advertising environment. The main finding of this study demonstrated that animated banner ads prompt better advertising effects than other ads. For instance, static ads. This can be due to animated banner ads being more eye catching and attention grabbing. Additional findings show that animated ads have a higher recall from consumers, are more favourable ads and have a higher click through rate in comparison to static ads. This study does not provide any evidence that the hierarchy of effects model is applicable to the online banner advertising environment. The hierarchy of effects model implies that advertising leading to consumer buying is a long process. Due to the nature of this study being conducted in an online experimental setting it would have been difficult to examine long term effects.

Appendix F – Phase One Questionnaire



Waterford Institute of Technology



An examination of the effectiveness of a social marketing campaign on walking participation.

Section A: Participant Profile

1. Please indicate your preferred gender? **Male** **Female**
Other _____

2. What age group do you fall into?
20-24 **25-29** **30-34** **35-39** **40-44**

3. Please indicate on the map where you live? **Grid section:** _____

4. Do you own a car?
Yes **No**

5. In a typical week, do you have work or care commitments? **If no skip to Q 8**
Yes **No**

- If so, on average, how many hours do you work or have care commitments in a typical week?
Less than 10 **10-20** **20-30** **30-40** **More than 40**

6. How do you usually travel to work/care commitments?
Walk **Cycle** **Car** **Public transport**

7. What is the distance you travel to work/care commitments?
Distance: _____ Kms (or) _____ Miles

8. How many children do you have attending the following schools? If none put a zero.
Crèche _____ **Primary School** _____ **Secondary School** _____

9. Do you own a dog/dogs?
Yes **No**

10. (A) In a typical week, on how many days would you normally walk for **recreation** for at least 10 minutes at a time?
 _____ **days p/w** **None** **Skip to Q12**

- (A) How much time would you typically spend walking for **recreation** on those days?
 _____ **hours per day** _____ **mins per day**

- (B) In a typical week, on how many days would you normally walk for **utilitarian** for at least 10 minutes at a time?
 _____ **days p/w** **None**

- (B) How much time would you typically spend walking for **utilitarian** on those days?
 _____ **hour per day** _____ **mins per day**

11. Are you a member of any kind of sports club? Include clubs for traditional sports and any other organisations that provide opportunities to engage in physical activity for recreation, exercise or sport?
 Yes No

12. Would you be interested in walking more for recreation?
 Yes No

Section B – Walkers

13. Which of the following factors are reasons for **taking part** in physical activity? Only tick boxes that apply to you.

To improve health/fitness To control/lose weight Spend time with friends
 De-stress Improve mood Bring children for walks

Other _____

14. To what extent do you agree that the following factors are the reasons why you prefer walking to other activities like running, jogging, cycling etc.?

	<i>Strongly Agree</i>	<i>Agree</i>	<i>No Opinion</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
I walk because I enjoy the outdoors	1	2	3	4	5
I walk because it is low cost	1	2	3	4	5
I walk to exercise my dog	1	2	3	4	5
I go walking because it is a suitable activity to do with my family	1	2	3	4	5
I walk for enjoyment	1	2	3	4	5
I walk because there is less risk of getting injured as opposed to strenuous exercise	1	2	3	4	5
I walk because it is more relaxing	1	2	3	4	5
I walk because I can go at my own pace	1	2	3	4	5
I can go walking anywhere as opposed to travelling for exercise	1	2	3	4	5
I can go on my own as opposed to playing in team sports	1	2	3	4	5
I walk because it doesn't require much equipment	1	2	3	4	5

15. Which of the following would help/encourage you to go **walking more/take part in other walking activities and challenges**? Please only tick boxes that apply to you.

If I had better transport/access to activities If there was a variety of walking routes nearby
 If there were more opportunities for walking activities/events If there were more walking groups to join
 If I had equipment for hiking/hill walking If I had more knowledge about nearby hillwalking routes
 If I had knowledge about hiking/hillwalking opportunities If I had more knowledge about challenging walks

16. In rank order, please indicate **where** your most preferred place to go walking for exercise/recreation is? (write the no.1 in the box for most preferred place, no.2 for your second option to go walking and so on)

Forest trails	
Local parks	
Beach	
Greenway	
Local roads/footpaths	
River/canal walks	
Mountains/hills	

Other: _____

17. In the past month, how frequently would you walk in these places?

	<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Frequently</i>	<i>All the time</i>
Forest trails	1	2	3	4	5
Local parks	1	2	3	4	5
Beach	1	2	3	4	5
Greenway	1	2	3	4	5
Local roads/foot paths	1	2	3	4	5
River/canal walks	1	2	3	4	5
Mountains/hills	1	2	3	4	5

18. Please indicate on the map places you have been walking in the **last 3 months**?

Grid Sections: _____

19. How far would you be willing to travel to use a suitable walking location?

_____ Kms (or) _____ Miles (or) _____ Minutes

Section C – Non-Walkers

20. Which of the following factors would be reasons for **taking part** in physical activity? Only tick boxes that apply to you.

To improve health/fitness To control/lose weight Spend time with friends
 De-stress Improve mood Bring children for walks

Other _____

21. Which of the following **would help/encourage you to go walking**? Only tick boxes that apply to you.

	<i>Strongly Agree</i>	<i>Agree</i>	<i>No Opinion</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
If I had someone to go walking with	1	2	3	4	5
If I was a part of a walking group	1	2	3	4	5
If there were walking routes nearby	1	2	3	4	5
If there were more groups with walking leaders	1	2	3	4	5
If I had more knowledge about walking routes	1	2	3	4	5
If there were better maintained footpaths	1	2	3	4	5
If parks/open spaces were better maintained	1	2	3	4	5
If I had more knowledge on the benefits of walking	1	2	3	4	5
If I had more knowledge about walking activities/events	1	2	3	4	5
If I had better access/transport to walking routes	1	2	3	4	5

22. Which of the following factors would **stop you from going walking**? Please indicate if you agree or disagree with the following statements.

	<i>Strongly Agree</i>	<i>Agree</i>	<i>No Opinion</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
No transport to get to walking routes	1	2	3	4	5
No suitable location to go walking	1	2	3	4	5
I have no time to go walking	1	2	3	4	5
I have a disability/illness that stops me going walking	1	2	3	4	5
I have a fear of getting injured	1	2	3	4	5
I am not confident enough to go walking	1	2	3	4	5
I do not feel safe walking on my own	1	2	3	4	5

23. In rank order, please indicate **where** your most preferred place to go walking for exercise/recreation is? (write the no.1 in the box for most preferred place, no.2 for your second option to go walking and so on)

Forest trails	
Local parks	
Beach	
Greenway	
Local roads/footpaths	
River/canal walks	
Mountains/hills	

Other: _____

24. In the past month, how frequently would you walk in these places?

	<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Frequently</i>	<i>All the time</i>
Forest trails	1	2	3	4	5
Local parks	1	2	3	4	5
Beach	1	2	3	4	5
Greenway	1	2	3	4	5
Local roads/foot paths	1	2	3	4	5
River/canal walks	1	2	3	4	5
Mountains/hills	1	2	3	4	5

25. How far would you be willing to travel to use a suitable walking location?

_____ Kms (or) _____ Miles (or) _____ Minutes

Section D – Both Walkers and Nonwalkers

26. Are you aware of the walking routes that are located within your local area?

Yes

No

27. Would you like to be more informed about any of the following options? Please tick boxes that apply to you. If you would not like to be informed, then leave blank.

Walking routes/trails

Benefits of walking

Walking groups

Walking activities

Thank you for completing the survey!

**The questionnaire is now complete.
Thank you for your time and patience in filling out this questionnaire!**

Appendix G - Landing Page for Campaign 1 Mount Congreve Gardens



NOV
03

Mount Congreve Gardens - Free
Entry Family Walk Day

Free

♥

Sales Ended

Details

Registrations Are Closed

Thank you for registering for this free event. We look forward to meeting you on the day!

Looking for a scenic walk for you and the family this weekend? Join Get Ireland Walking at the beautiful Mount Congreve Gardens this Sunday!

About this Event

Date And Time

Sun, 3 November 2019
10:00 - 16:30 GMT
[Add to Calendar](#)

Location

Mount Congreve Gardens
X91 PX05
X91 PX05 Kilmeaden
[View Map](#)



Mount Congreve Gardens will be open Sunday the 3rd of November from 10:00am to 4:30pm. Register now and receive **FREE** entrance for you and the family courtesy of Get Ireland Walking. To avail of this offer, you must present your family ticket on the day.

Mount Congreve Gardens offers woodland walks suitable for everyone in the family. Receive a map upon entry and begin to meander through 70 acres of beautiful and tranquil gardens. Explore the garden shop located on site and grab a bite to eat at the Dairy Cafe.



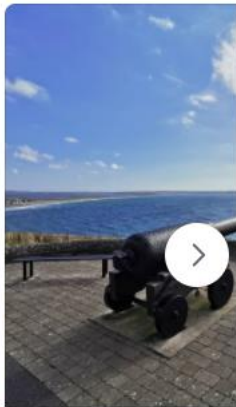
[✉ Contact Event Organiser](#)

Appendix H – Campaign One Additional Images for Carousel Advertisement



Anne Valley Nature Walk

[Learn More](#)



Doneraile Walk, Tramore



Doneraile Walk, Tramore

[Learn More](#)



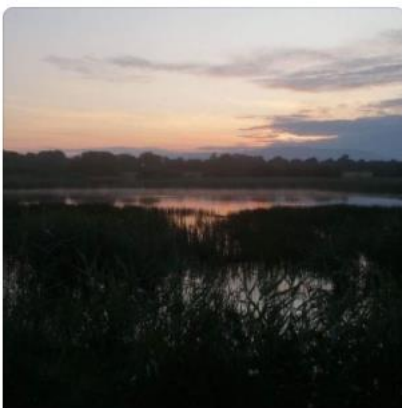
Waterford Greenway

[Learn More](#)



De La Poer Tower Loop, Portlaoigh

[Learn More](#)



Ballyscanlon Lake, Kill

[Learn More](#)



Kilbarry Nature Park

[Learn More](#)



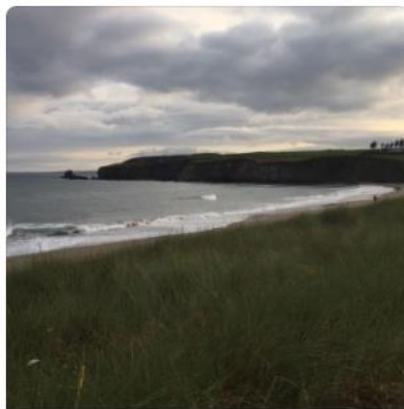
Crough Woods

[Learn More](#)



Portlaw Woods


[Learn More](#)



Bunmahon Coastal Walk

[Learn More](#)

Appendix I – Landing Page for Campaign 2 McGrath’s Cross Greenway



NOV
16

Mountaineering Ireland Guided Walk

Free

♡
Sales Ended
Details

Join Mountaineering Ireland and Kilmacthomas Walking Club this Saturday for a guided-walk through Crough Woods to Mahon Falls

About this Event

After a beautiful ascent from Crough Woods, you get rewarded with the breathtaking views of Mahon Falls stemming from the beautiful Comeragh Mountains.

This refreshing walk will be guided by walking leaders from Kilmacthomas Walking Club. The walk will begin on 10 am on the 16th of November. The meeting point is McGrath's Cross Greenway Car Park. Please arrive early as the walk will begin at 10.

Please note that suitable footwear is required. Suitable clothing is also required for this walk to stay dry and warm if it rains. Food, snacks and water is also essential for this walk.

Date And Time

Sat, 16 November 2019
10:00 – 13:00 GMT
[Add to Calendar](#)

Location

McGrath's Cross Greenway Car Park
McGrath's Cross
Greenway Car Park
Ahanaglogh
[View Map](#)



Length: 9.41 km	Total Ascent: 347 meter
Surface: Undefined	Total Descent: 333 meter
Difficulty: Medium	Max Elevation: 414 meter
Duration: 3.30hrs approx	Min Elevation: 118 meter



Appendix J – Landing Page for Campaign 2 Kilclooney Woods



DEC
07

Mountaineering Ireland Free
Guided Walk

Free



Sales Ended

Details

Join Mountaineering Ireland this Saturday the 7th of December for a **FREE** guided-walk to Coumshingaun Lake

Date And Time

Sat, 7 December 2019

10:00 – 11:30 GMT

[Add to Calendar](#)

About this Event



Location

Kilclooney Wood Car Park Comeragh Hike

Kilclooney Wood Car Park

Cuttsen

[View Map](#)

Join us for the opportunity to see jaw dropping natural beauty when we visit Coumshingaun Lake in the Comeragh mountains. This is a short guided walk with majestic views throughout. We will venture through a tall forest until the land opens up. From there we will walk to the lake taking in wonderful scenery along the way.

Information you need to know:

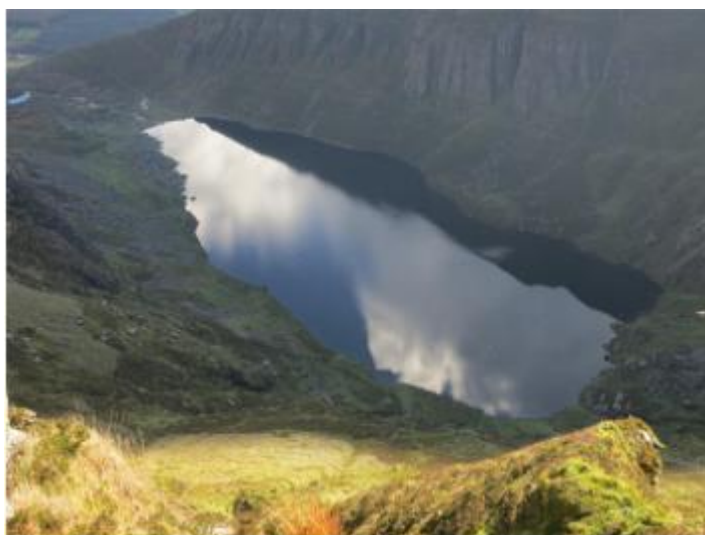
- The walk will start at 10am on Saturday the 7th of December (please arrive early);
- It will start and finish point is at Kilclooney Wood car park (this car park is located on the R676 connecting Dungarvan and Carrick-On-Suir);
- The walk is 4km with gentle slopes and will take approximately 45-60 minutes;
- Wrap up. Warm layers are needed. This includes a jacket, gloves and a hat;
- Suitable footwear is required. Hiking boots or shoes with a good grip are preferable;
- Bring some water and snacks if required.

This refreshing walk will be well worth the trip!

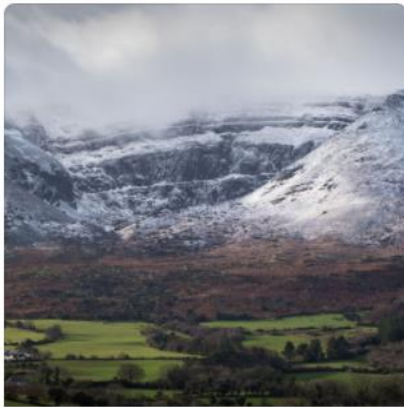
The walk will be lead by a qualified mountain leader.

Do not forget to print/show your ticket to avail of this free offer!

If you have any queries, do not hesitate to contact Ruth Whelan on 087-1612990.



Appendix K – Campaign Two Additional Images for Carousel Advertisement



Comeragh Mountains

[Learn More](#)



Comeragh Mountains



Comeragh Mountains

[Learn More](#)



Comeragh Mountains

[Learn More](#)



Comeragh Mountains

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Comeragh Mountains

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Appendix L – Phase Three Questionnaire (Get Ireland Walking)



Waterford Institute of Technology



An examination of the effectiveness of a social marketing campaign on walking participation.

1. How many family members have joined you at Mount Congreve Gardens today? Include yourself in the count.
 _____ **Adults** _____ **Children under 12** _____ **Children over 12**

2. In a typical month, on how many days do you and your family go walking for recreation and approximately how long do these walks last for?
 _____ **day/days** _____ **hours** _____ **minutes**

3. How did you hear about Mount Congreve Gardens family day?

Facebook Advertisements	<input type="checkbox"/>	Instagram Advertisements
Search/Internet	<input type="checkbox"/>	Word of mouth
Friends/Family	<input type="checkbox"/>	Posters/Flyer/Newspapers
Radio	<input type="checkbox"/>	Website
Other _____		

4. Have you noticed any promotional advertisements about walking on your social media platforms via Facebook and Instagram?

Yes	<input type="checkbox"/>	No – skip to Q 5	<input type="checkbox"/>
------------	--------------------------	-------------------------	--------------------------

 - (i) If you answered yes, can you recall the content of the advertisements you seen?

Video Advertisement (based on walking trails in Ireland)	<input type="checkbox"/>
Video Advertisement (kids exploring local trails, having fun and making memories together)	<input type="checkbox"/>
Image Advertisements (based on local trails/routes to go walking in Co. Waterford)	<input type="checkbox"/>
Image Advertisements (based on the health benefits of walking)	<input type="checkbox"/>

 - (ii) What was your experience of the advertisements about walking? On a scale of 1 to 5, 1 being an extremely positive experience, 5 being extremely negative.

Extremely Positive	Positive	Neutral	Negative	Extremely Negative
1	2	3	4	5

 - (iii) To what extent did the advertisements about walking encouraged you to get out and be active? On a scale of 1 to 5, 1 being strongly disagree that the advertisements encourage you to go walking, 5 being strongly agree.

Strongly Disagree **Disagree** **No Opinion** **Agree** **Strongly Agree**
1 2 3 4 5

5. Would you like to receive more advertisements based on walking routes and trails nearby? Via. Get Ireland Walking's Facebook Page

Yes **No**

The questionnaire is now complete.

Thank you for your time and patience in filling out this questionnaire!

This survey is only used for academic purposes. All information is protected under GDPR regulations in accordance with Waterford Institute of Technology.

Appendix M – Phase Three Questionnaire (Mountaineering Ireland)



Waterford Institute of Technology



An examination of the effectiveness of a social marketing campaign on walking participation.

1. In a typical month, on how many days do you go walking for recreation and approximately how long do these walks last for?

_____ **day/days** _____ **hours** _____ **minutes**

2. How did you hear about the Mountaineering Ireland free guided walk?

Facebook Advertisements	<input type="checkbox"/>	Instagram Advertisements
Search/Internet	<input type="checkbox"/>	Word of mouth
Friends/Family	<input type="checkbox"/>	Posters/Flyer/Newspapers
Radio	<input type="checkbox"/>	Website

Other _____

3. Have you noticed any promotional advertisements about hillwalking on your social media platforms via. Facebook and Instagram?

Yes **No – skip to Q 5**

- (iv) If you answered yes, can you recall the content of the advertisements you seen?

Video Advertisement (based on walking trails in Ireland)

Video Advertisement (based on scenic mountain and hill walking trails in Co. Waterford)

Image Advertisements (based on local mountain and hill trails/routes to go walking in Co. Waterford)

Image Advertisements (based on the health benefits of walking)

- (v) What was your experience of the advertisements about walking? On a scale of 1 to 5, 1 being an extremely positive experience, 5 being extremely negative.

Extremely Positive	Positive	Neutral	Negative	Extremely Negative
1	2	3	4	5

- (vi) To what extent did the advertisements about walking encouraged you to get out and be active? On a scale of 1 to 5, 1 being strongly disagree that the advertisements encourage you to go walking, 5 being strongly agree.

Strongly Disagree **Disagree** **No Opinion** **Agree** **Strongly Agree**
1 2 3 4 5

4. Would you like to receive more advertisements based on walking routes and trails nearby? Via. Mountaineering Ireland Facebook Page

Yes **No**

The questionnaire is now complete.

Thank you for your time and patience in filling out this questionnaire!

This survey is only used for academic purposes. All information is protected under GDPR regulations in accordance with Waterford Institute of Technology.