LEISURE EXPERIENCES
IN NORDIC WALKING AND RAMBLING,
AND THEIR CONTRIBUTIONS
TO MENTAL WELL-BEING:
A MIXED-METHODS STUDY

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ABSTRACT

Walking is a common recreational activity enjoyed by people of all ages and fitness levels. The body of knowledge stresses the importance of physical and social environmental influences on individual decisions to walk, which benefit health and well-being. The socio-ecological approach chosen as the theoretical framework for this study provides a comprehensive understanding of how multiple psychological, social and environmental factors influence engagement in leisure walking. The purpose of this cross-sectional study is to compare Nordic walking with rambling, as examples of leisure walking activities, in terms of socio-environmental influences, which produce unique leisure experiences in order to determine how these leisure experiences benefit mental well-being. The study used mixed-method approach. Quantitative and qualitative data were collected between April 2013 and August 2014. Quantitative data were gathered from 220 Nordic walking practitioners and 288 ramblers who completed close-ended online surveys. Qualitative data were obtained from the interviews with 13 ramblers and 12 Nordic walking practitioners. The comparison of the quantitative findings revealed that Nordic walking and rambling groups scored high on mental well-being scales. However, there was no significant difference in WEMWBS scores between the groups, which suggests that in general recreational walking benefits mental well-being. The comparative qualitative analyses revealed that the walking activities enhanced well-being in different ways. Nordic walking promoted a sense of achievement through opportunities for the commitment to personal health goals and skills development. Rambling enhanced well-being by offering positive experiences of social interactions with like-minded people in aesthetically pleasing natural environments. This study is the first step to bridge the gap in knowledge by offering a
broad understanding of benefits of Nordic walking, in comparison to rambling, towards mental well-being.
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CHAPTER 1
INTRODUCTION TO THE STUDY

“Isn’t it really quite extraordinary to see that, since man took his first step, no one has asked himself why he walks, how he walks, if he has ever walked, if he could walk better, what he achieves in walking... questions that are tied to all the philosophical, psychological, and political systems which preoccupy the world” (Honore Balzac, Theorie de la demarche, 1833 in Solnit, 2002).

Walking is an ordinary and natural human activity like breathing, sleeping and eating. It is also a common form of daily physical activity. Morris and Hardman (1997) describe it as being the nearest to a perfect exercise since it does not require any type of formal training or special equipment and can be performed at any convenient time and place (Darker et al., 2010; Wensley and Slade, 2012). Walking can be undertaken intentionally, for example when walking for recreation, to fulfil the need for social contact, and fitness, or to achieve exercise requirements. It can also be “incidental” when performed while being active for another purpose, such as walking for transportation (commuting to work or school), utilitarian walking (housebound, shopping) and leisure walking (while playing golf). The concept of walking is complex and can be viewed from various perspectives. From a physiological standpoint, Caspersen and colleagues (1985, p. 126) characterised it as “a body movement produced by skeletal muscles and resulting in energy expenditure, which varies from low to high and which has a positive correlation with physical fitness”.

In other words, walking is a rhythmic, dynamic, aerobic exercise that uses large muscle groups of legs, limb girdle and lower trunk, and can be practiced at various intensity levels (Morris and Hardman, 1997). However, considering walking only as a bodily
exercise, i.e. an instrument for improving physical health and fitness, reduces its meaning. Walking is much more than a capacity of a biological organism. It plays an important role in the mental and social functioning of people, as it is a socially constructed behaviour, a specific and unique system of communicating that depends upon individual intentions (Wright, 2003). Walking is embedded in cultural norms, habits and conventions, which regulate social life, time and space (Oliver, 1993; Edensor, 2010). Tolley (2003) explained that walking is the primary example of the activity, by which society educates individuals in the physical movement to become a part of a social group. Walking education starts early and the majority of children are able to walk by the time they reach twelve months old, and throughout life, people practice and master different types of walking appropriate for various social and cultural circumstances.

Humanistic geography posits that rhythms and styles of walking uncover and connect people with places. The relationship between people and various landscapes is multi-sensory and unique for everyone in terms of textures, sights, sounds and smells (Milligan et al., 2004). Wunderlich (2008, p. 129) suggested that while moving through space, people unavoidably touch and feel the environment with their entire bodies.

Walking in the city is an unquestioned form of movement, often unnoticed and supplemented by the sounds of cars, public transport, and loud conversations. On the contrary, walking in the countryside is a completely different experience. British artist Richard Long, who practices walking in natural spaces as a sculptural action, summarised one of his walks in the countryside:

“One and a half hour of early morning mist, the split-second chirrup of skylark, skirting the bronze age Grimsound, fording the West Dart river in two minutes, passing the pile of stones placed sixteen years ago, a crow perched on great gnats' head cairn for five minutes, holding a butterfly with a lifespan of
one month, climbing over granite 350 million years old on great Mis Tor, thinking of a future walk, eight hours of moonlight” (Long, 1995).

Individual walking rhythms can be identified, represented and regulated by the “gaze” - a construction of signs, characteristics of everyday life, which enable people to differentiate time and space, determine leisure time and space from non-leisure, and decide what behaviours and symbolic images are appropriate for given situations (Rojek, 1995, 2005; Argyle, 1996; Vergunst, 2010). For instance, people walk differently in busy streets, shopping malls, parks, beaches and at various times of day, weather or season (Edensor, 2010) and with increasing leisure time and mobility, the natural environment is made accessible to a large number of people to practice various types and rhythms of walking. Duerden (1978, p. 12) suggested that a walking rhythm is vital, and walkers should “achieve a steady pace with rhythmic strides. The sure sign of a good walker is the manner in which he makes it all look very easy, as if he could go on all day without tiring”. Furthermore, the terrain forces different affordances of walking across rocky ground, forests, marsh, moorland, pasture, tarmac, producing various rhythms. Edensor (2010 p. 73) noted that “the recent fashion for walking poles produces a particular sonic and bodily rhythm at variance to that where the hands swing by the side”. Moreover, Williams (1979) recommended that during trekking:

“The body should lean slightly forward to offset the weight of the rucksack. There is little movement of the arms and the hands are kept free. The legs are allowed to swing forward in a comfortable stride. High knee movements and over-striding are to be avoided as they are very fatiguing… the pace should be steady and rhythmical and the feet placed down with a deliberate step” (Williams, 1979, p. 94).

Walking styles and rhythms also indicate and develop social and cultural identities, positions or rankings in the society, which can be noticed within particular
environments, such as schools, hospitals, the army and various sub-cultural groups (Green, 2009). For example, Nayak’s (2006) study of working class males in the North East England described sub-cultures of “Charvers” or marginalised young men with a hooligan reputation by how, where and in what way they walked. “By adopting the outward manifestation of a street style - baseball caps, tracksuits, trainers, heavy gold jewellery - and accompanying this apparel with pronounced walk … ‘monkey walk’ or monkey run’: head down with an arched back” (Nayak, 2006, p. 822).

For many walking is an end itself. It is a multisensual and stimulating experience, which frees the mind and emphasises awareness of the self, the body and senses (Edensor, 2000; Morris, 2003; Gatrell, 2013). In particular, ramblers and pilgrims enjoy the experience of moving outdoors in attractive environments to achieve healthy physical and spiritual sensations (Green, 2009). Slavin (2003) reported the importance of reflexive walking, the rhythmic activity of the motion that enhanced the meditative aspect of the pilgrimage. According to him, the goal of the pilgrims was not reaching their destination, but the spiritual experience of “being on the way”. Similarly, Danely (2015) advocated that walking a pilgrimage embodied values of physical self-reliance, mental discipline and spiritual serenity into the everyday experience of movement through outdoor spaces. In his study, many pilgrims spoke of walking as having a deep psychological and somatic relationship with the landscape and community, which was perceived as an important means to a healthy life.

Nonetheless, the changes in lifestyle from active to sedentary due to the advance of new technologies, such as means of transport, television or the Internet, have replaced the traditional daily physical activities with the activities that reduce energy expenditure. The decrease in daily levels of physical activity is responsible for civilisation diseases related to inactive behaviours, such as obesity, diabetes, and cardiovascular diseases.
(e.g. Tully et al., 2005; Bull et al., 2010; Morency et al., 2011). The Health and Social Care Information Centre (2015) reported that 41% of men and 33% of women are overweight (with a BMI over 25 kg/m²), and 26% of men and 24% of women are obese (BMI over 30 kg/m²). In comparison, 31% of men and 41% of women have a BMI in the normal range (BMI 18.5 - 25 kg/m²). Excessive weight is the main modifiable risk factor for type 2 diabetes, as 90% of adults with type 2 diabetes are overweight or obese. Public Health England (Gatineau et al., 2014) estimated that in 2013, 6% (2.7 million) of the adult population were diagnosed with diabetes, an increase of 137,000 people since 2012. British Heart Foundation statistics (2016) stated that cardiovascular disease caused 27% of all deaths in the UK, some 155,000 deaths each year. The economic burden of cardiovascular disease, including indirect costs from premature death and disability, is estimated to be over £15 billion each year in the United Kingdom. Evidence suggests that these conditions can be prevented, managed or improved with the recommended amount of 150 minutes of physical activity per week in a minimum of 10 minute spells, which is equivalent to 30 minutes of moderate exercise at least five days a week (Department of Health, 2010, 2011; Department of Health, Department for Transport, 2010). Regular moderate intensity walking improves health, and prolongs life expectancy by reducing the risk of coronary heart disease, obesity, stroke, diabetes, high blood pressure, anxiety and stress (e.g. Blacklock et al., 2007; Darker et al., 2007b; Choi et al., 2007; Caperchione et al., 2011; National Institute for Health and Care Excellence, 2012; De Moor and the Ramblers, 2013; Ku et al., 2016). However, the Health Survey for England 2012 (Scholes and Mindell, 2013) reported that only 61% of adults (66% of men and 56% of women) met the national recommended physical activity levels. The substantial cost of treating and supporting ill people in the country is the main reason for the collaboration of British governmental
and non-governmental organisations to promote walking as a pleasurable way to improve health at a relatively low cost for the individual and the health care system. Hanson and Jones (2015) reported that walking groups, as a type of health intervention, benefited physical and mental health and improved quality of life. The widespread adoption of interventions to promote recreational walking has included the development of several walking campaigns in the United Kingdom, which tackle health problems associated with physical inactivity and develop interactions with the natural environment. Natural England, a governmental conservation organisation, actively promotes walking, putting emphasis on its restorative value (Natural England, 2014). Walk Unlimited (2015) (previously known as Walk England) promotes walking projects, such as “Walk4Life” to encourage the public to be more active (Walk England, 2011). In addition, the Ramblers’ Association has established numerous health initiatives, such as the “Get Walking, Keep Walking” project, to promote walking as a simple and affordable form of exercise (Ramblers’ Association, 2014a) and together with Macmillan Cancer support run “Walking for Health”. The scheme is one of the largest British public health interventions that offers 600 local health walk schemes across England (Ramblers’ Association, 2014c; Walking for Health, 2015). “Walking for Health” consists of organised regular, short, group walks led by trained volunteers that are delivered locally by local authorities, primary care trusts and voluntary organisations (Kokolakakis et al., 2015). The walks offer a chance to be active, socialise, explore local places, and improve health.
1.1. WALKING FOR LEISURE – SPECTRUM OF RECREATIONAL OPTIONS

“Walking is a valuable and enjoyable antidote to the increased uncertainty and tension that unfortunately are so often features of modern life” (Duerden, 1978)

Outdoor recreation portrays leisure activities that occur in urban, rural, terrestrial, or marine environments, since an important aspect of outdoor recreation is nature (Jenkins and Pigram, 2006, p. 364). It provides opportunities for psychological and spiritual renewal, for testing skills and knowledge, for building family relationships and friendships.

Walking is the most popular outdoor recreational activity in the United Kingdom (Edensor, 2000; Shores and West, 2010; Roe and Aspinall, 2011). In recent years, over nine million British people walked recreationally for at least thirty minutes in four weeks, which was almost twice the number that swim (5.6 million), more than twice the number that went to the gym (4.5 million) and nearly three times the number that cycled (3.5 million) (Ramblers Association, 2010b, 2014d).

Leisure walking is a diverse and dynamic activity with a wide spectrum of recreational options and purposes that range from occasional spontaneous short walks and daily strolls to challenging trekking and planned back-packing walks. Kay and Moxham (1996, p. 174) classified 20 types of walking based on five sets of walking dimensions: 1) casual - strenuous, 2) mixed-ability group - aficionados, 3) spontaneous - planned, 4) relaxing, sociable - challenging, rewarding, 5) mainstream – minority. Based on these categories, walking activities were grouped in five clusters (Figure 1).
Figure 1. Twenty types of leisure walking. Source: Kay and Moxham, 1996.

The first cluster includes walking activities, such as strolling, wandering and roaming, which are relaxing, social and spontaneous forms of outdoor recreation, suitable for mixed-ability groups. At the opposite end of the scale, there are strenuous and challenging walking activities that require planning and preparation, such as hill-walking, back-packing and peak-bagging. These demanding walking activities extend recreational walking into the outdoor pursuits that offer opportunities not only for
pleasure and relaxation but also for achievement and self-development. Between these contrasting clusters, there is a space for moderate difficulty walking activities, such as trail-walking and rambling.

Another dimension of leisure walking is sociability, which distinguishes individual or group walking. Solitary walking in natural settings promotes contemplation, self-development and often provides restorative opportunities for fascination and connectedness with nature. In contrast, group leisure walks improve personal and social communication skills and enable social relationships (Gatrell, 2013). Much research has emphasised the significance of the social world in participation in leisure walking, arguing that the opportunities for socialising and social support are the strongest predictors for walking in various population samples (e.g. Kwak et al., 2006; Burton et al., 2005; Moudon et al., 2007; Shores and West, 2010). In particular, group leisure walking, known in the United Kingdom as rambling, nurtures collective values of companionship and aesthetical appreciation of nature. Duerden (1978), for example, noted that joining a rambling club had many advantages, which broadened walking horizons and widened interests, such as meeting people with similar leisure pursuits, and opportunities to discuss equipment, routes, walking areas and accommodation. Rambling groups have walking leaders who are responsible for arranging walking routes and monitoring the progression of walks. The walking leaders are also trained in safety procedures in case of accidents and bad weather (Edensor, 2000). The leaders set the pace of walking to optimise group enjoyment and compatibility because the main purpose of rambling is taking pleasure in the experience of moving outdoors in attractive environments, to overcome challenges, achieve fulfilment, improve physical health and for some spiritual dimensions (Green, 2009).
1.2. A ROLE OF PLACE IN LEISURE WALKING AND BENEFITS FOR WELL-BEING

“Give me the clear blue sky over my head, and the green turf beneath my feet, a winding road before me and a three hours’ march to dinner – and then to thinking!” (Hazlitt, 2011, p. 327).

The growing popularity of leisure walking has provided an opportunity to promote walking as a therapeutic recreation that benefits health and well-being by bonding people with places. Place is a core concept of environmental psychology, and a rich body of literature has shown that the nature of attachment to the place can be considered in different ways - affective, cognitive and conative (practice) (Kyle et al., 2004a,b). Person-place bonding requires a positive emotional connection to a place (e.g. love or contentment), cognitive elements, such as memories, beliefs, meaning and knowledge that individuals associate with the particular place, and expressed actions of returning to the place (Scannell and Gillford, 2010). Prior studies on person-place bonding have proposed similar concepts such as place rootedness, sense of place, place identity and place attachment. Although these terms differ, there is agreement in the literature that these concepts are related. Furthermore, some scholars describe place identity as one of the dimensions of place attachment. However, place identity is also a holistic concept, and thus place attachment or place-identity are sometimes used interchangeably (e.g. Kyle et al., 2004b; Stedman, 2002; Hidalgo and Hernandez, 2001).

Place attachment is characterised as a positive affective relationship between a person or a group and a place that makes a specific place a part of conceptual and extended self (e.g. Hidalgo and Hernandez, 2001). The concept consists of two dimensions: place identity and place dependence. Place dependence is a level, to which individuals...
perceive themselves as functionally associated with places. Place identity is characterised as a combination of values, attitudes thoughts, beliefs, meanings, and behaviours reaching beyond emotional attachment and belonging (Proshansky et al., 1983). Three decades later, Scannell and Gillford (2010) revisited the concept and proposed a three-dimension framework of place attachment: person, place and process. The person dimension is divided into individual and group levels. At the individual level, it involves personal connection with place evoked by memories of meaningful experiences, personal milestones, and personal growth. At the group level, attachment is comprised of symbolic meanings of place (Scannell and Gillford, 2010). The place dimension is divided into two levels social and physical attachment. At the social level, attachment is often characterised as a sense of place – a collection of symbolic meanings of place, and satisfaction with settings, through which people acquire a sense of belonging, sense of community and rootedness. The physical attachment of place refers to physical settings, the built environment and the natural environment that provide amenities and resources to support the individual goals (Scannell and Gillford, 2010). The process dimension links the person and place dimensions in order to express positive actions and behaviours related to the place.

The literature on place-identity posits that the concept is characterised as a combination of values, attitudes, thoughts, beliefs, meanings, and behaviours reaching beyond emotional attachment and belonging (Proshansky et al., 1983). Scholars suggest that place identity carries two meanings: the first one refers to features of the place that guarantee its distinctiveness (e.g. Lewicka, 2008), the second one is where place is a means to distinguish oneself from others in order to create self-esteem (Twigger-Ross and Uzzell, 1996). The meanings of spaces are not universally shared. The individual meaning for a given physical setting indicates what should happen in it, what the setting
is supposed to be like and how the individuals are supposed to behave in it. Beyond knowing how to behave and what to expect from particular settings, environmental meaning includes symbolic and affective associations between individuals and various aspects of the physical environment (Proshansky et al., 1983). Furthermore, an important function of place-identity is the environmental past, recognising what is familiar or unfamiliar, against which any immediate physical settings can be judged and understood.

The concepts of place attachment and place identity are often linked to the recreational literature, since human bonding with recreational spaces is a common occurrence (e.g. Brown and Raymond, 2007). Human bonding with recreational places involves factors, such as characteristics of the physical environment, human experience and use of the environment, social, psychological and cultural interpretation of and constructed meanings of people-place interactions (Stedman, 2003). In other words, recreationalists search for aesthetic and natural environments and use special and unique settings and landscapes that can satisfy their leisure needs. As a result they develop an emotional bond, a sense of familiarity and close connections with these places.

Based on this diverse literature, Hammitt and colleagues (2006, 2009) developed five dimensions of place bonding for recreational spaces where people develop cognitive and affective attachment to places: place dependence, place familiarity, place belongingness, place rootedness and place identity.

Place dependence refers to the potential of place to satisfy the needs and goals of individuals. It suggests loyalty and relies on a broad range and functionality of recreation settings that facilitate leisure behaviours (Kyle et al., 2004b). Place dependence is an important dimension for walking since the enjoyment of walking depends on meaningful aspects of the built and natural environments such as parks,
trails, forests, lakes that satisfy walking needs and desires and promote experiencing specific leisure walking outcomes, such as relaxation, contemplation and a sense of escape.

Place familiarity involves pleasant memories, achievement memories, and environmental images that result from remembrances associated with recreational spaces. It offers a frame of reference where individuals feel secure, stable and perceive themselves as a part of the environment (Bott et al., 2003). Places visited during the leisure walks are often self-selected and thus result in memories that provide affectionate experiences and promote bonding with these places. Through walking people experience places as an opportunity for exercising and socialising, which create unique place experiences, memories and meanings. Moreover, by noticing landmarks and routes, walkers have feelings of being part of the landscape. While moving and connecting views and feelings and places, walkers have a new perspective of place and a strong knowledge base for familiarity of places and a sense of emotional security (e.g. Williams et al., 1992; Hammitt et al., 2006; Lund, 2012).

Place belongingness suggests a strong level of connectivity and affiliation with place and familiarity that may develop into a communal bond between people and places (e.g. Proshansky et al., 1983; Hammitt et al., 2006). Place belongingness also entails communal connections towards environments, which are shared with family and friends. In particular, walking creates a sense of intimacy by sharing the space with others, which often provides a context for social relationships, social support and social bonding.

Place rootedness is an intense level of place bonding, where people become settled to a degree that they have little desire for another place. Hammitt and colleagues (2006) suggest that there is recreational genealogy associated with the places rooted in family
members, lasting friendships, activities and stories from the past. Long-term walkers may speak of some walking routes and destinations as a home place, which are the centre of meaningful activities, interactions and stories from the past.

Place identity is a combination of values, beliefs and thoughts and meaning. Relationships between place identity and recreation help individuals create and affirm a sense of self. Recreational spaces that also satisfy needs may be viewed as an essential part of oneself resulting in strong psychological and affective bonds to places (Hammitt et al., 2006, p. 23). Researchers have emphasised the identity and symbolic meanings developed in outdoor places. The recognition and meaning of place-identity can be facilitated by walking as an embodied way of understanding individual relationships with place. Walking is a mode of experiencing places, developing feelings and thoughts for them (Wunderlich, 2008). Moreover it is an act of the exploration of the self (Lund, 2012).

Place-identity perceives walking as an end itself as it emphasises awareness of the self and synchronises inner (body and mind) and outer (social, collective) paces and rhythms as an experience of being exposed to natural and urban surroundings (e.g. Solnit, 2002; Slavin, 2003; Vergunst, 2010; Staats and Hartig 2004; Pretty et al., 2005; Herzog and Strevey, 2008).

In particular, walking in pleasant and calm landscapes enhances aesthetical awareness, diverts attention from negative emotions and thoughts, and provides opportunities for meaningful physical activity and recreation (Schimmack and Diener, 1997; Milligan et al., 2004). John Ruskin (1856, p. 300), an English writer and artist of the Victorian era, describes the joyfulness of walking in the country and creating the true sense of the spaces of earth.
“If we walk more than ten or twelve miles, it breaks up the day too much; leaving no time for stopping at the stream sides or shady banks [...] but if, advancing thus slowly, after some days we approach any more interesting scenery, every yard of the changeful ground becomes precious and piquant; and the continual increase of hope, and of surrounding beauty, affords one of the most exquisite enjoyments possible to the healthy mind”.

Human connections with the surrounding natural world and well-being is strongly actualised not only in literature but also in academic writings. A body of research shows that being outdoors in the natural environment is beneficial: Hartig and colleagues (2007) suggested that the natural environment was a preferred setting for restorative experiences when compared to urban settings. Ettema and Smajic (2015) similarly reported that the natural environment fostered positive emotions. Gidlow and colleagues (2016) reported that walking in the natural environment for at least 30 minutes conferred greater benefits for restorative experiences and cognitive functions when compared with walking in the pleasant urban environment. The positive effects of nature have been explained by various theories and approaches, such as Therapeutic Landscapes (Gesler, 1993, 2005), Attention Restoration (Kaplan, 1995) and Stress Reduction (Ulrich, 1984). The concept of therapeutic landscapes are based on the premise that particular landscapes can provide the settings for therapeutic activities, which are associated with healing. The beneficial effects of attractive landscapes focus on emotional bonds between people and spaces, as well as physical and mental engagement with the environment through sensory experiences and people’s sense of place. The main role of therapeutic landscapes is to capture people’s attention, enhance aesthetical awareness and divert focus from negative emotions and thoughts. The attractive landscapes satisfy the human need for cultural roots, provide opportunities for
meaningful activities and self-development, which are related to health and well-being (e.g. Herzog and Strevey, 2008; Stigsdotter et al., 2010; Adevi and Martensson, 2013). Similar to the concept of therapeutic landscapes, the attention restoration theory posits that natural spaces facilitate the restoration of attention capacities by providing activities that require prolonged effortless attention. Kaplan (1995) categorised effortless attention as soft and hard fascination. Soft fascination allows for effortless attention and reflection at the same time in natural settings. In contrast, hard fascination does not have a reflective quality to complement attention. Therefore, only soft fascination is a necessary condition for recovery and is an important part in attention restoration theory (ART). According to ART, “natural settings are equipped to facilitate restorative processes, because they are filled with innately fascinating and aesthetically pleasing stimuli” (Duvall and Kaplan, 2014, p. 686). Similarly, Hammitt (1982, p. 483) suggests that many aspects of the natural environment, such as the diversity in landscape, vegetation patterns, wildlife, sunrise, sunset, contain a great degree of fascination, affording an arousal and attentive state that is effortless. Therefore, restorative environments need to contain fascinating objects and events and provide opportunities for exploration and discovery that also allow for being away from everyday demands and problems.

Based on this premise, a body of literature (e.g. Kaplan, 1995, 2001; Morris, 2003; Hartig and Staats, 2006; Roe and Aspinall, 2011) has proposed that prolonged exposure to the natural environment offers relief from stress and mental fatigue in settings that evoke moderate levels of interest, pleasantness, calmness and reflective thoughts due to four properties:

- the experience of being away from daily routines and distancing oneself from problems,
- a soft fascination with natural settings, which provides opportunities for reflection and effortless attention thus allowing direct attention to rest
- the extent of the environment, which allows exploration, a sense of engagement and a sense of belonging
- the compatibility between environment and one’s purposes, which supports intended leisure activities.

As the attention restoration theory focuses on the cognitive benefits of natural landscapes, the stress reduction theory places emphasis on the visual perceptions of the environments, which contribute towards emotional and physical benefits of exposure to the natural environments (Ulrich, 1984). The concept explores the positive effects of being engaged with natural spaces on emotions with regards to the increase in positive feelings and decrease in negative ones. Ulrich (1981) suggested that people tend to favour green spaces with depth, complexity, structure, such as woodlands and parks, for stress recovery and that when they are exposed to the natural environment their attention is directed towards the landscape and away from the negative thoughts, which enhances wakefully relaxed attention (Zhang et al., 2014a,b; Korpela et al., 2014). Based on this premise, Pretty (2004) distinguished levels of exposure and engagement with the natural environment, which can be summarised as passive and active enjoyment of nature. Passive enjoyment refers to viewing nature either through windows or in a painting, or being in the presence of nature, while walking, cycling, talking to friends in a park, which has relaxing, restorative and social components (e.g. Ulrich, 1984; Stigsdotter et al., 2010). Active enjoyment of nature can be described as involvement in the landscape when gardening, camping, cross-country running, horse
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riding that develop personal skills and independence, increase social interactions and person-place connections (e.g. Adevi and Martensson, 2013).

There is ample evidence to suggest that walking in natural environments benefits well-being. Therapeutic effects of walking for leisure are expressed in the concepts of “walking - cure”, “psychotherapeutic walking” (Wallace, 1993) or “therapeutic mobilities” (Gatrell, 2013), which suggest all individuals can walk their way into physical health and mental well-being.

Walking therapy may lie in a solitary walk or the company of others (Gatrell, 2011). For many people a solitary walk in the natural environment is preferable as it allows for a closer communion with nature. In the solitude individuals seek to withdraw from complex social environments, which they have little control over (Hammitt, 1982).

Thus, lone walking provides an enjoyable antidote to stress and mental fatigue through engagement with the physical environment - aesthetical awareness, fascination with the countryside, the experience of being away from daily routines and distancing oneself from daily stresses and problems (Kaplan, 2001; Morris, 2003; Roe and Aspinall, 2011).

Solitary walking also encourages a reflective appreciation of surroundings and cultural contextualisation of the countryside (Snape, 2004). This preference was given much credence, as it was practiced, theorised and used through the Romantic Movement of the late 18th century. As the essayist William Hazlitt wrote (2011, p. 326):

“One of the pleasantness things in the world is going on a journey; but I like to go by myself. I can enjoy society in a room; but out of doors, nature company is enough for me. I am then never less alone than when alone”.

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Thomas Jefferson, an American president, also advocated solitude walking as the purpose of clearing the mind:

“The object of walking is to relax the mind. You should therefore not permit yourself even to think while you walk. But divert your attention by the objects surrounding you” (Rayner, 1832, p. 286).

Rousseau in “Reveries of a solitary walker” (1783) offered no descriptions of picturesque landscapes in any of the ten walks. On the contrary, his time of solitary walking was filled with reflections on social, political and religious thoughts. Also, Hunt (2016, p. 298) suggested that landscape provokes an unfocused or diffuse state in which anything and everything can enter the mind rather than aspects or images of the landscape in which the solitary walk occurs.

Nonetheless, walking as a shared experience is therapeutic. Group walking is a form of togetherness, even when one is alone among strangers, because it allows walkers to establish and maintain an intimacy and familiarity with community, create a sense of belonging to a special group, which with time may become a centre of one’s social life (Kyle and Chick, 2002; Bean et al., 2008; Chick, 2009). Group walks in natural environments can have an effect on well-being greater than solitary walking as they provide social settings for interactions, developing and strengthening friendships, expressing and sharing interests (Edensor, 2000; Darker et al., 2007b). This form of supportive sociality and emotional closeness combats feelings of loneliness and isolation, which can have significant benefits for well-being (Doughty, 2013).
1.3. NORDIC WALKING AS A NEW FORM OF LEISURE WALKING

“Living an active life or being physically active is important to many people and walking is fundamental for active living. While walking we are most able to engage with our environments and with each other while benefiting our health.” (Wright, 2003, p. 402).

Most new leisure activities are often based on well-established activities: “[…] of recent invention undertaken in free time, in the sense, that a number of people in a region, nation, or large socio-cultural unit have only lately taken it up as a past time” (Stebbins, 2009, p.78). New leisure activities attract minority interests that are customised for sets of people, draw together particular followers and separate them from the members of the public (Roberts, 2006). The growth in popularity of new leisure activities in a society may transform them into casual and serious leisure activities with time. The customisation of new leisure activities may be driven by commercial interests, social interests or a combination of both, for example: snowboarding, parkour, ice golfing, kite skiing and Nordic walking.

The name - Nordic walking - was created as a commercial enterprise of the Finnish sport equipment company – Exel, and aimed to describe the cultural characteristics and origins of the activity. Nordic walking, also known as walking with poles, fitness walking, power walking, power poles, ski walking, urban poling and exerstriding® adds new options for choosing walking as a pastime, providing an alternative to other types of pole walking, such as trekking or rambling. The activity combines the classic cross-country skiing technique with fitness walking. The main goal of Nordic walking is to engage those muscles, not used during a standard walk (Song et al., 2013). Nordic walking technique can be summarised as an enhancement of a normal arm swing that occurs when walking, with the addition of specially designed poles made of carbon
fibre or glass fibre that are durable, light and do not vibrate when the pole strikes the ground (figure 2). The optimal length of the poles should be set to approximately 68% of a body height, which results in an elbow angle around 90° when the pole and upper arm are held vertically and the pole is planted in front of a person (Hansen and Smith, 2009). When the poles are used correctly the activity strengthens the lower body and also improves the upper body performance, such as the endurance of arms, mobility of neck, chest and shoulders (Hagen et al., 2011; Takeshima et al., 2013; Pellegrini et al., 2015).

Figure 2. Nordic walking poles
Nordic walking technique requires pushing the pole past the hip and releasing the grip whilst opening and closing hands during the pole movement. The technique is relaxing due to a specially designed strap, which is attached to the hand. The correct Nordic walking technique involves maintaining an upright posture, not leaning forward or backward and holding the poles close to the body. When the leading foot moves forward, the opposite arm swings the pole to waist height. The second pole strikes the ground with the heel of the leading foot. It is important not to plant the pole in front of the foot. The pole should be pushed back as far as possible. The arm straightens and the hand opens off the grip by the end of the arm swing (Reuter et al., 2011; Shim, 2012). Based on these movements, the International Nordic Walking Federation (INWA) created a 10 step Nordic walking technique (figure 3) claiming that mastering all those steps is very important for acquiring the maximum health benefits of the activity.

Figure 3. INWA 10 steps technique
1. Impale the pole
2. Push away to hip line
3. Push away beyond hip line
4. Straightening the forearm
5. Open hand
6. Push off the straps
7. Bend forward
8. Rotate the shoulders
9. Carry the pole
10. Pull the pole

Nordic walking is a diverse activity as it offers forms of exercising for individual and group practice. It bridges the concepts of leisure activity and sport as it provides a workout at a choice of intensity levels (Piech and Raczynska, 2010; Hagen et al., 2011). There are three categories of Nordic walking: health, fitness and sport. Nordic walking for health is practiced in large groups supervised by expert instructors. It can be viewed as a form of leisure due to its links to outdoors and social benefits. Nordic walking for health is suited for those who usually abstain from physical activity as it focuses on improving and maintain health and well-being (Piotrowska, 2011). Fitness Nordic walking consists of running and jumping to improve fitness and muscular endurance. It is a new possibility for training and physical development, considered as a softer alternative to running due to a lower impact on the knees compared to running at the same speed (Hagen et al., 2011). Sport Nordic walking is a competitive activity that develops individual performance during sports events, such as Nordic walking marathons (Kocur et al., 2009; Morgulec-Adamowicz et al., 2011). It requires special knowledge, training and skills (Oksanen-Sarel and Timonen, 2005).
Nordic Walking is easy to learn; its benefits and desired effects may be achieved by following the exercise precisely, especially in the initial stages of learning “walking with poles” technique. Therefore, the role of Nordic Walking instructors in mastering the basic Nordic walking technique is vital. Moreover, the instructors act as activity promoters, leaders and organisers. They possess knowledge of the activity and promote the idea to local communities (Toczek-Werner, 2005). In addition, Nordic walking instructors organise activities and events to change public awareness of physical activity and implement active lifestyle habits in local communities. Their key role is to promote Nordic walking through different strategies, motivate people to regular practice, develop and strengthen social bonds, and bring satisfaction in the activity (Gotowski and Zurawik, 2013).

One of the important aspects of Nordic walking is its beneficial effect on physical health. The activity has received increasing academic attention in exploring the positive effects of Nordic walking on groups of people with special needs and various medical problems. For example, a study conducted by Knobloch and Vogt (2006) demonstrated that the activity is safe, with the overall injury rate reaching 0.926/1,000 hours of exposure and falls occurred at a frequency of 0.24/1,000 hours. Other studies revealed that Nordic walking is a simple and effective exercise for patients with COPD (Chronic Obstructive Pulmonary Disease) (Breyer et al., 2010) and patients suffering from Parkinson’s disease (Reuter et al., 2011; Fritz et al., 2011; Bassett et al., 2012). The results of these studies suggested that Nordic walking training increased patients’ daily physical activity levels and reduced daily symptoms of these diseases. The activity also improved coordination of movements and functional capacity, which makes it an effective form of physical activity for elderly people (e.g. Kukkonen-Harjula et al., 2007; Sokeliene and Cesnaitiene, 2011; Parkatti et al., 2012; Chomiuk et al., 2013;
Knapik et al., 2014; Ossowski et al., 2014). Nordic walking is also a suitable form of exercise used in various rehabilitation programs (e.g. Kocur et al., 2009; Antosiewicz, 2010; Morgulec-Adamowicz et al., 2011; Jones, 2011; Scevinskaite et al., 2015), including rehabilitation of breast cancer survivors (Sprod et al., 2005; Malicka et al., 2011). Fischer and colleagues (2015) reported a significant reduction in shoulder problems among women with breast cancer immediately after the Nordic walking intervention. Moreover, several studies have indicated the benefits of the activity with regards to mental health, such as reduction of depressive symptoms, anger and fatigue (e.g. Larkin, 1992; Breyer et al., 2010) and improvements in psycho-emotional state of middle-aged women (Saulicz et al., 2015; Soboleva et al., 2016).

Nordic walking is also recommended by academics and medical professionals for the prevention and management of symptoms of civilisation diseases, related to physical inactivity, such as obesity (e.g. Church et al., 2002; Piotrowska, 2011; Tschentscher, et al., 2013), acute coronary syndrome (Kocur et al., 2009), coronary artery disease (e.g. Saulicz, et al., 2015), back pain (e.g. Morso et al., 2006; Hartvigsen et al., 2010) or moderate to severe heart failure (e.g. Keast et al., 2013). Scientific evidence suggests that Nordic walking increases the exercise intensity of walking due to the active use of the poles (Breyer et al., 2010) resulting in the increased use of the upper body, greater shoulder movement (Schiffer et al., 2006, 2011), without increasing perceived exertion (Church et al., 2002). Thus, Nordic walking is beneficial in weight loss programmes and fitness programmes (Saulicz, et al., 2015). The activity evidently increases oxygen consumption by an average of 20%, caloric expenditure by 22% and heart rate response by 16% in comparison to normal walking (e.g. Kukkonen-Harjula et al., 2007; Hansen and Smith 2009; Figard-Fabre et al., 2010; Zajac-Kowalska et al., 2011; Pellegrini et al., 2015). However, in contrast, a study conducted by Knobloch and colleagues (2009)
reported no significant differences in the extent of cardiac output between Nordic walking and brisk walking.

The growing popularity of Nordic walking as a leisure activity gives the opportunity for reinventing leisure walking as an innovative means to maintain and improve health and well-being of the British sedentary and older populations.

1.4. CONCEPTUAL FRAMEWORK OF THE STUDY

The conceptual framework of the study is shaped by a critical analysis and evaluation of the academic literature in the fields of physical activity, leisure walking, well-being and Nordic walking. A large body of research on physical activity, including walking, has adopted an ecological approach as this offers a comprehensive theoretical perspective that recognises the combination of individual, psychological, social, and environmental factors in physical activity, health and well-being (e.g. Spence and Lee, 2003; Granner et al., 2007; Cerin et al., 2010). As a result, I decided to employ the ecological perspective as a theoretical background for this research study.

The exploration of the relationships between humans and their environments was introduced with the concept of social ecology in the 1960’s, and brought attention to the social, institutional and cultural contexts of relations between people and their environments (Stokols, 1996). Social ecology integrated person-focused efforts to modify individual health behaviours with environment-focused interventions to enhance physical and social surroundings and reduce serious and prevalent health problems (Stokols, 1996; Sallis et al., 2008). Since the 1970’s there has been an increased interest in the ecological perspective due to its comprehensive approach for understanding multiple and interacting determinants of health behaviours, including physical activity and the socio-ecological model has been developed by many researchers. McLeroy’s
(1988) model of health behaviour, was based on the premise that individual behaviour was shaped by multiple influences, and could be categorised as intrapersonal (knowledge, attitudes, beliefs), interpersonal (family, friends, peers), institutional (rules, regulations, informal structures), community (formal and informal social networks, norms and standards) and policy (laws that regulate or support healthy actions), that worked together in certain natural or built environments to modify individual health behaviours (McLeroy et al., 1988). Based on this model, Stokols (1992) identified two key assumptions, which helped to create the social-ecological model of health promotion. The first assumption integrates many concepts that derived from systems theory to understand dynamics and mutual influences between individuals and their environments. In other words, personal health decisions are influenced by multiple factors of the physical and social environment as well as personal attributes and behavioural patterns. The second assumption states that human environments are multidimensional and complex, therefore can be described as having actual (objective) and subjective (perceived) qualities that together support or prevent individual participation in physical activity (Moudon et al., 2007; Darker et al., 2007a; Lachowycz and Jones, 2014). The socio-ecological perspective is illustrated by the following model (Stokols, 1992, 1996) (figure 4)
In the socio-ecological model of health promotion the primary level of influence that determines personal levels of physical activity are individual factors, such as socio-demographic correlates (e.g. age, sex, level of education, socio-economic status, employment status, disability) and psychological correlates (e.g. self-efficacy, attitudes and motivation). The second level of determinants are those related to the social environment and include small or large, formal or informal groups (family, friends, neighbours, class mates and work colleagues) that can influence changes in personal attitudes towards physical activity. A third level of determinants considers the physical environment, categorised into natural (e.g. weather conditions, geographical features and aesthetics) and built (e.g. parks, playgrounds, walking and cycling paths, urban density, leisure and sport facilities). Policy is the final level of influence. It incorporates individual attitudes together with the social and physical environment to create reliable
and sound formal guidelines that promote participation in physical activity (e.g. WHO, 1998). In the United Kingdom, the government reports on British health, such as the *Chief Medical Officer’s report “At Least Five a Week”* (Department of Health, 2004), “*Be Active, Be Healthy*” (Department of Health, 2009), “*Healthy Lives, Healthy People*” (Department of Health, 2010), *Chief Medical Officers Report: “Start Active, Stay Active”* (Department of Health, 2011), “*Living Well for Longer*” (Department of Health, 2013) emphasise the importance of physical activity, including walking, on individual health to reduce the risk of premature mortality, improve physical activity and increase the physical and mental health of British people (Ramblers Association, 2010a).

Similarly, to the socio-ecological model of health promotion, Alfonzo (2005) created a conceptual model of classified urban and non-urban variables and moderators that affect individual decisions to walk. According to this model, the hierarchical structure can be applied to walking engagement. Alfonzo’s (2005) hierarchy of walking needs is based on Maslow’s motivational theory (1948) and organises walking needs into five levels of prominence – feasibility (personal limits), accessibility, safety, comfort and pleasurability, which are somehow associated with the socio-ecological model (Figure 5).

![Figure 5. Hierarchy of walking needs. Adapted from Alfonzo, 2005.](image-url)
The pyramid model of the hierarchy of walking needs shows that the basic needs develop from the feasibility of walking, which refers to mobility, health status, income status, self-efficacy, occupational duties, time constraints, and other responsibilities and commitments that may prevent taking up walking. The next level of walking needs is concerned with accessibility to urban forms (i.e. patterns, quantity, quality and variety of pavements, walking paths and trails) and safety (i.e. pubs, shops and presence of threatening individuals). The accessibility level suggests that the better quality and quantity of walking routes, the more opportunity for walking engagement. The higher walking needs relate to comfort and individual convenience. At this level, satisfaction with walking is affected by environmental qualities that make the exercise more comfortable and less distressing. The highest level of walking needs is pleasurability of walking (i.e. diversity, complexity, liveliness and aesthetic appeal of walking environments) (Alfonzo, 2005; Beenackers et al., 2013). Alfonzo (2005, p. 819) suggests that the model alone does not explain all walking behaviours, and it should be placed within the context of socio-ecological framework in order to fully understand the walking decision-making process.

These two models of socio-environmental influences on participation in physical activity and walking provide a theoretical framework, in which I examine personal, social and environmental determinants of participation in leisure walking. A body of research studies that investigated the primary level of influences - the relationships between socio-demographic characteristics and participation in walking suggested that participation in recreational walking varies with age. Adults aged 25-55 walk for leisure more than other age groups (Sport England, 2009). Although, Berger and colleagues (2005) suggested that levels of physical activity declined with age and retirement was a key transition in terms of achieving recommended levels of exercise, walking was more
likely to be maintained later in life more than any other physical activity. Walking is a popular form of physical activity among older adults, as it is the most feasible and appropriate way for the elderly to meet the exercise recommendations (WHO, 2010). The Ramblers’ Association factsheet (2010b) stated that the average age of its members was 55, and for new comers it was 51. Dawson and colleagues (2006) proposed that most participants joining the Walking for Health scheme were in the 65-74 age group. Research into gender inequalities in leisure walking is ambiguous. A Sport England report (2009) indicated that leisure walking was enjoyed equally by both men and women with only a fraction of men walking more. Agrawal and Schimek (2007) further noticed that men walk further than women. However, according to Katzmarzyk (2011) walking was a more popular way to be active for women. In addition, Dawson and colleagues (2006) claimed that females were easier to engage in walking with 75% participants of Walking for Health project and 55% of Ramblers’ members being women.

In terms of ethnicity, certain ethnic groups are less physically active. The Active People Survey 2007/2008 (Sport England, 2009) reported that in general, white people were more likely to walk, and 23% of white people and only 13.5% of non-white people walked for at least 30 minutes in four weeks. Black African, Caribbean and Asian adults were less likely to achieve the recommendations than the general population (Sproston and Mindell, 2006). Furthermore, de Moor and the Ramblers (2013) reported that Indian, Pakistani, Bangladeshi and Chinese people who lived in England reported lower than average levels of physical activity, with 51% of Bangladeshi men and 68% of Bangladeshi women active for less than half an hour a week.
In terms of household income, the Ramblers’ Association factsheet (2010b) reported that people in professional jobs were more likely to walk for leisure (28%) than those in lower paid jobs (14%). Moreover, studies conducted by Blacklock and colleagues (2007) and Kitchen and Williams (2011) implied that low income groups walked more for transport, suggesting that for many indigent people walking is a necessity rather than a choice and they may not receive its full health and well-being benefits.

The literature that explored the primary psychological level of influences often focused on the motivation for walking engagement (e.g. Davies et al., 2012; Ball et al., 2014). Motivation is often defined as perceived incentives or reasons for engaging in behaviour, related to physical activity initiation and maintenance. It is central to the self-determination theory (SDT) developed by Deci and Ryan (1985). Self-determination Theory (SDT) provides a broad framework that explains human motivation through three basic psychological needs: competence, autonomy, and relatedness. It argues that autonomy, competence, and relatedness foster continued engagement in various physical activities. The extent to which these three needs are satisfied will determine how people are motivated in any given setting. Moreover, it provides an explanation regarding their overall capacity to function effectively and experience wellness (Deci and Ryan, 2000). Originally, self-determination theory proposed three constructs of motivation: extrinsic motivation, which occurs when behaviour is oriented towards instrumental outcomes (such as receiving a reward or avoiding a punishment); intrinsic motivation, which occurs when people tend to engage in an activity because of the interest, enjoyment and pleasure derived from the activity itself; and amotivation, which occurs when an individual has no motivation to participate in an activity (Sibley et al., 2013; Battistelli et al., 2016). However, later developments in self-determination theory (Deci and Ryan, 2000, 2002) have suggested
an alternative theoretical conceptualisation of motivation that goes beyond the differences between intrinsic and extrinsic motivation. Ryan and Deci (2000) proposed that different extrinsic motivations can be placed along a self-determinism continuum, which may have different effects on behaviour. Thus, according to these authors, intrinsic motivation and four kinds of extrinsic motivation can be identified, along a continuum from highly controlling to highly autonomous, based on external regulation, introjected regulation, identified regulation and integrated regulation.

External regulation is the least autonomous and most externally controlled form of extrinsic motivation, in which the participants engage in an activity to gain some external reward, such as money and prizes (Sibley et al., 2013). Introjected regulation is a partially controlled form of motivation, in which external rewards and punishments are self-imposed to support self-worth (gain the approval) or to avoid negative emotions, such as guilt or shame (Battistelli et al., 2016). Identified regulation is a more autonomous form of extrinsic motivation, in which people recognise core values of behaviour, which are considered a part of one’s identity. For instance, people who value health choose to engage in exercise. Integrated regulation is the most autonomous form of extrinsic motivation, in which people completely accept the importance of behaviour, by fully integrating its values within some aspects of their own identity. Intrinsic motivation is the most self-determined type of motivation, in which people participate in an activity for fun, pleasure, enjoyment, curiosity, or the experience in and of itself (Sibley et al., 2013).

The literature proposes (e.g. Moreno et al., 2008; Ryan et al., 1997; Sit et al., 2008; Rodgers et al., 2002; Ferrand et al., 2012) that intrinsically or extrinsically oriented motivation to engage in physical activity influences participation in various physical activities. Scholars have provided empirical evidences on the positive influences of
intrinsic motives (social interaction, competence, and enjoyment) on physical activity. Similarly, research into leisure walking suggested that the activity is mostly intrinsically motivated and enacted out of fun, pleasure and satisfaction. Walking is an important source of positive emotions, enables social relationships and shared positive experiences (e.g. Den Breejen, 2007; Crust et al., 2011; Davies et al., 2012; Adevi and Martensson, 2013; Gatrell, 2013). On the contrary, in Nordic walking an important part of motivation is satisfaction with the performance and achievement. Motivation for Nordic walking can be characterised by motives of enjoyment, competence, social affiliation and body-related motives, such as appearance and fitness.

Rambling and Nordic walking take place within a community context, where people engage in social activities and feel a sense of belonging based on common interests, goals or needs. Thus, the growing research on the second level of determinants - the social environment acknowledges the importance of social interactions, developing basic social skills and enhancing community spirit in walking for leisure (e.g. Staats and Hartig, 2004; Rhodes et al., 2007; Wensley and Slade, 2012). Adults are more likely to become active and maintain an active lifestyle if they have opportunities to interact, communicate with others and share experiences (Cerin et al., 2010; Caperchione et al., 2011; Doughty, 2013). Moreover, social support for regular physical activity has been one of the most studied psychosocial determinants (e.g. Sallis et al., 1992; Courneya et al., 2000). Several studies have found strong positive associations between physical activity and social support (e.g. Trost et al., 2002). Particularly, friends and family support have been reported to be the most beneficial influence in the participation in physical activity across a wide range of populations (Granner et al., 2007; Fletcher et al., 2008). Leisure walking is a highly sociable activity and group leisure walks provide social settings, such as a set of people with shared interests to socialise, develop and
strengthen friendships. By contrast, a lack of social support from family and friends is associated with lower levels of physical activity especially for women (Stahl et al., 2001).

The academic literature on the role of the physical environment in participation in physical activity including walking, acknowledges the importance of environmental factors in an individual’s decision to walk. Several studies advocated that leisure walking granted people mental freedom, as green spaces enhanced well-being by offering an escape from urban life and interactions with nature (Ryan et al., 2010; Keniger et al., 2013).

Walking in natural environments provides an enjoyable antidote to stress, maintains mental health, develops self-identity and improves social cohesion (Haartig and Staats, 2006; Berman et al., 2008; Roe and Aspinall, 2011; Gatrell, 2013). In addition, research has recognised that the weather and seasonal aspects of the natural environment affect levels of leisure physical activity, including walking (Rutt and Coleman, 2005). Frequency and duration of walking for leisure decreases during colder and winter months as people are less likely to participate in outdoor activities when it is raining, snowing, icy, windy or dark (McGinn et al., 2007).

Several studies focused on built facilities that influenced participation in physical activity suggesting that individuals were more physically active if they lived in the areas having a greater number of destinations within walking distance, lower crime rates, available exercise facilities, parks with amenities and pedestrian friendly streets (e.g. Giles-Corti and Donovan, 2002; Thompson et al., 2011). In particular, the predominance of walking in general was associated with the higher levels of mixed land use, street connectivity, safety of an environment, access to open spaces and other walking facilities, such as aesthetic attributes, streetlights, trust in the neighbourhood,
use of private recreation facilities and sports fields (e.g. Hovell et al., 1989, 1992; Brownson et al., 2004; Owen et al., 2004; Giles-Corti et al., 2005; Saelens and Handy, 2008; Feuillet et al., 2016). Similarly, walking for leisure was linked to immediate neighbourhoods, convenience, safety, access to pavements and walking trails, aesthetically pleasing natural and built environments (e.g. Humpel et al., 2004; Rutt and Coleman, 2005; Suminski et al., 2015). Nevertheless, ample evidence suggests that walking in natural environments is proven to offer more benefits for physical and psychological restorative experiences and cognitive functions when compared with walking in a pleasant urban environment (e.g. Hartig et al., 2007; Berman et al., 2008; Beil and Hanes, 2013; Ettema and Smajic, 2015; Gidlow et al., 2016).

The socio-ecological perspective on health behaviour proves that human behaviour is a product of a dynamic relationship between psychological, sociological and environmental determinants, which together influence individuals to walk for leisure. However, some readers may suggest that the models are weak because they lack specification about the most important influences on participation in physical activity. Thus, I must note that the socio-ecological models are not to demonstrate the supremacy of some influences over others. They are to show the balanced relationship between influences and interactions between the levels. Hence, the perspective offers a suitable theoretical framework for an investigation into socio-environmental influences on group leisure walking, such as rambling and Nordic walking.
1.5. **Purpose of the Study**

Given the empirical evidence of the relationships between leisure walking and well-being, and the role of social and environmental determinants in walking participation, it is reasonable to assume that leisure walking benefits well-being by providing a sense of enjoyment and offering contact with other people whilst providing the opportunity for an encounter with the natural environment. Rambling, as a form of group leisure walking, is already proven to be a low intensity, pleasurable outdoor activity that benefits health and well-being. However, there is a lack of empirical knowledge regarding the leisure experiences of Nordic walking and their implications for mental well-being. Therefore, the work I undertake within this thesis focuses on the comparison of Nordic walking with rambling, as examples of leisure walking, to gain a deeper understanding into how these walking activities contribute to mental well-being.

The overall purpose of my research study is centred around areas of interest, listed below:

1) personal, social and environmental determinants of participation in leisure walking activities  
2) leisure experiences and pursuits in Nordic walking and rambling  
3) state of mental well-being of leisure walking participants

These three areas of interest are accompanied by the fourth conceptual concern:

4) differences between Nordic walking and rambling in their contribution to mental well-being.
Figure 6. Research objectives

The signposted four areas of interest transform into two broad aims of this study:

- to explore to what degree social and physical environments influence participation in Nordic walking and rambling and in what way these influences are experienced as beneficial for mental well-being,
- to explore the kinds of leisure pursuits in Nordic walking and rambling, in order to understand the dynamics of engaging in leisure walking activities and the distinctiveness of their contribution to mental well-being

Having presented the broad study aims, my thesis offers a new theoretical perspective on the subtleties of engagement in Nordic walking and rambling in order to account for the social and environmental influences on leisure pursuits that differentially impact on mental well-being.
1.6. SIGNIFICANCE OF THE STUDY

Over the last two decades Nordic walking, as a form of prevention and rehabilitation has benefited from extensive exploration and documentation (e.g. Chomiuk et al., 2013; Knapik et al., 2014; Ossowski et al., 2014; Scevinskaite et al., 2015). In contrast, the benefits of the activity on mental health has attracted recent attention, which is still limited (e.g. Saulicz, et al., 2015; Soboleva et al., 2016). The potential contribution of the socio-environmental influences on the mental well-being of Nordic walking practitioners is non-existent. Also, the research into Nordic walking as a form of leisure-time physical activity is still absent in the academic literature. Therefore, my work in this thesis aims to address these significant gaps in knowledge by exploring Nordic walking from a leisure perspective, identifying the potential social and environmental factors that influence the participation in Nordic walking and contribute to mental well-being creating unique leisure experiences.

Furthermore, more scholars have been adopting qualitative research methods to explore social and environmental aspects of walking behaviours. At the same time, research studies into participation in Nordic walking have been primarily quantitative in design. This study is the first and the largest research study to-date to offer an in-depth and multi-perspective approach into Nordic walking that gathers quantitative and qualitative information regarding socio-environmental influences on engagement and leisure experiences in Nordic walking, as well as evaluating the mental well-being of the study participants. As first, it draws from the experiences of Nordic walking participants, instructors, and professionals involved in development and promotion of the activity worldwide and in the United Kingdom. Furthermore, it is affirmed to be the first study that analyses and compares Nordic walking and rambling in terms of personal, social and environmental influences on the activity participation, perception of unique leisure
experiences and benefits for mental well-being. In doing so, it will broaden an understanding of how Nordic walking and rambling, as examples of recreational walking, are different in their contribution to mental well-being.

1.7. THESIS OUTLINE

Walking is a popular form of leisure activity as it offers a lower intensity exercise and benefits for mental well-being. In addition, great interest is paid to the positive aspects of walking with poles on the human body. Nordic walking is proven to be a safe and effective form of physical activity. However, no research studies have explored its benefits on mental well-being. Therefore in this study, I employ the ecological perspective, which provides the comprehensive theoretical framework for examining and understanding how dynamic interactions between individual, social and environmental determinants influence participation in leisure walking activities and improve mental well-being.

In order to present the steps of my research study, I organised this thesis into eight chapters. The first chapter provides a broad overview of the literature in the fields of recreational walking and its implications towards well-being. Next, I outline the conceptual framework, the purpose and significance of the study.

In the first part of the Chapter Two, I look at the history and the current status of walking for leisure and describe the rise of rambling as a national leisure pastime. As a part of this review, I explore the history of Nordic walking development in detail using information from two in-depth interviews with Nordic walking professionals. Mr Aki Karihtala - International Nordic Walking Federation (INWA) President, who contributed to the development of Nordic walking in Finland in the 1990’s and its worldwide promotion, and Dr Catherine Hughes - British Nordic Walking National
Coach, who was one of the first Nordic walking instructors in the United Kingdom in the 2000’s. In the second part of Chapter Two I provide an in-depth review of theories of well-being and concepts of leisure. The chapter concludes with presenting research evidence of the relationships between leisure and well-being.

In Chapter Three, I introduce the choice of methodological approach and the rationale for the research design applied in this study. I discuss the significance of the mixed methods, and issues of validity and reliability in the chosen mixed-method approach. The chapter concludes with the ethical considerations of the research study. Chapters Four, Five and Six are the empirical pieces of my research. In Chapter Four, I describe quantitative and qualitative pilot studies that I undertook prior to the main data collection. In Chapter Five, I present the detailed analysis and findings from the quantitative and qualitative studies from a total group of 232 British Nordic walking practitioners. Chapter Six comprises the quantitative and qualitative analyses and findings from a group of 301 British ramblers. In Chapter Seven, I integrate the findings from quantitative and qualitative studies in the comparative analysis with the purpose for achieving methodological triangulation and complementarity in the empirical confirmation. In Chapter Eight, I review the research design and draw together all findings from the Nordic walking and rambling studies in order to address the key focus of this research study and outline the overall contribution this thesis makes to the existing knowledge. I conclude the dissertation by stating its limitations and recommendations for future research.
CHAPTER 2

PART 1. HISTORY OF WALKING FOR LEISURE: RAMBLING AND NORDIC WALKING.

This chapter is divided into two parts. In the first part, I present the history of walking for leisure and the development of organised leisure group walks in the United Kingdom. Next, I investigate the origins of Nordic walking and the history of the activity, based upon narrative accounts. Then, I describe an expansion of Nordic walking worldwide and in the United Kingdom. In the second part of the review, I explore hedonic and eudaimonic theories of well-being followed by the concepts of leisure. The chapter concludes with an outline of the research evidence of the leisure and well-being relationship.

2.1. HISTORY OF LEISURE WALKING AND RAMBLING

“The history of walking is an unwritten, secret history whose fragments can be found in a thousand unemphasised passages in books as well in songs, streets, and almost everyone’s adventures. The bodily history of walking is that of bipedal evolution of human anatomy” (Solnit, 2002, p. 10).

The history of walking as a means of transport is well-established, however walking for pleasure has a shorter history. Human bodies have evolved in order to live a physically active life, to which they were adapted by having an “abundance of muscle fibres with high oxygen capacity, and little body hair and numerous sweat glands to allow efficient dissipation of heat from the body” (Blair et al., 1994, p. 25). From the prehistoric era, walking was the most common form of daily activity or a source of transport. People led nomadic lifestyles as hunters and gatherers, and the only way to survive was
walking for food and shelter (Newman, 2003). This particular active lifestyle required a high total energy expenditure and high level of exertion. Ten thousand years ago, people started to settle in more fecund geographic areas, developed agriculture, domesticated animals and grew plants. The settled lifestyle provided a regular food supply and enabled the establishment of villages, which with time developed into towns and cities. The early agriculturalists were still physically active, as most of the power needed for manufacturing and farming was supplied by humans and animals. However, most walking activities were practical and incidentally performed during other work-related activities. In the feudal period, most people were tied to their land, which was a place of work, and movement beyond the local areas was both feared and forbidden. The recreational use of land was only a privilege of the aristocracy. However for centuries, purposeful walking from site to site was an activity available only for the few professions and classes (Edensor, 2000). For example, in ancient Greece, where peripatetic schools originated, teachers and philosophers wandered habitually, extensively giving lectures and teaching pupils (Solnit, 2002). In the Middle Ages, many musicians, minstrels, troubadours, and medics walked from town to town to earn a living. Merchants travelled by foot, creating paths, roads and eventually trade routes to exchange or sell various commodities. The armies of soldiers marched through vast lands to conquer new territories, and pilgrims took long-distance and strenuous trips for religious purposes to Rome, Jerusalem, Santiago de Compostela and Mecca.

Major changes occurred in Western societies during the Industrial Revolution in the 18th century when the steam engine was constructed. This invention helped supply energy for manufacturing and transportation. Steam engines increased the capacity of production and caused a dramatic drop in levels of physical exertion in populations due to labour-saving devices. During the industrial period (1800 - 1945) with additional
advances in the means of transport and the increase of urbanisation and industrialisation in towns and cities, the active lifestyle, which also involved utilitarian and transportation walking decreased spectacularly. In the 19th century, as industrial ugliness dominated British towns and cities, the public park movement was developed (Taylor, 1999). The upper classes took up social walking in public parks and city gardens. Public parks became a symbol of positive modern urban life, which promoted moral and physical health (Machlow, 1985; Loxham, 2013). They were viewed as the “lungs of the city” providing ventilation for overcrowded streets. The introduction of public parks to the urbanised areas was an extension of the idea of the countryside as a recreational space for everyone, and a reaction against urban existence. The concept of walking for leisure in Great Britain was linked to seeking freedom and recuperation in nature. Walking connected individuals with landscape and provided an emotional relief and refreshment of body and soul. As Thoreau stated (2008, p. 4):

“I think that I cannot preserve my health and spirits, unless I spend four hours a day at least - and it is commonly more than that - sauntering through the woods and over the hills and fields, absolutely free from all worldly engagements”.

The countryside became a popular space for walking, particularly for men, as it was believed that delicate female bodies of middle-class women were unsuited for the sturdy demands of walking (Edensor, 2000). The first walking clubs were called Gentlemen’s Clubs, whose members were from the upper classes. The clubs’ members walked in the countryside searching out new experiences and self-development that could not be provided by urban environments (Hill, 1980).

Walking was much practiced, theorised and used in the eighteenth century. In particular, walking for leisure was linked to the era of Romanticism (1780 - 1850). The Romantic movement recognised nature as divinity and advocated for the surrender to nature by
learning a simple and humble life, which led to greater spiritual wisdom (Ibrahim and Corded, 1993). Romantic sets of ideological and aesthetic notions proposed that thinking and walking were connected in an intimate way and praised the significance of walking in reconnecting industrial bodies with nature, providing solitude and escape from polluted factory towns and the stresses of daily lives. Many romantic artists, writers and philosophers, such as Rousseau, Wordsworth and Thoreau, believed the emerging urban, industrialised world was a source of unhealthy emotions, morals and thoughts and highlighted the importance of wandering or sauntering through landscapes in search of true self, beauty in nature, healthy emotions and inspirations. Rousseau advocated seeking harmony in nature, as he believed in its sacred powers. Wordsworth, described as a “poet of nature in all her moods”, started the art of fell walking and was the first to have a vision of preserving the natural beauty of the Lakes for posterity (Hill, 1980). In his “Guide through the District of the Lakes”, Wordsworth discussed nature sublimity, found in formations of the landscape, and its picturesque setting defined by landscapes soft features and effects, such as the interplay of light and shade, which come together to create an aesthetic of scenery (Ousby, 1990). From the mid-19th century in all parts of urban Britain, the rambling movement became a popular form of recreation, especially in the industrial North of Lancashire and Yorkshire, where ramblers came from trade unions, co-operative and labour movements (Hill, 1980). The growing popularity of leisure walking resulted in the establishment of many walking clubs and groups around the country, formalising actions to protect the supply of countryside recreation facilities and resources for public enjoyment (Curry, 1997). These organisations included the Commons and Open Spaces Society, which became The National Trust in 1895 and the Federation of Ramblers’ Club in 1905. In the early 1930’s Ramblers called for unrestricted access to moors and mountains and began mass
trespassing demanding the right to access the countryside as a leisure space and freedom to roam (Hill, 1980; Glyptis, 1998). In 1931, six regional federations representing walkers from all over Britain joined to create the National Council of Ramblers’ Federations, a body that could advocate walkers’ rights of access to the countryside recreation facilities and resources for public enjoyment at a national level (Bassett, 1980; Snape, 2004). In 1934, the Council decided to change its name, leading to the official founding of the Ramblers’ Association on January 1st, 1935. In the first year, the Association had 1,200 ramblers in 300 affiliated clubs who worked to maintain access to footpaths and open country, as well as provide information and accommodation for walkers on routes (Edensor, 2000; Green, 2009). After World War II, in 1949, the Ramblers’ long campaign to increase access to the British countryside resulted in the National Parks and Access to the Countryside Act (1949), which acknowledged the status of the countryside as a recreational space for the quiet enjoyment of leisure forms in keeping with the cultural symbolism of the landscape (Snape, 2004, p. 144). The Act required all footpaths in England and Wales to be recorded on definitive maps and laid the foundation for the establishment of National Parks, National Trails in England and Wales and National Nature Reserves (Ramblers Association, 2014b). In addition, in order to prevent damage to the countryside, the National Parks and Access to the Countryside Act approved the right of compensation for proven damage, which public access might cause (Hill, 1980). In the 1960’s the Ramblers were campaigning to signpost all footpaths around the country and in the 1970’s the Association went through a series of changes. In 1974 Ramblers Cymru became a separate entity in Wales, followed by Ramblers Scotland later on in 1985, which began its own campaigns to secure public access to the lands and coasts. The popularity of rambling blossomed in the 1980’s when thousands of new walkers were
encouraged to join and regularly participate in walks to explore the British countryside using locally produced ramblers’ guidebooks. Consequently, after over a hundred years of campaigning, walkers were finally given a new right of access to most areas of open country in England and Wales, when the new Countryside and Rights of Way Act (CRoW) was introduced in 2000. The right gives walkers the freedom to roam in a million hectares of open countryside in England and Wales, making the United Kingdom one of the most walking friendly countries in Europe (The Telegraph, 2014). Ramblers were also successful in the campaign “One Coast for All”, which called on the government to create a path around the entire coast of England and Wales. Different arrangements apply in Scotland, where new legislation gives a statutory right of access to almost all land, so long as visitors behave responsibly (Ramblers’ Association, 2007). Since 2000, the countryside is easily accessible for people who wish to participate in a wide range of outdoor activities, such as walking, climbing, canoeing, fishing, golfing etc., that take place in a variety of environmental and social settings (Harrison, 1991). In 2009, the association also contributed to the passage of the Marine and Coastal Access Act in 2009. The first Welsh coastal path opened in May 2012 with the Big Welsh Coastal Walk and the England Coastal path opened in Weymouth in June 2012. The most recent Ramblers campaign “Branch Out,” focuses on being opposed to the Forestry Commission’s plans to sell off publicly accessible woodlands in England. The campaign persuaded government to rethink their plans and continues to advocate for the increased access to British woodlands (Ramblers Association, 2014b). The Rambler’s Association not only protects and provides access to British land and inland waters, but also promotes walking for health, leisure and transport, which contribute to health and well-being as well as supporting a more sustainable way of life (Ramblers Association, 2014d). Since the 1990’s, in response to the growing numbers of people leading inactive
lifestyles, Ramblers started numerous health initiatives, often in partnership with government, local authorities and community groups, to give everyone the opportunity to enjoy walking as an easy and accessible form of exercise. The organisation established health walks programs across the country, “Let’s Get Going” initiative in England, “Lonc a Chlonc” (Walk and Talk) launched by Ramblers Cymru in 1993 and “Paths for All” established in 1996 in Scotland. In the new millennium the “Walking Out” project supported short and easy city-based walks connected with public transport. Furthermore, Ramblers Cymru founded the “Stepping Stones” initiative and Ramblers Scotland founded “Bums off Seats,” the Fife walking initiative, and the “Take 30” campaign, to help people achieve their recommended amount of daily exercise through everyday walking. In 2007, the Ramblers’ Association launched another walking campaign: “Get Walking, Keep Walking”, a 12-week walking programme to encourage inactive people to walk (Ramblers Association, 2014a). Moreover, since April 2012 the organisation has been involved with national health walk networks in England and Wales. Over 600 local groups and over a 110,000 members take part in the “Walking for Health” programme in England and the “Let’s Walk Cymru” campaign in Wales which supports 75,000 regular walkers in approximately 600 health walk schemes across the country (Ramblers Association, 2014b). Nowadays, the Ramblers Association is the biggest walking charity in Great Britain, which protects the countryside, promotes open-air recreation and access to the countryside (Ramblers Association, 2011).
2.2. History of Nordic Walking

“Ever since humans learned to walk on two legs, they have used their free hands to carry clubs, canes and crooks or to support themselves on crutches” (Shove and Panztar, 2005, p. 47).

Walking with sticks as an aid has a long history and it has always been associated with old age senility and infirmity. However, the history of walking with specially designed sticks for health is short and yet there is a long lasting dispute between Finnish and American Nordic walking practitioners as to who actually “invented” it.

The European sources claim that the original concept of the activity, later named as Nordic walking, can be traced back to the 1930’s, when in summer time the Finnish cross-country skiers used skiing poles to exercise and prepare for winter seasons. In 1966, Leena Jääskeläinen, a physical education lecturer from the University of Jyväskylä, introduced walking with ski poles, called ‘Sauvakävely’ in Finnish, into the students’ lessons as “New ideas for P.E. in schools” (INWA, 2010). In 1987, she presented walking with ski poles at a public event, Finlandia Kävely (Finlandia Walk), in Tampere for the first time. The activity was soon noticed by the Finnish Central Association for Recreation Sports and Outdoor Activities (Suomen Latu) that with a help of Exel – a sport equipment manufacturer, began the “reinvention” of walking with ski poles. According to the Finnish sources, another person who had a significant role in the development of Nordic Walking was Mauri Repo, the former Finnish cross-country skiing head coach, who described different training methods for the off-season cross-country ski training in 1979. Repo’s training methods are still used in the practice of fitness and sport Nordic Walking practitioners (INWA, 2013b). In contrast, the American sources state that the walking with specially designed poles was “invented” in
1985 in the United States by Tom Rutlin (Urbanski, 2007), who named it “Exerstriding®” - simultaneously exercising all the body's muscles while walking, running, skipping or bounding. In 1988, Tom Rutlin launched the first commercially available fitness walking poles called “Exerstriders®” that had leather straps and rubber tips for use on asphalt surface (Downer, 2005; Urbanski, 2007). In the online blog dedicated to Nordic walking, David Downer (2007) clarifies and presents the evidence that walking with specially designed poles was commercially established in the USA a decade before the Finnish competitors:

“It all began in 1988 in Wisconsin, USA, when Wisconsin resident Tom Rutlin launched the very first commercially available fitness walking poles. Tom created the name Exerstriding (Exercising all the body’s major muscles while striding) to describe his new creation. This isn’t hearsay or speculation, it is hard fact. I actually own an original 1988 copy of Tom’s ‘Exerstrider Manual and Instruction Guide’ that he sent out with every new set of poles (and still does today). [...] and also that Tom’s poles and techniques are slightly different too” – That may be the case but it's still 100% ‘fitness walking with specially designed poles’!”.

The claims of American originators are supported by two studies on the effects of a 12-week programme of fitness walking with poles, called exerstriding, conducted by Larkin (1992) and Karawan (1992), who suggested that the walking with specially designed poles was recognised in the USA as a valid rehabilitation exercise before its commercial break in Europe in the mid 1990’s. Nevertheless, my research study focuses on the development of walking with specially designed poles called Nordic walking, which originated in Finland and was commercially reinvented and reframed by three Finnish organisations:
1. The Finnish Central Association for Recreational Sports and Outdoor Activities (Suomen Latu) - a promoter of outdoor activities which focuses on increasing interest in exercise, developing possibilities for outdoor exercise, maintaining and improving quantity and quality of hiking routes and walkways in Finland (Suomen Latu, 2013a).

2. Finnish Sport Institute (Vierumäki) - a national coaching and training centre for sports and physical education. The institute operates under the Ministry of Education and Culture that develops, produces and markets high-quality coaching, training and education services both nationally and internationally (Vierumaki, 2013).

3. Exel – A Finnish sport equipment manufacturer, including cross-country skiing poles (Exel, 2013a,b).

In 1997, the three organisations began a collaboration to design poles suitable for health walking in order to encourage people who were not keen on exercising to be more active. Exel created walking pole prototypes, which had special tips and straps and the appropriate length for comfortable walking. Athletes from Vierumäki fitness-rebuilding programme tested the new poles by performing uphill-downhill exercises similar to traditional cross-country skiers’ summer training. The aim of the tests was to demonstrate the benefits of walking with poles in various landscape conditions and develop special poles for walking. The tests results indicated that walking with Exel poles was effective in raising the pulse to levels that benefitted heart and circulatory systems, and activated various muscles in the legs and upper body. Encouraged by the positive results, Suomen Latu and Vierumäki published the first brochure on the techniques and benefits of walking with specially designed poles. Exel became
responsible for creating a demand for walking poles. The company launched the sale of the poles under the trademark “Walker”. The walking poles were made of composite, carbon fibre or glass fibre - the most important factor was that the material was durable, light and did not vibrate when poles struck the ground. However, the distribution of the poles was challenging, since Finnish sports retailers refused to sell the equipment. Therefore, Exel had to change their marketing strategy. The company decided to focus on creating a demand for the activity first among Finnish people. In autumn 1997, Exel agreed with Suomen Latu to give around 1000 poles to build the activity awareness and educate people how to walk with poles during walking events (Oksanen-Sarela and Timonen, 2005). This way, news about Nordic walking and its benefits spread quickly in local Finnish communities. The walking events were popular among middle-aged women and older adults who had an opportunity to try a new type of walking and learn the correct walking technique. In order to reach an even larger number of people, Suomen Latu decided to build instructor networks in the country. Instructors taught the correct walking technique and offered positive experiences. They created communities, in which individuals felt appreciated and shared the same or similar positive experiences of the activity. Although, the main role of the instructors was to promote the activity and Exel equipment by providing information about health benefits of walking with poles, and explaining the differences in Exel poles. Exel aimed advertisements directly at consumers, using a marketing strategy of “word-of-mouth” communications, which were a successful form of promotion due to several factors. First, people had an extensive knowledge about the activity and equipment, due to the informative role of the instructors and they informed each other about Nordic walking and its benefits. Second, instructors encouraged people to be involved in the activity, providing a
friendly atmosphere, positive feedback and support. Peer recommendations were perceived as more reliable and trustworthy than advertisements.

“People who tried Nordic walking had knowledge about the activity and equipment, they shared positive experiences with other friends and family, which made the network of Nordic walking practitioners grow bigger and bigger in a very short time” (Karihtala, 2013).

Since 1997, the popularity of Nordic walking has grown due to active promotion, which gradually led to increased demand for “the product”- Exel walking poles. Although, despite the initial interest in this new activity and soar in Exel sales, in the beginning there was a motivational conflict - people were afraid of going outdoors to practice Nordic walking.

“People thought of it as a sport for unfashionable people, which meant that we had a lot of work to do to overcome this image problem… well, it was really quite awful, for example people were heckling when we passed the golf course, they were going ‘hey, have you forgotten your skis?’ Then, we tried to provide scientific and physiological facts and emphasise the health benefits, and prove the significance of it all to them. When you convinced someone, they clearly don’t care about what other people say” (Karihtala, 2013).

The Nordic walking image challenges were tackled with extensive publicity in television, magazines and newspapers that focused on health benefits of the activity. The promotion of scientific results together with doctors’ public support gave Nordic walking further credibility. People became more enthusiastic about the activity and with time Nordic walking groups were getting smaller and later on, people started walking in
pairs or individually. By the end of 1998, 160,000 (4%) Finnish people practiced Nordic Walking regularly, Suomen Latu was organising Nordic walking trainer courses for 200 local associations, and Vierumäki trained more than 2,000 instructors in Finland (Suomen Latu, 2013b). In 2002, according to the Finnish Sports Federation report, Nordic Walking was the seventh most popular sports hobby among adults in Finland with around half a million (14%) regular walkers and 1.6 million (35%) Finns who had tried it at least once. In 2004, there were 760,000 regular Nordic walking practitioners (Sandberg, 2005). With this commercial success in Finland, Nordic walking was introduced to the rest of Scandinavia, and next the Nordic walking trend spread to the rest of Europe:

“When you think of it, you could never think of a reason why they’d be interested in something like Nordic walking. They don’t even have this kind of nature, or the culture that we have here in the Nordic countries. But it did break through there as well, and people walk mostly on beaches on soggy sand” (Karihtala, 2013).

The international interest in “walking with poles” influenced Exel to reinvent the name from Finnish commonly known as “Sauvakävely” (pole walking) to Nordic walking. The company also decided to change the brand name of walking poles from “Walker” to “Nordic walker”. Changes in name of the activity and equipment were significant for gaining recognition and acceptance around the world.

“The name had to describe the activity - walking and the second part described the geographical region of home of the activity. […] even we were surprised how easily the words Nordic and Nordic walking have been accepted in the countries we’ve been exporting to. They seem to evoke the associations people
have with the north, Nordic countries - fresh air, pure nature, healthy lifestyle. It’s been pretty easy to get those ideas through to people’’ (Karihtala, 2013).

In the year 2000, the International Nordic Walking Association (INWA), changed later to Federation, was founded by Aki Karihtala, Raija Laukkanen, Vesa-Pekka Sarparanta and Marko Kantaneva. Since then, the International Nordic Walking Federation has been the only international organisation working on a non-profit basis authorised by the creators of Nordic Walking to promote, develop and educate Nordic Walking internationally and support a global network for Nordic Walking instructors. INWA also collaborates with scientific, medical and professional communities in sports, health and fitness offering research guidelines, developing teaching methods and educational programs for Nordic Walking. Currently, INWA is a governing organisation for Nordic walking with member organisations in over 20 countries (INWA, 2013a).

Picture 1. INWA board 2010-2012. Source: INWA newsletter November 2012
In recent years, Nordic Walking has become a popular activity around the world and the amount of walkers has risen dramatically. According to INWA statistics, the participation in the activity around the world rose from 160,000 in 1998 to over ten million Nordic walking practitioners in 2012 (INWA, 2013b) (figure 7).

Figure 7. Development of Nordic walking 1998 - 2012. Source: Aki Karihtala, 2013

Shove and Pantzar (2005, p. 60) noted that the activity is widely accepted by populations worldwide, yet Nordic walking emerges in various leisure and health contexts:

“In Japan, Nordic walking is confined to leisure resorts, and is certainly not practiced in the streets. In Germany and France, Nordic walking is framed as a safe, risk-free method of engaging with mild nature. By contrast, American Nordic walking is about body shape and fitness”.
Furthermore, Nordic walking is recognised in a variety of different countries as a training programme with systems of accreditation for Nordic walking instructors (Gotowski and Zurawik, 2013). Moreover, for the fast growing popularity of the activity, the “Nordic walker” brand of poles created a platform for Nordic Fitness Sports. The concept was launched in 2003 and embraces both summer and winter sports that activate the lower and upper body in a workout, such as Nordic blading - Nordic walking which involves inline skating with specially designed angled Nordic blader poles and Nordic snowshoeing - walking with snowshoes and poles, hence getting exercise similar to Nordic walking. Nordic walking is an example of a very successful leisure venture. Within two decades, it was transformed from a “ridiculous-looking” form of training to a leisure practice due to the actions of producers and practitioners, and private and public interests. Nordic walking changed the urban and rural scenes in many countries around the world, and managed to engage various groups of the population in walking. Furthermore, the reputation of Nordic walking has encouraged the development of other activities based on the Nordic walking technique, such as BungyPump. It is a modernised version of walking with poles that have built-in suspension system providing extra resistance for the body when the pole is pressed down (BungyPump, 2014).

2.2.1. **NORDIC WALKING IN THE UNITED KINGDOM**

Nordic walking was introduced to the United Kingdom in 2004 by Francis Mitchell, who opened the British branch of the International Nordic Walking Federation (INWA). Similar to Finnish beginnings, the activity was a commercial venture. Mitchell established Nordic Walking UK Limited, the company that promoted the activity through the local media with help from the Finnish embassy as a safer and efficient
alternative for exercising. The organisation began courses to train new Nordic walking instructors and collaborated with personal trainers who began to introduce Nordic walking to their customers, as a part of exercise programmes. Despite extensive publicity, in the media and the work of 500 INWA trained instructors, the first years after introducing Nordic walking to the United Kingdom were troublesome. The organisation had serious financial problems and went bankrupt in 2008. In the same year two companies were established, British Nordic Walking and Exercise Anywhere/Nordic Walking UK, which continued the promotion of the activity, training and support of British Nordic walking instructors.

British Nordic Walking is the only training body in Great Britain accredited by INWA, which has more than 700 INWA, qualified Nordic Walking instructors in England, Ireland, Scotland and Wales. British Nordic walking organises two types of courses: INWA Instructor and INWA Leader courses. The Instructor course lasts two days. The applicants must have experience in Nordic walking and fitness instructor qualifications, a teaching or medical background or be walk leaders. After the course, participants are awarded an INWA Instructor Certificate and can teach provided they have suitable equipment and satisfy all necessary health and safety conditions. All INWA instructors are registered on the INWA website. The INWA Leader course lasts one day and is suitable for people who have already been taught to Nordic walk and want to lead Nordic walks (Gotowski and Zurawik, 2013).

Exercise Anywhere/Nordic Walking UK is an independent private company with 2500 certified instructors endorsed by Skills Active. Nordic Walking UK trains individuals from any backgrounds and awards four types of qualifications: NWUK Nordic Walking Fitness Instructor, Central YMCA Qualifications (CYQ) level 2 Certificate in Fitness Walking, NWUK Nordic Walk Leader and NWUK Nordic Walking Community
Instructor. The NWUK Fitness Instructor course is eligible for qualified fitness instructors with a minimum level 2 qualification in gym-based, studio-based or water-based fitness. The course is endorsed by SkillsActive. CYQ level 2 certificates in fitness walking, including NWUK Fitness Instructor, is a course for non-fitness qualified individuals. NWUK Community Instructor certificate is for those who want to assist certified NWUK instructors and all applicants must be recommended by a certified NWUK instructor. NWUK Nordic Walk Leader qualifications are suitable for people who want to lead Nordic walking classes for community projects, but do not want to gain a fitness qualification (Gotowski and Zurawik, 2013).

Both companies help their instructors to set up and develop their own Nordic walking business. The organisations offer marketing of Nordic Walking classes on their websites and facilitate the sales of Nordic walking poles as an additional business option for the instructors. In addition, they also provide support and guidance for Nordic walking instructors in dealing with the initial negative image of walking with poles, which is a huge problem especially for new practitioners.

“It takes a lot of guts and lots of confidence to Nordic walk especially in the early days. Nordic walking people have to come together in the moment because it’s new and they feel a bit embarrassed, they don’t feel brave to go out on their own but they feel a lot less embarrassed in a group so people say – ‘oh I like it in your group, I would never do it on my own, I would be too embarrassed’. We all look a bit funny on our own so it’s safety in numbers and that encourages other social things and I would like to develop that because it gives us cohesiveness and reasons to come together as a community” (Hughes, 2014).
However, in Great Britain, Nordic walking did not only develop in the commercial sector. Both organisations focus on promoting the activity in non-profit sectors. Nordic walking classes became a part of health programs and health walking schemes offering free walks in local communities across the country. In particular, Nordic walking for health is a very popular community activity in Wales. Age Cymru organises free classes for older people, with over forty volunteers from across Wales leading Nordic walks in local communities (Age UK, 2013).

The growing popularity of Nordic walking in Great Britain provides opportunities for organising more local and national walking festivals, challenges and charity walks every year to bring the Nordic walking community together and promote the activity to the general public. Furthermore, individuals who practice more advanced modes of Nordic walking - fitness and sport, have the opportunity to take part in organised charity running and Nordic walking, Five kilometres, Ten kilometres, Marathons, and Half Marathons across the country.
One of the most popular Nordic walk challenges is called “Shepherd’s Walks”, which takes place in spring every year in North Cumberland (Shepherds Walks, 2013). Moreover, in 2013 British Nordic walking organised a new event to promote the activity – a Nordic walking biathlon, a combination of Nordic walking and laser gun shooting. The activity was organised in Rosliston Forestry Centre, near Burton-on-Trent, south of Derbyshire during the Nordic walking instructor training sessions. The event attracted various age groups including many younger individuals, which introduced the adolescents to walking with poles. In July 2014, British Nordic Walking launched its first Nordic Walking Challenge Series at Ashton Court in Bristol. Nordic walking practitioners competed in 5Km, 10Km or 20Km distance races. Race coordinator Steve Ellis reported:

"The race team has been working hard to bring what we hope will be the first of many dedicated Nordic walking events across the county. This fun and proven formula has been run in Europe for many years and we will be bringing the INWA competition to the UK” (British Nordic Walking, 2014).
The popularity of the event in the British Nordic walking community, encouraged organisers to launch more British Nordic Walking Challenge Series events across the country. In 2015, there were three Nordic walking races organised in Wollaton Park in Nottingham, Lydiard Park in Swindon and Black Park in Buckinghamshire. In 2016, Nordic walking practitioners could enter four key events: in Wollaton Park in Nottingham, Lydiard Park in Swindon, Black Park in Buckinghamshire and Margam Park in South Wales. The entrants competed in categories: the fastest man and woman 5Km, the fastest man and woman 10Km, the fastest man and woman 21Km, the fastest team in each distance (calculated on the combined times of a named team of four people) (British Nordic Walking, 2016). During the events people also had the chance to meet other Nordic walking practitioners from all over the UK, and enjoy Nordic Walking in “beautiful” settings. The events were also an opportunity to promote the activity. Many instructors offered free Nordic Walking lessons and taster sessions.
Since the introduction of Nordic walking to the United Kingdom over a decade ago, the Nordic walking organisations have been joining efforts to promote the activity to local British communities. However, participation in Nordic walking is constrained by several factors. Firstly, the name of the activity itself poses an image barrier. Shove and Pantzar (2005, p. 55) explained, “In the UK context, the ‘Nordic’ reference is something of a liability, being strongly associated with stereotype of snowy Scandinavia than with the more diffuse concept of glowingly healthy outdoor lifestyle” Secondly, there is an image barrier of walking with poles. In the UK, walking poles are marketed as equipment for climbing hills and mountains. Thus, many people may be afraid of negative reactions from others, when using a pair of walking poles on flat surroundings, which may result in discouragement and physically refraining from practicing Nordic walking. Therefore, the continuous collaboration of the commercial and non-profit sectors in Nordic walking provides an opportunity for overcoming the image barrier of walking with poles and “reinventing” walking for better health and well-being in the United Kingdom.
PART 2. LEISURE AND WELL-BEING

Well-being is a complex construct associated with positive health and quality of life. In the second part of this review, I explore theories of well-being, which play an important role in the search for authentic happiness in life. Next, I evaluate various concepts of leisure and present their links to states of enhanced well-being.

2.3. THEORIES OF WELL-BEING

Since ancient times, philosophers and writers have hypothesised the notions of well-being that led to a dichotomy of the concept. Hedonic well-being, also described as subjective well-being, is a theory based on the presence of happiness and other positive emotions. On the contrary, eudaimonic well-being categorised as psychological well-being, refers to positive functioning, human growth and meaningful experiences, which are the measurements for an individual’s quality of life. Both concepts of well-being equate with life satisfaction, yet in different ways.

2.3.1. SUBJECTIVE WELL-BEING

The hedonic concept of well-being was established in the fourth century B.C. by Aristippus of Cyrene (435-356 BC), a philosopher who claimed that the objective of human existence is to experience the maximum amount of pleasure and happiness. He claimed “the art of life lies in taking pleasures as they pass, and the keenest pleasures are not intellectual, nor are they always moral”. Hedonism describes well-being as a subjective idea which can be summarised as enjoyment (Schueller and Seligman, 2010), pleasure (Waterman, 1993), optimism (Carruthers and Hood, 2004), morale (Aspinwall,
Marta Anna Zurawik

1998), life satisfaction (Diener, 1984) and happiness (Ryan and Deci, 2001; Deci and Ryan, 2008; Abraham et al., 2012). Following the principles of Hedonism, another Greek philosopher, Epicurus (341-270 BC) advocated that the only unconditional good in life is pleasure:

“We must, therefore, pursue the things that make for happiness, seeing that when happiness is present, we have everything; but when it is absent, we do everything to possess it” (Turner, 2012).

Subjective well-being is often characterised as a goal-related, lifelong pursuit of immediate gratifications, which bring short-term pleasure (Diener, 1984; Angner, 2010; Tay and Diener, 2011). The construct of subjective well-being is defined by three factors: the presence or absence of positive and negative feelings about life, satisfaction and a comparison of what people have to what they think they deserve (Diener et al., 1985; Pavot and Diener, 1993; Pressman and Cohen, 2005; Fredrickson, 2001; Fredrickson and Joiner, 2002) (figure 8).

Figure 8. Construct of subjective well-being.
Subjective well-being is a cognitive judgmental process based on discrepancies between current conditions and multiple standards. For instance, a discrepancy that involves upward comparison, where standards are higher than the existing state of living, results in decreased satisfaction. In contrast, downward comparison, where standards are lower than the current state of living, results in an increased satisfaction (Diener et al., 1995, 1999). In addition, the presence of positive and negative emotions and moods in a certain period of time influences the degree, to which an individual judges their overall quality of life as more favourable (Nave et al., 2008; Tomer, 2011). Mark Twain (1995) compared subjective well-being to co-dependent purposes of human behaviour. “Every man is a suffering-machine and a happiness-machine combined. The two functions work together harmoniously, with fine and delicate precision, on the give-and-take principle”.

A body of research has established that the levels of subjective well-being are determined by 50% genetic predispositions of a personality, such as emotional stability and extraversion (Ryan and Deci, 2002). Forty per cent of a person’s happiness levels are influenced by intentional, goal-orientated activities and only ten per cent of happiness levels were determined by circumstantial and demographic factors, such as health, socioeconomic status, marital status, geographical location and living conditions (Veenhoven, 1984; Lykken and Tellegen, 1996). The premise that we, not our circumstances, are responsible for our happiness is explained by the Easterlin paradox, which suggested that beyond a certain threshold, rising incomes did not increase subjective well-being (Easterlin, 1973). The predisposition for better well-being is simply explained by Dale Carnegie, an American writer and public speaker:

“It isn’t what you have, or who you are, or where you are, or what you are doing that makes you happy or unhappy. It is what you think about.” (Shearer, 2014).
The changing state of subjective well-being can also be explained by the Hedonic Adaptation Theory, which postulates people would never remain happy over a long period because they rapidly adapt to both, good and bad conditions. Thus, when individuals learn how to cope and adjust their goals accordingly these circumstances no longer influence their well-being. A research study conducted by Brickman and colleagues (1978) focused on comparing lottery winners and paraplegic people and their levels of life satisfaction. The results showed that after a period of time for adaptation to new circumstances, the quality of life of disabled people was close to the quality of life of people with no disabilities, and the lottery winners soon lost their thrill of victory and were no happier than the rest of the population. Furthermore, according to the hedonic adaptation theory, many people seek higher levels of happiness, which require risky behaviours, including the use of alcohol, drugs and lead to instability in an individual life (Oishi et al., 2007). Therefore, subjective well-being, on its own, is considered as a poor measure of a life quality as it provides no lasting worth and only focuses on a temporary boost in mood, which does not result in an optimal happiness or fulfil the requirements for a meaningful life.

2.3.2. PSYCHOLOGICAL WELL-BEING

“The many, the most vulgar, seemingly conceive the good and happiness as pleasures; hence they also like the life of gratification. Here, they appear completely slavish, since the life they decide on is a life for grazing animals” (Aristotle, 2009).

Psychological well-being has its conceptual roots in Eudaimonia, a school of thought established by the Greek philosopher Aristotle (384-322 BC). He criticised the focus on self-indulgent pleasures and considered the development of human potential as a measurement for a meaningful life. The key idea of psychological well-being lies in
“daimon” or “spirit”; a sense of excellence and perfection that gives meaning and direction to the life, to which individuals strive (Ryff, 1989; Waterman, 1993). Eudaimonic pursuit of satisfaction with life is expressed in mental states of happiness by doing what is worthwhile and meaningful (Seligman, 2002). It also demands individuals live to their fullest potential in harmony with their “true self” (Ryan and Deci, 2001; Tomer, 2011). Psychological well-being can be achieved by focusing on becoming a better person through leading a virtuous life congruent with inner values and pursuing intrinsically motivated goals and aspirations, which are often challenging, yet contribute to a greater skill set (Steger et al., 2008; Ryan and Deci, 2001; Sheldon and Lyubomirsky, 2006). Psychological well-being is often described as a process, positive functioning or flourishing, which is the end goal of human beings and their highest good (Tiberius, 2006; Helliwell et al., 2013). Furthermore, achieving high levels of psychological well-being also depends on acknowledging life as an entity with good and bad life periods together with being capable of facing challenges and being open to new experiences where happiness becomes a pleasant result, yet it is not a core of the actions (Tiberius, 2006; McDowell, 2010). This means that enjoyment, not pleasure is the key sensation in psychological well-being. Enjoyment refers to the pleasurable feelings accompanied with feelings of personal growth and accomplishment, which leads to long-term happiness (Csikszentmihalyi, 1990). People experience eudaimonic happiness when they feel intensely alive and authentically enjoy meaningful activities that enhance their skills (e.g. Kashdan and Steger 2007; Steger et al., 2008; Tomer, 2011; Newman et al., 2014).

Maslow was the first psychologist to study the scope of human potential. His hierarchy of needs (1954) consists of basic physiological needs and safety needs to higher levels, such as the need for belonging and self-esteem. According to Maslow, self-actualisation is the final need in the hierarchy, which involves making choices based on growth, self-awareness and accepting responsibility for one’s actions (Lambert et al., 2015). Ryan and Deci (2002) developed self-determination theory (see Chapter One), which considered competence (efficiency in completing tasks), autonomy (having control over own behaviours), and relatedness (feeling of belonging) as fundamental aspects of psychological well-being (Lambert et al., 2015).

Ryff (1989) distinguished six dimensions of psychological well-being: autonomy (a sense of independence), environmental mastery (the ability to manage environments for own growth by controlling both internal and external factors), personal growth (development of personal potential by dealing with challenges), positive relations (having satisfying, high quality relationships with others), purpose in life (believing that one’s life is meaningful) and self-actualisation (positive attitude towards oneself) (figure 9).

Figure 9. Construct of psychological well-being. Source: Ryff and Keyes’ (1995)
Keyes (1998) complemented Ryff’s framework for psychological well-being by developing a concept of social well-being, which considered functioning in social life, quality of relationships within community. According to Keyes (1998) social well-being consists of five dimensions of sociality, which are associated with Ryff’s (1989) dimensions of psychological well-being: integration, contribution, coherence, actualisation, and acceptance. Social integration refers to the evaluation of the quality of individual relationships to society and community. According to Keyes (1998) integration is the extent, to which people feel they have something in common with others who constitute social reality, as well as the degree to which they feel they belong to their communities and society. Social acceptance is an evaluation of the favourable views of human nature. Thus, people who have high social acceptance trust others and feel comfortable around other people. Social contribution refers to an evaluation of personal value in society. It reflects whether, and to what degree, people feel that they are valued in society and that they contribute to society. Social actualisation is an evaluation of the potential and the trajectory of society. It captures the idea of social growth and development. Social coherence refers to perception of quality and organisation of the social world. Coherence includes a concern for knowing and understanding the world.

In contrast, Mihalyi Csikszentmihalyi (1990, 2009) conceptualised psychological well-being as a theory of optimal experiences. He first introduced the concept of flow - an optimal leisure experience, which refers to participating in optimally challenging activities to achieve full potential. Flow is characterised as a balance between the skills of participants and the challenge of the activity. Flow is an experience of deep concentration, in which a person becomes absorbed in a moment and loses track of
time. Achieving flow entails engaging in activities that challenge skills while providing a sense of mastery and competence, which result in enhanced psychological well-being. In general, the concept of well-being is best comprehended when it involves optimal functioning (eudaimonia) and pleasurable experience (hedonia) as both eudaimonic and hedonic pursuits are related to well-being outcomes, including life satisfaction, self-esteem, vitality (Huta et al., 2012) and a sense of self-congruency (Seligman 2002; Schueller and Seligman, 2010). Both feelings of psychological (positive functioning) and subjective well-being (positive feelings) compensate for each other to constitute “authentic happiness” and ultimately lead to a good life of meaning, engagement and pleasure (Tiberius, 2006) (figure 10).

![Figure 10. Construct of the authentic happiness](image)

Each aspect of authentic happiness is a unique predictor of well-being. Engagement refers to a state of “flow”, an optimal leisure experience that develops talents, allows psychological growth, and promotes positive resources (Csikszentmihalyi and LeFèvre, 1989). A key role of engagement is to transform mundane tasks into interesting activities. Finding pleasure in life is linked to hedonic well-being. An increase in subjective well-being is related to frequent, long-term levels of positive emotions.
(Diener et al., 1995, 1999). Meaning is defined as a sense of life purpose through the pursuit of goals, sense of competence and fulfilment (e.g. Steger et al., 2008; Schueller and Seligman, 2010). Meaningful leisure enables individuals to feel the value of the activity, increased levels of participation while promoting positive emotions and life satisfaction (Liu, 2014; Harmon and Kyle, 2016; Jaumot-Pascual, et al., 2016). Iwasaki (2008) identified five themes in describing meaning-making of leisure pursuits: 1) positive emotions and well-being, 2) positive identities, self-esteem and spirituality, 3) social and cultural connections and harmony, 4) human strengths and resilience, 5) learning and human development across the life-span. However, the pursuit of pleasure, engagement, and meaning do not contribute equally to subjective and psychological well-being. Literature suggests that engagement and meaning are strongly related to well-being rather than pleasure. Pursuing engagement and meaning increases social and psychological resources, whereas, pleasure only focuses on a temporary boost in mood and does not result in optimal well-being (Schueller and Seligman, 2010; Oishi et al., 2007). Engagement leads individuals to search activities that challenge skills and develop talents (Csikszentmihalyi, 1990); meaning helps build social connectedness and provide self-relevant goals. Therefore, participation in engaging and meaningful activities leads to increased well-being and produces more happiness in life. As Helen Keller (1880 - 1968), an author and political activist observed, “many persons have a wrong idea of what constitutes true happiness. It is not attained through self-gratification but through fidelity to a worthy purpose”.

Marta Anna Zurawik
Based on the model of authentic happiness, Seligman (2011) added to the pathways of positive emotions (P), meaning (M) and engagement (E) two more components – relationships (R) and achievement (A), in developing the PERMA model (figure 11).

In the PERMA model, relationships refer to feelings of social support and social connections. This dimension in the model reflects Keyes (1998) social aspect of well-being. Accomplishment involves making progress towards goals, feeling capable and having a sense of achievement. It depends on focusing on engagement in meaningful activities, enhancing skills, increasing resources, robust individual happiness and self-esteem that allow for achieving the purpose and significance of life and a long-lasting life satisfaction.
2.4. CONCEPTS OF LEISURE

“In our play we reveal what kind of people we are” – Ovid (43BC - 17AD).

One of the ongoing problems surrounding leisure studies concerns the conceptualisation of leisure. Grazia (1994) classified leisure according to six bipolar dimensions: active - passive, participant - spectator, solitary - social, indoor - outdoor, in home - outside, and sedentary - active. However, the lack of consistency and conflicting meanings attributed to leisure have led to more general and dichotomous categorisation of leisure concepts as objective and subjective (Mannell and Kleiber, 1997). An objective standpoint characterises leisure as free time or an activity, which is associated with pleasant feelings (Dumazedier, 1960; Brightbill, 1960; Parr and Lashua, 2004). Leisure as free time is orientated towards pursuits of freely chosen recreational activities that fulfil personal needs and provide intrinsically rewarding experiences after complying with occupational, family, household, socio-spiritual and socio-political obligations (Rojek, 1995; Roberts, 2006; Kelly, 2012). Leisure activities focus on the quantity of participation and environment, in which leisure takes place. Leisure behaviours occur in discretionary time, during voluntary activities, which offer no material gain and provide meaningful and satisfying experiences (Argyle, 1996). In contrast, a subjective approach interprets leisure as a state of mind or experience (Grazia, 1994; Neulinger, 1974), associated with freedom of choice, intrinsic motivation, psychological functions, enjoyment, relaxation and commitment (Iwasaki et al., 2005; Shaw et al., 2006; Watkins and Bond, 2007). Although, defining leisure only as a temporal, behavioural or mental phenomenon appears to be incomplete. Purrington and Hickerson (2013) suggest that considering leisure only in terms of free time reduces leisure to time left after work, which makes the definition of leisure insufficient. Viewing leisure as behaviour only acknowledges participation in various leisure-related activities, which means that
mental states or experiences associated with leisure behaviour are the effects or causes of leisure participation (Kelly, 2012). In addition, defining leisure as a psychological phenomenon appears to be inadequate too, as it means that experiences of leisure could also occur during work or other productive activities (Csikszentmihalyi, 1990), which contradicts the concept of leisure time. Therefore, time, behaviour or experience, are not sufficient definitions of leisure, on their own. Leisure occurs outside of work, which suggests the mental state of leisure is inseparable from behaviour and leisure behaviour and experience are an interplay of internal psychological dispositions, such as feelings, beliefs attitudes, needs, personality characteristics, and situational influences, norms and media (Mannell and Kleiber, 1997). As a result, leisure can be defined as a crossover of free time, activity and attitude (figure 12). It is a mental state that occurs in free time during voluntary activities, based on personal interests, intrinsically satisfying, pleasurable and pursued for the individual rewards (e.g. Shaw et al., 2006).

Figure 12. Model of leisure. Source: Shaw et al. 2006
Leisure experiences are psychologically pleasant in anticipation and recollection, offer lower levels of tension and cover the whole range of meanings, commitment and intensity (e.g. Mannell et al., 1988). The research into defining leisure meanings describes it as a sense of life purpose through the pursuit of goals, sense of competence and fulfilment (e.g. Steger et al., 2008; Schueller and Seligman, 2010). Iwasaki (2007) claimed that leisure can be a powerful medium to discover one’s life’s meaning, through experience of positive emotions, positive self-identity, development of social connections, or life-long learning. Moreover, Edginton and colleagues (1992) suggested that leisure time and activities provide the opportunities for not only relaxation, self-improvement and interaction with other people, but also for novelty and excitement due to the fact that leisure activities are freely chosen. However, it must be noted that freedom in leisure is relative or perceived rather than absolute because choosing leisure activities occurs within the specific context of role definitions and expectations. The “perceived freedom” in leisure is a state in which people feel that leisure activities are undertaken by personal choice and needs. Neulinger (1974) created a classification of “perceived freedom” and motivation as criteria for leisure (figure 13).
Categories of motivations are based on various needs for engaging in behaviours associated with the belief that certain actions reduce the disequilibrium in life and lead to desired goals or satisfaction (Ryan and Deci, 2002). For example, intrinsic motivation satisfies psychological needs for enjoyment with the leisure activity itself. On the contrary, extrinsic motivation focuses on the engagement in the activity that leads to other material rewards, such as social approval, physical appearance, or money. Thus, if activities result in fulfilment of intrinsic and extrinsic needs the experience of satisfaction provides positive feedback and encourages continuation of certain leisure and work related activities. In contrast, if activities do not satisfy those needs, negative feedback results in stopping the activities.

According to Neulinger’s classification (1974) “pure job” or “anti-leisure” is an activity undertaken compulsively, as a means to an end. It is perceived as necessity, with a high degree of time consciousness and externally imposed constrains. The “pure job”
classification offers a minimum of personal autonomy and avoids self-actualisation, authentication or finitude. With regards to walking, the pure job category may characterise utilitarian walking. The “work-job” category refers to activities that are carried out under constraints, yet motivated by both intrinsic and extrinsic rewards. This category may refer to choosing walking as mode of transport. The “pure work” or “semi-leisure” describes activities, which arise from leisure, as they are freely chosen, however the attitudes towards them represent obligation and commitment. The “leisure-job” category refers to freely chosen activities in which satisfaction is achieved not from an activity itself, but from its consequences. This category may relate to walking as an option for exercising in order to lose weight. The “leisure-work” group describes freely chosen activities that are motivated by a combination of both intrinsic and extrinsic rewards (Leitner and Leitner, 2012). The category of “leisure-work” is related to the Stebbins concept of serious leisure (Stebbins, 2000, 2001, 2008). The last of the Neulinger’s leisure category is “pure leisure” that refers to activities freely chosen for intrinsic reasons, which provide opportunities for relaxation, intense pleasure, spontaneity, timelessness, adventure, interaction and skill utilisation (Argyle, 1996; Watkins and Bond, 2007). This type of leisure may refer to rambling.

Adding to the literature, Kaplan (1975) identified essential elements of pure leisure experiences such as psychological recognition of the activity as play and the antithesis of work, identification with pleasure, minimum obligation, psychological perception of freedom and the identification of the activity as being close to the values of culture and inclusion of an entire range of responses from insignificance to importance.

Similarly, Watkins (2013) created a continuum of six leisure meanings and five leisure dimensions of the intentional change in leisure meanings. His theoretical framework consists of two premises. First, leisure experiences are perceived as internal relations
between individuals and their leisure involvement. Second, leisure experiences can be ordered as a sequence of meanings according to increasing levels of complexity. More developed meanings demonstrate greater diversity in dimensions forming the leisure experiences, increasing flexibility in the temporal organisation of dimensions, and higher levels in integration between leisure and other areas of life (Watkins, 2013, p. 92). Figure 14 shows the progress of leisure meanings from experiencing leisure as passing time, exercising choice, escaping pressure to achieving fulfilment. Two subcategories of exercising choice and escaping pressure indicate different patterns of intra- and inter-meaning change in the continuum. Five dimensions highlight the interconnected nature of leisure experiences relating to time, motivation, behaviour, emotions, and leisure functions.

![Continuum of leisure meanings and dimensions](image)

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temporal</strong></td>
<td>Spare time</td>
<td>Free time</td>
<td>Make time</td>
<td>Timeless</td>
</tr>
<tr>
<td><strong>Motivation</strong></td>
<td>Avoid boredom</td>
<td>Gain control</td>
<td>Find balance</td>
<td>Seek fulfilment</td>
</tr>
<tr>
<td><strong>Behaviour</strong></td>
<td>Sedentary</td>
<td>Expensive</td>
<td>Detached</td>
<td>Contemplative</td>
</tr>
<tr>
<td><strong>Emotion</strong></td>
<td>-enjoyment</td>
<td>Satisfaction</td>
<td>Pleasure</td>
<td>Happiness</td>
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<tr>
<td></td>
<td>-relaxation</td>
<td>Physical</td>
<td>Emotional</td>
<td>Spiritual</td>
</tr>
<tr>
<td><strong>Function</strong></td>
<td>Entertainment</td>
<td>Independence</td>
<td>Well-being</td>
<td>Contentment</td>
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Figure 14. Continuum of leisure meanings and dimensions describing development in experiences of leisure (Watkins, 2013).
Watkins (2013, p. 98-103) conceptualises changes in leisure meanings from passing time (e.g. sleeping, eating, watching TV) to exercising choice indicates the increased relevance of leisure in personal life and desire for personal choice and control in establishing and reinforcing leisure identity. Exercising choice focuses on asserting control – adjusting to the external demands associated with increasing obligations, having less free time and judgments about time usage. Those who learn how to experience leisure as asserting control, the leisure meanings change from escaping pressures to forgetting about problems. The intentions driving this change focus on taking time to regain control, detaching from the source of pressure to forget problems and restore balance in life. In contrast, changing from passing time to exercising choice by displaying competence - acquiring knowledge, skills and establishing goals, indicates understanding leisure as an opportunity for personal growth and extending awareness beyond personal needs in order to escape pressure and understand problems. The intentions indicating this change concentrate on recognising that reclaiming time is important for well-being, using leisure to cope with pressure, deriving well-being from deep affective appreciations and relationships, and knowing that personal well-being influences the well-being of others. Individuals who experience leisure as understanding and dealing with problems progress to leisure experiences of achieving fulfilment. The intentions driving this change are freeing the mind of distractions to focus on the moment, meditating leisure meanings, and building connections with people and places as opportunities for on-going meaning and wisdom.
Identity refers to “a personal theory of self”. It is a set of meanings that individuals attach to themselves and a belief about how others perceive them (Kleiber, 1999; Stets and Biga, 2003). Stryker and Burke (2000) argue that there are two key approaches to conceptualise identity theory in social psychology: the linkage of social structure with identity, and the internal process of self-verification. The social structure explores external influential factors in society, such as family friends, peers and media on personal identifications. The internal or cognitive identity theory examines how individuals internally evaluate and interpret themselves (Cieslak, 2004). These approaches complement each other - social structure (external resources) influences individuals internal process of self-verification while individuals’ self-verification process sustains external social structure (Stryker and Burke 2000). People do not passively accept a given identity but engage in a lifelong process of seeking to understand themselves in relation to the world and maintaining a sense of self-consistency. Thus, leisure activities are important factors for creating and developing social and personal identities. Haggard and Williams (1992) suggested that people express themselves by participating in leisure activities that reflect a specific set of images or traits. The concept of leisure identity implies that people can incorporate recreational activities and the meanings associated with these activities into their self-definitions, defining themselves through participation or identification with the leisure activity (Jun and Kyle, 2012). The research into leisure identity discusses the concept in terms of motivation (e.g. Stets and Burke, 2002), level of participation commitment (Shamir, 1992), skill levels and development (e.g. Stebbins, 2004, 2008), subculture establishment (e.g. Stets and Tsushima, 2001), and constrained negotiation process (Rojek, 2005; Jun and Kyle, 2011).
An important assumption underlying the research on the self and identity is that the self is a primary motivator of behaviour (Stryker and Burke, 2002). People take multiple roles in society; thus have multiple identities, which can be organised in a prominence hierarchy (Stets and Biga, 2003). A prominence hierarchy addresses what is important to an individual and reflects on the ideal self. It depends on the degree, to which an individual receives support from others from the expressed identity, and intrinsic and extrinsic rewards for that identity (Stets and Biga, 2003).

In terms of level of participation commitment, leisure identity is explained by the salience of identity - the importance of identity for defining one’s self relative to other identities the individual holds (Shamir, 1992). The salience hierarchy is influenced by a degree of social commitment to the identity and indicates how an individual will likely behave in a situation (Stets and Biga, 2003). The greater social commitment premised on identity (e.g. gender, race, age), the higher that identity will be in the salience hierarchy. Shamir (1992, p. 302) identified two dimensions of commitment: quantitative and qualitative. Quantitative commitment refers to a number of people with whom an individual is connected through a particular identity. The greater the social relations, the greater commitment to this identity. Qualitative commitment states that the stronger or deeper the ties to others based on a particular identity, the higher the commitment to that identity. Commitment has a strong influence on leisure identity, which is salient and valued for three main reasons:

1) it expresses and affirms individual talents and capabilities,
2) it endows the person with social recognition,
3) it affirms individual central values (Shamir, 1992).
Therefore, the salient leisure identity is observed among people in serious leisure (Stebbins, 2004). Leisure identity within the serious leisure concept refers to characteristics that individuals are able to acquire as a sense of identity through participation in their chosen activities (Liu et al., 2016). One of the key defining characteristic of serious leisure is providing participants with a sense of social identity, which is developed in five career stages: presocialisation, recruitment, socialisation, acceptance, and decline. The presocialisation phase refers to the acquisition of knowledge about a specific serious leisure identity, to which participants aspire, and formation values and attitudes about the activity and associated identity. This information may be gained through a variety of means, such as family members, peer recommendations, information in the media or through personal contact with social world surrounding the activity. Recruitment refers to the initial entry to the social world. The next phase of developing serious leisure identity is socialisation – an ongoing process of gaining knowledge about roles, norms, and values. During this stage participants learn about the unique ethos associated with serious leisure activity. The success in socialisation result in achieving the stage of acceptance, during which the leisure identity is confirmed. Participants interact with the social world of serious leisure activity. The final stage of participation in serious leisure refers to decline and exit from serious leisure activity (Green and Jones, 2005, p. 172).

Identity theory is rooted in sociology, and often focuses on social networks of relationships and roles, to which they are linked in the social structure (Stryker and Burke, 2000). Interactions of individuals who consider themselves as a part of a group with other members generate a sense of belonging and identity with a particular group. This often leads to comparisons of a group with other groups, as well as perceiving and understanding the world from a group collective perspective (Stets and Tsushima, 2001;
Social groups that embrace certain distinctive cultural elements, such as a shared set of identifiable values and meanings of symbol expression are defined as subcultures (Green, 2001). Subcultures are accessible through direct, active participation in the activity or competition, and indirect participation through viewing, reading, discussing and purchasing products. Regardless of the way people participate in a subculture, the unique values and beliefs are transmitted socially as participants interact with each other (Green, 2001). Interactions with a subculture help to construct and confirm the identity the participants take when joining the subgroup (Haggard and Williams, 1992) and during the interactions within the subculture, these images are shaped and refined to reflect a deeper understanding of the symbolic meanings and subcultural expressions (Green, 2001).

Edensor (2000, p. 98) suggests that the rambling subculture can be observed through the market of walking products, ranging from clothing, accessories and equipment to specialist magazines guidebooks, maps and routes which are to help the walkers enjoying and improving walking experiences, and reinforce the collective corporeality image and the status of the ramblers. Walkers make status-conscious decisions about the quality and style of their clothes, which either highlight the notion that ramblers are not concerned about self-adornment when walking, and seek quality, heavy-duty clothing, or emphasize the view that through choosing fashionable clothing and accessories, ramblers make status and leisure identity statements. Jebb (1996, p. 74) considers a backpack as a symbol of self-sufficiency for ramblers. Big and heavy backpacks demonstrate that true ramblers can travel without help from anyone and are prepared for any eventuality whilst “en route”. Michael (2000, p. 118) studies the role of walking boots as a tool to signify ramblers’ style and leisure identity. Serious walkers choose boots on the basis of durability and price. Attractiveness or style are always secondary.
Walking boots are also perceived as a means to expand the capacities of human bodies and access to natural environments. These overlaps between rambling practice and walking products create the leisure identity of ramblers and unique experiences of a collective, reflexivity, freedom and appreciation of nature, which benefit well-being.

In the case of Nordic walking, Shove and Pantzar (2005) suggest that the Nordic walking subculture can also be perceived through equipment, competence, skill and the hierarchical organisation of activity. The Nordic walking practitioners perceive themselves to be competent and skilful members of a community, within which walking with sticks and healthy living go hand-in-hand (Shove and Pantzar, 2005, p. 58). In order to become a member of the Nordic walking community, all practitioners need to be trained to master a new walking technique during specially designed courses. People are taught how to hold the walking poles and use them to best effect in a variety of conditions. All Nordic walking groups are organised and supervised by the instructors who provide advice and guidance how to incorporate Nordic walking in an exercise regime. The instructors have their own sub-community within the Nordic walking community with a distinctive system of accreditation and recognition in local, national and worldwide networks of the instructors. Moreover, Nordic walking identity is also defined by using specially designed Nordic walking poles during the workout. The poles are made of carbon fibre or glass fibre with the straight handle and a strap that goes around the hand like a glove. The styling of the walking poles is different from ordinary trekking poles and influenced by ski sticks (Shove and Pantzar, 2005).

Different, bright colours and fashionable patterns of the walking poles suggest it is a type of a leisure fashion accessory.

The research into leisure identity and the process of the constrained negotiation disagree with academics who suggest that leisure as freely performed behaviour provides a
context, which allows more freedom for expressing a true self through a symbolic meaning of leisure activities (e.g. Kelly, 1983; Haggard and Williams, 1992). The concept of perceived freedom in leisure is criticised by Rojek (1995) who suggested that the definition of leisure associated with freedom and choice is misleading or even untrue because participation in leisure depends on time, place and the actions. Rojek (1995) viewed leisure as a two-dimensional paradigm, which is based on the interplay of leisure constraints and facilitators that act together to produce leisure participation or non-participation. Leisure constraints, such as physical, environmental, social, economic and moral inhibit or prohibit people’s participation in leisure activities or achieving desired levels of enjoyment and satisfaction with leisure (Crawford et al., 1991; Jackson et al., 1993; Jackson, 1993). On the contrary, leisure facilitators allow these constraints to be managed, reduced or eliminated in order to promote the formation of leisure preferences and encourage leisure participation (Raymore, 2002; Henderson and Bialeschki, 2005). Based on that premise, Jun and Kyle (2011, p. 183) merged the concept of leisure constraints-facilitators with the identity theory suggesting that constraints to leisure and efforts to negotiate them depend on the degree to which people perceive the identities they carry facilitate or conflict with one another. A broad range of tensions and conflicts between leisure freedom-constraints led to establishing four leisure functions associated with representation, resistance, control and identity that contribute to understanding and managing leisure participation (Rojek, 2005). The function of representation involves mass media and governmental actions to influence an individual’s voluntary behaviour. It creates various leisure forms as a basis for social cohesion and generates demands and desires for leisure activities by expressing them through habitus (Rojek, 2005). For instance, walking for health campaigns, as a part of public health policies, encourage physical activity among populations and remove
barriers to an active lifestyle. Mass media carefully plan and communicate appropriate messages to people to be more active and healthy. These actions involve interventions from local communities, primary care, schools, workplaces, sport and leisure facilities. They also require changes to services and aspects of the physical, social and economic environment. The function of resistance characterises leisure activities as dependent on the social position of individuals. Therefore, pursuits of one’s own versions of leisure activities are associated with social classes, gender, race and status (Shaw et al., 2006).

As it was noted earlier, walking as a leisure pursuit has always been attributed to men from higher classes. However, since establishing the Ramblers’ Association in the 1930’s walking has become a popular leisure-time activity for working-class populations. Nowadays, rambling is a popular activity amongst white older adults, the majority being women, from a middle-class background (e.g. Sport England, 2009). In the case of Nordic walking, the activity has also become extremely popular among middle-aged and older women from a middle-class background (Karihtala, 2013).

The function of leisure identity suggests that leisure activities construct exclusions, but also bring a sense of belonging by being part of special leisure groups, which attract members with similar interests, beliefs and attitudes. Through leisure participation people interact with others and as a result of mutual tastes, they declare and develop self-images, values, aspirations and decide with whom they choose to associate. Repeated participation in leisure activities enhances these self-identities, increases motivation for the shared goals, develops special skills and maintains a source of pride and self-worth. The function of control focuses on restraining public leisure behaviour in respect to body (for example, drunkenness, nudity and aggression), assembly (for example, public protests, and riots) and incitement (for example: religious, racial and sexual intolerance). The relation of leisure and body is mostly explored from an
individual life-cycle standpoint in which the individual biological cycle is translated into series of social powers and responsibilities. Kelly (1987) produced a life course model of leisure, which identifies stages of growth: Infancy (0-12 months); childhood (1-11); early adolescence (12-15); late adolescence (16-18/20); youth (19/21-29); early maturity (30-44); maturity (45-retirement); retirement- disability event; disability event-death. Kelly (1987) argued that early and adolescent years are associated with light social responsibilities and obligations, which give opportunity for more leisure experiences yet limited finance and general family independence, restrict choices. Leisure also dominates in youth but focuses on the acquisition of independence, as individuals seek to form a stable family unit. Maturity is characterised by a period of stability, cohabitation, parenthood and accomplishment. In these stages of life, leisure tends to be home and family-centred. Leisure experiences are constrained by household expenditure and supporting dependents. The retirement period is a transformation from work into full-time leisure (Rojek, 1995). This phase in life also brings new circumstances, needs, motives and constraints (Gibson and Singleton, 2012). Retirement pensions have improved the economic situations of older adults and better health care present better opportunities for older adults for prolonged health and well-being (Adams et al., 2010). Nevertheless, the literature is not consistent in characterising the leisure experiences and changes in leisure participation in later life. Many research studies contradict the stability of leisure patterns in later life, and show that participation in leisure, especially active leisure, decreases with age due to lower income, loss of work-based networks and deteriorating health (e.g. Armstrong and Morgan, 1998; Rojek, 2005; Janke et al., 2006). In contrast, Lee and King (2003) stated that old age correlates with the stability of time spent on leisure activities, which replace work and household expenditures. Furthermore, Beck and colleagues (2010) suggested that as adults age,
they often seek new challenges through physical activity, and for many people, leisure becomes a meaningful central life domain. Leisure is also proven to extend years of independent living, decrease disability, and enhance overall quality of life (Aldrich, 2004). In addition, older adults choosing leisure behaviours tend to look for activities that allow them to maintain important relationships with friends and family, and develop close social connections in order to diminish the perception of loneliness and isolation (Beggs et al., 2014).

Increased longevity and changes in economic situation of the retired individuals propose that older people are a growing segment of the leisure market and consumer culture. Many older adults perform consumptive leisure activities, such as watching TV, reading books, attending performances and sporting events, playing golf and performing other types of active leisure behaviours. Leisure consumption can be explained with Veblen’s conspicuous consumption theory. Veblen (2013) named leisure “the non-productive consumption of time”. He argued that fashion in modern society is dictated by a leisure class and consumption activity, which is not based on the satisfaction of physical needs but in the exhibition of status superiority. Similarly, Pantzar and Shove (2005) described leisure as an arena where personal identities are developed and expressed by branding - imprints, symbols on commodities to increase consumers’ desire and attachment to products and services to boost leisure consumption. In other words, free time is associated with a desire for commodities, buying goods and services, which puts leisure in the area of consumption opposed to productive work. This economic standpoint on leisure is relevant in the modern world. The various forms of leisure commercially provided, which focus on leisure as a means to an end (community profit or public good) have grown disproportionally to non-market forms, which concentrate on leisure as an end itself. This division of leisure activities in modern society, in which
the leisure industry operates to supply or shape leisure needs, can be associated with the concept of serious leisure (Stebbins, 2008). Gallant and colleagues (2013) explained that some serious leisure pursuits require significant financial commitment, inputs of time and advanced levels of skills and knowledge. Moreover, some serious leisure activities revolve around acquisition of consumers’ goods and collectables. Theorising leisure in such a way means that nowadays, either people buy or make leisure.

2.4.2. SERIOUS LEISURE PERSPECTIVE

The serious leisure perspective arranges leisure participations along a continuum of involvement from casual to serious depending on behaviour, skills, commitment, motivations and preferences (Xiangyou and Yarnal, 2010). The continuity between serious and casual leisure can be perceived more clearly by the progression of the notion of the recreational specialisation theory: a continuum of behaviour from general to the particular, reflected by equipment and skills used in sport and the activity setting preference (Bryan, 1977, 2000). Recreation specialisation is a stage process that characterises a person’s involvement and progression in the activity. The specialisation at each stage comprises of three elements:

1) behavioural related to past experiences and investment in equipment,
2) cognitive refer to development of skills, knowledge,
3) affective include attachment and commitment to the activity and centrality to lifestyle (Bryan, 1977; Tsaur and Liang, 2008; Scott, 2012).
Similar to the behavioural continuum, Robert Stebbins (2008) distinguished three categories of leisure commitment: project leisure, casual leisure, and serious leisure. These are further divided into types and subtypes, which are characterised by a set of distinguished qualities, costs and rewards or benefits in the case of casual leisure.

Project leisure is a distinctive form of a leisure pursuit “a short-term, moderately complicated, either one-shot or occasional, though infrequent, creative undertaking carried out in free time. It requires considerable planning, effort and sometimes skills and knowledge, but for all is neither serious leisure nor intended to develop into such” (Stebbins, 2005, p. 2). Project leisure does not require long-term commitment; thus it is suitable for people with heavy workloads or those who want a temporary change in their leisure lifestyle. Project leisure can be divided into two types: one-shot projects, and occasional projects. One-shot projects require talents and knowledge at hand and in case of leisure walking, a one-shot project may be a long back-packing trip or walking holiday to a distant destination. Occasional projects include activities that are undertaken at home, work or for religious occasions and contain the possibility of becoming routinised, such as pilgrimage or participation in annual walking festivals.

Casual leisure is an “immediately, intrinsically rewarding, relatively short-lived pleasurable activity requiring little or no special training to enjoy it, such as play, relaxation, passive and active entertainment, sociable conversation, sensory stimulation, casual volunteering, pleasurable aerobic activity” (Stebbins, 2004). Casual leisure benefits individuals by providing creativity, accidental discovery, and spontaneous invention, edutainment - being educated and entertained at the same time, regeneration or re-creation, interpersonal relationships, and well-being. It is a purely hedonic experience identified with the social world of the leisure pursuit, which suggests immediate self-gratification, pleasure and enjoyment rewards. Rojek (1995) described
casual leisure as opportunistic experience, which focused on sensory stimulation and offered no career, requires minimal knowledge from its participants. Casual leisure walking refers to participation in leisure and health walks, taking strolls, rambling. Although, Stebbins (2001) reported that participation in casual leisure was also associated with drawbacks, such as boredom, weariness or restlessness, lack of leisure identity, lack of optimal leisure lifestyle, limited contribution to self and community.

Serious leisure is characterised as a “systematic pursuit of an amateur, a hobbyist, or a volunteer activity sufficiently substantial and interesting for the participant to find a career there in the acquisition and expression of a combination of its special skills, knowledge and experience” (Stebbins, 2008, p. 5). Serious commitment places leisure in the centre of the life, to which individuals are highly committed (Baldwin and Norris 1999; Gallant et al., 2013). Serious leisure walking refers to pursuing a career, participating in training to become a hill and moorland leader, mountain walking instructor or Nordic walking instructor. Furthermore, Stebbins (1980, 2008) identified three types of serious leisure participants: amateurs, hobbyists, and volunteers.

Amateurs undertake leisure activities in a professional-amateur-public (PAP) system of interdependent networks, in which the relationships between professionals and amateurs are closer than between amateurs and the public (Green and Jones, 2005). Amateurs are guided by the standards of excellence set and communicated by professionals in terms of skills and techniques, performance and behaviours, which are aspired to by amateurs (Stebbins, 1980). Hobbyists are individuals who participate in a specialised pursuit beyond their occupation and lack a professional counterpart. Thus, the rules guiding rule-based pursuits are either subcultural or regulatory. Hobbyists are categorised as collectors, makers and tinkerers, activity participants (in non-competitive, rule-based pursuits), sports and game players (in competitive, rule-based pursuits without a
professional counterpart), and liberal arts enthusiasts (Green and Jones, 2005; Stebbins, 2008). Volunteers are characterised by four dimensions: free choice, remuneration, structure and intended beneficiaries. Stebbins posits that volunteers retain their voluntary spirit by avoiding becoming dependent on any money received from their service. Volunteers may collaborate with legally chartered organisations or informal groups or networks in order to provide substantial and continuous helping (Stebbins, 2008).

Furthermore, serious leisure can also be defined by six distinctive qualities found between amateurs, hobbyists, and volunteers: perseverance, leisure career, significant effort, durable outcomes, unique ethos, and strong identification with the activity. These qualities may exist in all types of serious leisure, however Green and Jones (2005) claimed that not all serious leisure activities demonstrate all six qualities. Perseverance or persistence to overcome difficulties seems to be the most significant serious leisure quality that separates itself from casual leisure. All leisure participants confront various kinds of challenges, frustrations, and fatigue during leisure participation. However in serious leisure, participants have a tendency to actively overcome these difficulties and maintain their engagement with leisure activities (Brown et al., 2008). A leisure career is developed through the leisure pursuit and progression through the activity related to skills, knowledge and abilities in leisure pursuit, which includes stages of achievement and reward. Significant personal effort in serious leisure is based on preparation to undertake the activity, specially acquired skills, knowledge to prepare and participate in the activity. Serious leisure provides durable outcomes in the form of personal benefits, such as increased self-esteem, self-expression, self-determination and self-actualisation (Lyu and Oh, 2015). A unique ethos in serious leisure refers to being part of clearly identifiable group with its own norms, values, beliefs, behaviours and language that are
shared by members of serious leisure social world. Identification with a leisure group and its social world is enhanced by sharing their experiences and talking about the activity that leads to belonging, pride and self-worth. Serious leisure offers participants a sense of belonging and pride in the pursuit of the activity that plays a central role in their lives (Heo et al., 2013). However, participation in serious leisure has some drawbacks, which include disappointments, dislikes, tensions that emerge from the tendency for serious leisure to consume large amount of time and money (Gallant et al., 2013). Nevertheless, efforts to deal with the leisure drawbacks and constraints constitute the most important elements of serious leisure pursuits, in particular persistence, which offers more durable benefits (Lyu and Oh, 2015).

2.5. RELATIONS BETWEEN LEISURE AND WELL-BEING

“Everybody can have free time. Not everybody can have leisure” - Grazia (1994)

There is a clear distinction between free time and leisure. Leisure occurs during free time; however, not all free time is leisure. Free time is leisure when it involves activities that provide relaxation, entertainment, personal development and spiritual renewal (Shaw et al., 2006). Moreover, unlike free time activities, leisure activities enhance both, subjective and psychological well-being through meaningful and pleasurable experiences (Mannell, 2007; Iwasaki, 2007). Thus, meaningful leisure activities enable individuals to feel the value of the activity, increase levels of participation, promote positive emotions and life satisfaction (Liu, 2014; Harmon and Kyle, 2015). Aristotle (2004) discussed the importance of leisure in offering pleasures and happiness in life which is “final and self-sufficient and it is the end of action”. Leisure improves subjective well-being by producing positive moods and emotions (Wensley and Slade
The relationship between leisure and subjective well-being can be found in opportunities to escape from everyday life problems and negative emotions (Mannell and Kleiber, 1997), as well as learn how to cope with stressful situations by becoming involved and achieving satisfaction from leisure experiences (e.g. Iwasaki and Mannell, 2000; Hutchinson et al., 2008; Stenseng et al., 2012). Regular participation in leisure activities also influences psychological well-being by developing self-determination, promoting self-restoration, providing unique opportunities for commitment and developing skills (Seligman, 2002; Heintzman and Mannell, 2003; Stebbins, 2008; Heintzman, 2009; Newman et al., 2014). Moreover, leisure offers a context for many types of positive experiences that decrease loneliness and foster companionship, friendship, social and emotional support (Coleman, 1993; Coleman and Iso-Ahola, 1993; Iso-Ahola and Park, 1996; Iwasaki and Mannell, 2000). In particular, interaction with friends, social networks in leisure groups is important for increasing social happiness, contributing to social identity and social functioning (Kelly, 2012; Ku et al., 2016). The literature suggests that one of the most beneficial forms of leisure is physical activity also known as active leisure, which includes purposeful exercises and sports as well as non-purposeful movements that occur during other leisure activities, such as play and dance (e.g. Henderson and Bialeschki, 2005; Shores and West, 2010). Active leisure provides physical and psychological revitalisation as it improves fitness, enhances self-esteem, provides opportunities for testing skills and knowledge, and facilitates social interactions (Paffenbarger et al., 1994; Iso-Ahola and Park, 1996).

The impact of leisure activities and experiences on individual well-being can be classified according to the six leisure theories: pleasure-relaxation-fun, need compensation, keeping idle hands and mind busy, buffer and coping, identity formation
and affirmation, and personal growth. These theories describe the relationships between leisure and overall well-being, which lead to building a valuable and purposeful life of social connection, accomplishment, happiness, meaning and engagement.

“Pleasure-relaxation-fun theory” suggests that leisure activities provide many small moments of immediate pleasure, enjoyment, excitement, relaxation and other positive emotions, which cumulate overtime and enhance long-term individual mental health and well-being (Brajsa-Ganec et al., 2011; Purrington and Hickerson, 2013).

“Need compensation theory” identifies leisure as perceived freedom, intrinsic motivation and a low work orientation (Shaw et al., 2006). According to this theory leisure produces detachment from work and helps individuals disengage from life pressures in order to produce more positive cognitions and emotions through recovery (Newman et al., 2014). Time away from work is essential for recovery and leisure provides greater freedom of choice of activities and offers an expression of desires and drives that would otherwise remain hidden and even suppressed. Regular participation in leisure compensates negative work-related experiences so people can return suitably restored to professional roles in their workplaces (Haworth, 1997; Haworth and Veal, 2004). Recovery may occur through rest, enabling recuperations from high levels of exhaustion from work and may be characterised by sleeping or laying on the beach. It also can occur through arousal-seeking behaviours, which provide respite from work through thrilling leisure activities (Newman et al., 2014).

“Keeping idle hands and mind busy theory,” posits that the aim of leisure activities is to prevent boredom and engagement in harmful activities, provide mental stimulation and divert attention from distressing thoughts and stressful life events (Iso-Ahola and Weissenger, 1987; Iso-Ahola and Park, 1996; Heintzman and Mannell, 2003). Engagement in leisure leads to losing track of time and concentrating on tasks, which
represents “nowness” - a pleasure inducing experience when engaged in leisure activities (Iwasaki and Mannell, 2007).

“Buffer and coping theory” suggests that people seek satisfaction, rewards and social interactions in leisure in order to escape everyday life problems (Iwasaki and Mannell, 2000; Hutchinson et al., 2003, 2008). Leisure activities as intrinsically valuable pursuits facilitate coping with everyday life problems, negative emotions and non-productive activities by self-suppression - the escape to minimise effects of ill-being, and self-expansion - the escape to maximise well-being (Kleiber et al., 2002; Stenseng et al. 2012). Therefore, the aim of participation in leisure activities is to develop and mobilise personal strengths and interests, decrease loneliness and isolation by promoting companionship, friendship, social and emotional support (Coleman, 1993; Coleman and Iso-Ahola, 1993; Arai and Pedlar, 1997; Hemingway, 1999).

“Identity formation and affirmation theory” defines a set of meanings applied to the self in a social role or situation, defining what it means to be who one is in that role and situation (Burke and Tully, 1977). The theory suggests that regular participation in leisure activities maintains a source of pride and self-worth by offering a context for many types of meaningful experiences that provide unique opportunities for commitment and effort (Iwasaki, 2007; Haggard and Williams, 1992; Csikszentmihalyi and Hunter, 2003; Caldwell, 2005; Stebbins, 2001; Heo et al., 2010). Leisure contributes to personal enrichment by creating and expressing identities, seeking confirmation in personal beliefs to build steady self-views that provide a sense of stability and generate positive emotions (Burke, 2004). Leisure activities provide a context for establishing and maintaining an affective bond with people with similar interests, beliefs, attitudes and shared goals in order to form close relationships, social interactions and increase social happiness (Tsaur et al., 2012; Ku et al., 2016).
“Personal growth theory” posits that leisure engagement provides the opportunities for self-actualisation, competence and self-esteem, which contribute to feelings of personal control and mastery (Mannell et al., 1988; Mannell, 2007; Gould et al., 2008; Tsaur and Liang, 2008; Stebbins, 2008). Mastery focuses on efforts to overcome challenges, provide learning opportunities, develop skills and achieve a new level of success in leisure activities (Newman et al., 2014). The engagement in meaningful and satisfying leisure activities produces moments of both intense and pure happiness, which become optimal leisure experiences, associated with self-actualisation (Ryff, 1989). Csikzentmihalyi (1990, 2009) describes these optimal experiences as “flow” - a state of consciousness when a person is intrinsically motivated, completely involved, satisfied with challenging and personally meaningful leisure activities (Csikzentmihalyi and LeFevre, 1989; Ryan and Deci, 2001, 2002). Flow is conceptually linked to serious leisure (e.g. Stebbins, 2005). Many research studies bring these two concepts together in order to produce strong evidence that experiencing the qualities of flow in leisure engagement makes leisure experiences optimal (Heo et al., 2010; Elkington, 2011; Chungsup and Payne, 2016). The state of “flow” occurs when people enjoy the moment, stretch capabilities, learn new skills, increase self-esteem and personal complexity in voluntary efforts to accomplish something difficult and worthwhile. The state of “flow” is achieved when the perceptions of challenges and skills are equally high, giving the optimal leisure experience (figure 15). This can depend on a high level of concentration, clarity of goals, immediate feedback from the activity, deep involvement in the activity, a sense of control, personal expressiveness and forgetting about problems (Csikzentmihalyi and LeFevre, 1989; Elkington, 2011). However, inappropriately high or low levels of leisure challenges and aspirations affect well-being and may lead to boredom (low level of challenges and high level of skills), anxiety (high level of
challenges and low level of skills) or apathy (low level of both challenges and skills) (Csikszentmihalyi, 1990).

![Figure 15. Dimensions of challenge and skill in leisure engagement. Source: Csikszentmihalyi, 1990](image)

Leisure boredom, anxiety and apathy are the negative states of mind that reflect a mismatch between the optimal leisure experiences and the experiences available to the individual (Iso-Ahola and Weissinger, 1987). On the contrary, a high frequency of flow has a positive influence on self-esteem, coping strategies, commitment and motivation to pursue of a meaningful life (Asakawa, 2010).

The optimal leisure experiences contribute and enhance psychological well-being by using various resources:

1) Cognitive resources, which help individuals to adapt to their lives by setting goals, solving problems and process information in order to engage more effectively in future life and leisure activities.
2) Psychological resources, such as optimism, personal control, sense of meaning, competence, happiness, self-awareness, which help people face challenging or threatening events and escape from negative emotions.

3) Physical resources, such as physical health, fitness, mobility, energy are linked to health promotion and support ongoing involvement in everyday and leisure activities.

4) Environmental resources which are external conditions and characteristics, such as access to social, educational, career and leisure opportunities.

5) Social resources, such as communication skills, interpersonal skills, social connectedness and social confidence promote personal development, meaningful social engagement and quality of experiences within specific social situations (Diener et al., 1995; Iso-Ahola and Park, 1996; Csikszentmihalyi, 1999; Hood and Carruthers, 2007).

Developing resources is an important component of Hood and Carruthers’ (2007, p. 310) Leisure Well-Being Model, in which a major premise posits that the type and quality of leisure experience has differential effects on well-being. In particular, the quality of leisure experience can be cultivated and enhanced to support leisure satisfaction and overall well-being by five ways:

1. Savouring leisure is a capacity of leisure to appreciate and enhance positive experiences, which support happiness and well-being. The role of savouring leisure is to pay attention and enhance positive aspects and emotions associated with leisure involvement and purposefully searching for leisure experiences that give positive emotions.
2. Authentic leisure focuses on the role of leisure in providing context for expression of the true self in ways that are consistent with inner thoughts and feelings. This type of leisure has great impact on identity development and authenticity when it provides the context for exploration of interests and personal capacities through regular leisure engagement.

3. Leisure gratifications require a match between skills and challenge, which results in full engagement and absorption in the activity. Leisure experiences are voluntary in nature, optimally challenging, fully engaging.

4. Enjoyable leisure experiences result in personal development in meaningful ways which lead to authentic happiness.

5. Mindful leisure is an experience that facilitates non-judgmental, full engagement and conscious awareness of one’s unfolding present experiences with disengagement from concerns about daily life, the past or future. Mindfulness is an important factor in disengaging individuals from automatic thoughts, habits or unhealthy behaviour patterns and building awareness of the current experience.

Virtuous leisure is based on notions of building a life around one’s strengths and using them to contribute to general well-being. Leisure experiences are most fulfilling and contribute to a life well-lived when they combine a sense of mastery, self-improvement, accomplishment and a sense of purpose. Virtuous leisure is manifested through voluntary work, providing distractions from personal difficulties, increasing positive self-evaluation, positive moods and social integration (Hood and Carruthers, 2007, pp. 310-317).
The Leisure and Well-being Model (Hood and Carruthers, 2007) was used by Anderson and Heyne (2012) to create the Flourishing Through Leisure Model: an ecological extension of the Leisure and Well-being Model. The model is grounded in the ecological approach and demonstrates how the environment or contextual factors contribute to well-being. According to Anderson and Heyne (2012), the model aims to enhance leisure experiences and resources within participants and the environment to increase leisure and life satisfaction. Enhancing leisure experiences of participants involves building skills and knowledge, defined by Hood and Carruthers (2007), such as savouring (attention to the positive aspects of leisure), authentic leisure (reflection of true self in leisure), leisure gratifications (meaningful and rewarding leisure), mindful leisure (awareness of present moment) and virtuous leisure (sense of meaning and contribution). In addition to these areas, the Anderson and Heyne’s (2012, p. 137-138) model outlines other areas like development of interests, preferences, talents, abilities skills and competencies; increased leisure knowledge and awareness to make better choices and decisions for enjoyable experiences; clarification or discovery of aspirations for leisure in order to pursue leisure goals of having fun with family and friends, travelling, having a hobby, contributing to community, belonging to a leisure group. Strengthening environmental resources to enhance leisure experiences involves facilitation of real choices for leisure that are convenient and accessible; facilitation of typical leisure lifestyle rhythms that allow for continuity; facilitation of social support, companionship and friendship; facilitation of an inclusive environment - physically, administratively, and programmatically. The process of enhancing leisure experiences and resources within participants and environment takes place across five life domains:
1) psychological and emotional domain

Facilitation of psychological and emotional strengths in individuals focuses on emotion regulation, self-awareness, self-acceptance and optimism. Facilitation of psychological resources in the environment considers supporting positive behaviours, enhancing natural cues and consequences, creating quiet spaces in public areas, promoting the development of high expectations and positive attitudes.

2) cognitive domain

Facilitation of cognitive strengths in individuals helps thinking and learning. Cognitive strengths include abilities to attend, concentrate, follow directions, remember and solve problems. Facilitation of resources in the environment to build cognitive strengths involves using environmental cues and prompts that promote stimulating and novel involvement in leisure experiences, adapting activities and equipment, modifying the environment and creating quiet spaces to support cognitive abilities.

3) social domain

Social strengths can be facilitated through communication skills, interpersonal skills, leadership, citizenship skills and social confidence. Enhancing environmental resources to build social strengths focuses on fostering inclusivity and diversity, creating opportunities for engagement in meaningful social roles, providing staff training, and developing peer and social support networks.

4) physical domain

Physical strengths can be facilitated through physical activity skills, mobility, fitness and vitality. Facilitation of resources in the environment to build physical strengths includes creating safe environments, designing accessible recreation amenities, adapting activities and equipment, providing equitable resource distribution, and developing home and community recreation resources.
5) spiritual domain

Spiritual strengths can be fostered through inspiration, self-actualisation, peace of mind, reflection, wisdom, sense of meaning and purpose. Enhancing resources in the environment to build spiritual strengths includes facilitating access to nature, quiet spaces and aesthetically pleasing environments, facilitating access to communities of worship and meditation, and developing cultures of hope, support, and encouragement (Anderson and Heyne, 2012; Heyne and Anderson, 2012).

Anderson and Heyne (2012, 2016) proposed that when all dimensions were optimally facilitated within individuals and their environment, the enjoyable leisure experiences had the power to enhance leisure well-being through enjoyment in leisure experiences, psychological well-being through perceived control, cognitive well-being through focused thinking and learning, social well-being through sense of belonging, physical well-being through vitality and fitness, and spiritual well-being through sense of purpose and harmony, that in the long term leads to a flourishing life.

Leisure is an important element of a personal life associated with relaxation and freedom from obligations, especially when compared to the seriousness, obligation and importance of paid employment (Iwasaki et al., 2005; Purrington and Hickerson, 2013). It enables people to recover from fatigue, relief from boredom, develop skills and discover abilities that would otherwise be unused, remain hidden and even suppressed (Roberts, 2006). In addition, leisure keeps individuals together by socialisation, facilitating social bonding, community development, promoting collective aims and constructing social identities (Frey and Dickens, 1990; Grazia, 1994; Arai and Pedlar, 1997; Hemingway, 1999). As a result of mediating leisure freedom-constraints, enhancing leisure experiences, and developing resources, participation in leisure
becomes an important aspect of life with its own rules, rituals and social world, which improves an individual’s well-being (Argyle, 1996; Kyle and Chick, 2002).

2.6. **CHAPTER SUMMARY**

The purpose of the review was to connect this research study to the on-going discourse in the literature on the role of social and environmental influences on leisure walking and their relationships with well-being. The increasing interest of academics and general populations in leisure walking provides the opportunity for this research to compare two leisure walking activities - rambling and Nordic walking.

Leisure walking has been confirmed to provide enjoyment with natural environments and satisfaction with social aspects of group walking, which contribute to well-being. However, the research into Nordic walking as a form of leisure and its benefits on well-being is still non-existent in the academic literature. In addition, the matters of social and environmental influences on Nordic walking are under-researched. Based on these gaps in the literature, there is a need to gain a deeper understanding how social and environmental factors influence participation and leisure experiences in Nordic walking and in what way these experiences are beneficial for mental well-being. By doing so, this research study will fill the existing gap in knowledge with regards to social and environmental influences on engagement in Nordic walking, leisure experiences and contributions to mental well-being by investigating and comparing Nordic walking and rambling, as examples of leisure walking.
CHAPTER 3

METHODOLOGY OF THE RESEARCH

The purpose of this chapter is to outline the methodological approach I adopted for this research study. Given the empirical evidence of the relationship between leisure activities and well-being in the previous chapters, in this chapter I present the type of research inquiry, research design, procedures of data collection and sampling I employed in this study to gain a deeper understanding of how leisure walking activities influence mental well-being. The ethical considerations for undertaking this study are outlined as a conclusion of this chapter.

3.1. RESEARCH PARADIGM

A paradigm is an established academic approach that guides the researcher to embrace specific design and methods in the research (Tashakkori and Teddlie, 1998; Creswell, 2009). In other words, it is an understanding of what one can know about something and how one can gather knowledge about it (Grix, 2004). In the past, a “paradigm war” was fought concerning the superiority of one of the two major social science approaches - positivist and constructivist. Positivists believed that there was a single objective reality (ontology) that existed independently of human perception (epistemology). The positivist paradigm based knowledge on the experiences through the senses developed through observations and experiments. The positivist researchers used a deductive approach, that tested theories and hypotheses, and employed quantitative methods, which aimed to measure and analyse causal relationships between variables (Creswell, 1994; Sale et al., 2008). In contrast, the constructivist approach proposed that there were
multiple realities (ontology) socially constructed by individuals (epistemology). Constructivist researchers used qualitative research methods to explore the in-depth personal meanings, experiences, and employed inductive logic in which rich, context-bound information emerged from informants and led to theories that helped explain the phenomenon (Creswell, 1994).

As a result of the paradigm war, the alternative – pragmatic approach was introduced. The word pragmatism comes from the Greek words: “pragma” - “a fact” and “prasso” – “practice” (Giacobbi et al, 2005). Pragmatists argue that there is a continuum between objective and subjective viewpoints. Thus, qualitative and quantitative methods are compatible and can be combined in a single study (Tashakkori and Teddlie, 2008).

Creswell (2009, p. 10-11) stated that pragmatism is not committed to any of the systems of philosophy or reality. Hence, truth and knowledge are equivalent to the consequences that derive from integrations. Giacobbi and colleagues (2005) advocated that a key premise of the pragmatic approach was to,

“... deny there is a single reality and see no way for scientists or others to determine whether their theories are closer to the truth than their colleagues. For these reasons, the pragmatic researcher abandons discussions that concern the correspondence of the theory and reality in favour of dialogues where the value of different types of knowledge are viewed as tools to produce anticipated and desired outcomes” (Giacobbi et al., 2005, p. 20).

As a result, the pragmatic researcher places the research problem and specific research questions of “what”, “why” and “how” as central, applying all data collection and analysis methods, which appear to be best suited to understand and provide insight into the phenomenon without getting caught up in philosophical debates about which is the
best approach (Tashakkori and Teddlie, 1998; Creswell, 2009). Pragmatism provides the philosophical framework for mixed-methods research as it offers the best understanding of a problem or phenomenon that does not fit comfortably with only quantitative or qualitative approaches (Armitage, 2007). Mixed-methods approaches draw on both quantitative and qualitative studies, matching the research questions with the methods of inquiry in order to provide the best understanding of the research problem (Creswell, 2009).

Having considered its merits, I chose pragmatism as the research philosophy of science that underlies my study. The pragmatic philosophy allowed me to mix different research methods and techniques, data sources and methodological analysis to study the research problem, interpret the results and answer the research questions. In addition, choosing the mixed-method design as a research approach for this study presented the opportunity for overcoming the weaknesses of a singular method, since quantitative research does not investigate personal stories and meanings of individuals and qualitative research does not enable generalisation from a small group to a large population (Creswell, 2015).

3.1.1. MIXED-METHOD APPROACH TO WRITING

There is a distinction between the dominant perspectives of quantitative and qualitative writing and their implications for mixed methods authorship. A writer’s voice is reflected in their perspective of writing - subjective or objective. These two perspectives may conjoin in a single piece. Often, mixed method texts include the blend of voices where the author changes between using the intimate first-person perspective and objectively distanced third-person in a single piece of writing (Zhou and Hall, 2016). The goal of the mixed method writer is to communicate meanings as effectively as
possible to tell the research story. In this way, the writing of mixed methods research can reflect one of the purposes of conducting this type of research - its complimentary nature as one mode of writing strengthens and compliments the other’s shortcomings. In quantitative writing, the goal is objectivity and generalizability. Such writing is useful in implying theory, preserving participants’ anonymity and indicating replication of experiments. In qualitative writing, the goal is to present personal, individualised experiences and the use of the personal pronoun “I” is essential to the approach. The research story telling depends on the researcher’s knowledge of the literature regarding the phenomenon under enquiry, through listening and hearing personal experiences and their own reflexivity during the process (Wertz et al., 2011). Therefore, given the dualistic positioning of mixed method work, the mixed methods audience must be able to understand both statistical justifications and qualitative descriptions by engaging in text through both first-person and third-person approaches. Zhou and Hall (2016, p. 10) advised on opening a piece to personally invite the reader. Next, they suggested writing an overview of literature in the third person. The actual study can include both, the first person and the third person. Researchers ought to use the active voice to describe the methods employed in the study and employ the third-person approach to convey more objectivity in reporting the findings. Finally in closing the report, the first person may prevail, reminding the reader that the piece was composed by a person with subjective thoughts.
3.2. THE RESEARCH STUDY QUESTIONS AND OBJECTIVES

The role of the research questions is to advocate the study framework, organise the project, provide the direction and show the boundaries of the research. Research methods are tools for answering the research questions that also can indirectly influence the research questions by constraining the research design, sampling and data analysis. A good way to achieve a fit between the research questions and methods is to ensure that the contents of research have the logical priority over the method (Punch, 2000, p. 20-21). With this methodological advice in mind, based on the overall purpose of the research study to explore and compare the benefits of Nordic walking and rambling, as leisure pursuits, and to investigate socio-environmental influences on mental well-being (section 1.5. Chapter 1), the overarching research question for this study was developed:

**How do the leisure experiences in Nordic walking and rambling contribute to mental well-being?**

The overall research question is centred around two broad aims of this study:

- to explore to what degree social and physical environments influence participation in Nordic walking and rambling and in what way these influences are experienced as beneficial for mental well-being,
- to explore the kinds of leisure pursuits in Nordic walking and rambling, in order to understand the dynamics of engaging in leisure walking activities and the distinctness in their contribution to mental well-being.
These extensive aims are answered by accomplishing the following objectives:

- In quantitative studies:
  1. To evaluate the effects of Nordic walking on mental well-being using the Warwick-Edinburgh Mental Well-being Scale (WEMWBS).
  2. To investigate socio-environmental influences on Nordic walking using a specially designed questionnaire.
  3. To evaluate the effects of rambling on mental well-being using the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) and WHO-5 well-being index.
  4. To investigate socio-environmental influences on rambling using a specially designed questionnaire.
  5. To compare socio-environmental influences on Nordic Walking and rambling, using a specially designed questionnaire.
  6. To compare the effects of Nordic walking and rambling on mental well-being, using Warwick-Edinburgh Mental Well-being Scale (WEMWBS).

- In qualitative studies:
  7. To explore what socio-environmental factors contribute to the leisure experiences in Nordic walking, using semi-structured interviews.
  8. To explicate how leisure pursuits in Nordic walking benefit mental well-being, using semi-structured interviews.
  9. To explore what socio-environmental factors contribute to the leisure experiences in rambling, using semi-structured interviews.
  10. To explicate how leisure pursuits in rambling benefit mental well-being, using semi-structured interviews.
11. To compare the beneficial aspects of Nordic walking and rambling on mental well-being, using the leisure theories.

- In mixed method studies:

12. To examine to what extent the qualitative results confirm and clarify the quantitative results in the Nordic walking study.

13. To examine to what extent the qualitative results confirm and clarify the quantitative results in the rambling study.

3.3. RESEARCH DESIGN OF THE STUDY

Research design is an “overarching plan for the collection, measurement and analysis of data” (Gray, 2009, p. 131). Kumar (2005) classified research based on three perspectives: application, objectives and inquiry mode. The most important decision in planning a research study is the choice of a research approach to determine how the information is to be collected, as the selection of the research approach will depend on the nature of the research itself. My study is of an applied type as the research methods were used to collect data about various aspects of the phenomenon for a deeper understanding of the subject. In terms of the study objectives, this study is descriptive and exploratory, since it is based on collecting various data, which aim to describe and explore the research subject, which is little known (Yin, 2003). According to Schell (1992) the descriptive study may be exploratory if relatively little research has been done in the area, or it may be illustrative of the aspects thought to be representative or typical. In terms of the inquiry mode, the design of this research project is based on the mixed methods approach. This approach combines a collection and analysis of both qualitative and quantitative data in a single study where neither type of data is linked to any particular inquiry paradigm (Gray, 2009). The mixed method design might be
drawn from the “within methods” approach, based on combining different methods from the same, either qualitative or quantitative approach or the “between methods”, which combines both qualitative and quantitative approaches (Creswell, 1994). In addition, within various mixed-method approaches, there are different classifications of the mixed method designs:

- **Sequential/ two phase studies** - a researcher first conducts qualitative then quantitative studies or vice versa. These two phases of data collection are separable.
- **Parallel/ simultaneous design** - a researcher conducts both qualitative studies and quantitative studies at the same time.
- **Equivalent status design** - a researcher conducts a study using both qualitative and quantitative approaches equally to understand the phenomenon
- **Dominant- less dominant studies** - a researcher conducts a study within a single dominant paradigm with a small component of the overall study drawn from an alternative design (Creswell, 1994, 2009).

Based on these categories, this particular research is categorised as a “between methods” approach with an equivalent and concurrent design. In this study, the overarching research question led to three specific research sub-studies 1) a qualitative and quantitative investigation into Nordic walking 2) a qualitative and quantitative investigation into rambling, 3) a comparative analysis of Nordic walking and rambling studies’ results, which are reflected in the research questions outlined in the previous section.

Qualitative and quantitative methods were combined equally to examine both the number and nature of the same phenomenon and offer an insight into a case from
different angles, extend experience and increase conviction about the subject that may not be achieved by a singular approach (Yin, 2003; Ritchie and Lewis, 2003).

Figure 16. Qualitative and quantitative methods used equally and in parallel.

The strength of the quantitative method lies in collecting structured quantifiable data from large numbers of populations who are known to be representative. In addition, the quantitative information can be measured and compared between the cases (Bryman, 1996). In contrast, the qualitative approach provides an opportunity for the detailed investigation of personal experiences and meanings, which is difficult to capture using quantitative methods. In this research project, a combination of the quantitative and qualitative data sources aimed to improve consistency and accuracy of the findings. Providing a complete overview of the phenomenon and joining the lines of enquiry that point to the same conclusions or findings, lead to “triangulation”. The purpose of triangulation is to strengthen the multimethod design by providing a confidence of the research findings and uncovering the deviant dimensions of the phenomenon (Greene et al., 1989; Jick, 2008). Tashakkori and Teddlie (1998) distinguished four common types of triangulation:

- data triangulation, which involves time, space and people;
- investigator triangulation that involves multiple researchers;
- theory triangulation that uses more than one theoretical perspective to interpret phenomenon;
methodological triangulation, which involves using more than one data collection method.

In addition, the methodological triangulation can be categorised as a “within method” triangulation - a comparison of multiple qualitative or quantitative approaches and an “across method” triangulation - an integration of qualitative and quantitative data (Brannen, 1995; Tashakkori and Teddlie, 1998). Apart from triangulation, there are other benefits of adopting mixed methods research, such as complementarity, development, initiation and expansion (Greene et al., 1989). Complementarity seeks elaboration, enhancement and illustration of the results from one method with the results from the other. It uses different methods to measure overlapping but also different facets of the phenomena. Development refers to using sequentially quantitative and qualitative methods, in which the first method helps develop the second one. Initiation involves the discovery of new perspectives and paradox with recasting of the questions or results from one method with the questions and results from the other. Expansion relates to the extension of the research inquiry by using different research methods. This particular study attempts to seek complementarity and triangulation to “increase the validity of constructs and inquiry results by maximising the heterogeneity of irrelevant sources of variance, capitalising on inherent methods strengths and counteracting inherent bias in methods and other sources” (Greene et al., 1989, p. 259). The overall purpose of the research study is to investigate the relationships between personal, social and environmental factors and walking experiences to discover how they influence mental well-being, utilising both quantitative and qualitative data. By employing “across methods” triangulation, I am able to consider different dimensions of the
subject under study, compare findings obtained through various instruments. In the final stages it allows me to provide a mutual confirmation, which also increased the meaningfulness and validity of the research findings. In addition, employing complementarity of the mixed method design in the study allows for clarifying and supporting the results from the quantitative studies with narratives from the qualitative studies. In order to collect data necessary to answer the research questions, the procedures for quantitative and qualitative data collection were established as presented in table 1.

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<th>PROCEDURES OF DATA COLLECTION</th>
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<tr>
<td><strong>PILOT STUDY</strong></td>
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<tr>
<td><strong>Quantitative data</strong></td>
</tr>
<tr>
<td>Close-ended surveys</td>
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<tr>
<td>(15 Nordic walking practitioners)</td>
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<td><strong>MAIN STUDY</strong></td>
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<tr>
<td><strong>Quantitative data</strong></td>
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<td>Close-ended online surveys</td>
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<tr>
<td>Nordic walking practitioners</td>
</tr>
<tr>
<td>(220)</td>
</tr>
<tr>
<td>Nordic walking practitioners (12)</td>
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<tr>
<td>Dr C. Hughes</td>
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</table>

Table 1. Procedures of data collection
The data collection began with two pilot studies. I conducted a quantitative pilot with fifteen individuals from “Active Living” a Wigan group, who participated in weekly walks in Three Sisters Park in Ashton-in-Makerfield (Wigan borough) from 27th April 2012 to 20th July 2012. During that period, I distributed three close-ended questionnaires with the Short Warwick Edinburgh Mental Well-Being Scale (SWEMWBS) (Appendix 1). The aim of the study was to assess the adequacy of the research design and suitability of the mental well-being scale for the main study data collection.

A qualitative pilot study consisted of open-ended questionnaires (Appendix 2) distributed to an international group of fourteen Nordic walking instructors from September 2012 to December 2012. My decision to select open-ended questionnaires as the instrument for the pilot study was based on the lack of interest in participation in interviews from local groups of Nordic walking practitioners after my first attempt of gathering data. The aim of this study was to verify the quality and coherence at questions for the interviewing process and explore various aspects of the relationship between Nordic walking and mental well-being. The main procedures of the data collection took place from April 2013 to August 2014 and began with collection of quantitative data from the British Nordic walking population. However, I had a concern that the data collected only from Nordic walking practitioners may not be satisfactory for generating reliable knowledge and drawing the conclusions about the beneficial influences of Nordic walking on mental well-being. This concern led to including a second group of walkers - ramblers as a group for the comparison of the study findings. Therefore, the same qualitative and quantitative methods of data collection were used for both walking groups for understanding of how various leisure walking activities influence mental well-being and in order to ensure the significance, reliability and
trustworthiness of the results. The main quantitative study consisted of two similar sets of close-ended questionnaires designed for Nordic walking practitioners (Appendix 3) and ramblers (Appendix 4). The aim of the study was to investigate the relationships between personal, social and environmental factors that influenced participation in walking activities and individual state of health and mental well-being. The main qualitative study focused on conducting semi-structured interviews with Nordic walking practitioners (Appendix 5) and ramblers (Appendix 6). The objective of this qualitative study was to obtain an in-depth insight into the leisure experiences and the role of socio-environmental factors in rambling and Nordic walking. In total, twelve Nordic walking practitioners and thirteen ramblers participated in the interviews. When the data collection process ended, I conducted several comparative quantitative and qualitative analyses. At first, the data analyses for each of the qualitative and quantitative studies were conducted separately, and then related one to another with the purpose of triangulation and complementarity. The quantitative data from the online surveys assessed the mental well-being of both groups, identified correlations between particular personal, social and environmental factors and walking activities. The qualitative data from the semi-structured interviews with British Nordic walking practitioners and ramblers explored the individual meanings of the leisure walking activities and the role of personal and socio-environmental influences on mental well-being. Furthermore, a part of the research was conducted in Finland during an Erasmus student exchange program between January and May of 2013. Spending a semester in the “home country” of Nordic walking gave me an opportunity to investigate the history and various aspects of Nordic walking from its origins to its more recent worldwide expansion to achieve a better understanding of the Nordic walking status and serve as a step in the comparative study of Nordic walking and rambling. During that time, I collected data on the origins,
history and promotion of Nordic walking. By doing so I aimed to provide a far greater insight and understanding of the innovation of Nordic walking through progression and promotion of the activity. I obtained information during a face-to-face, in-depth audio recorded interview with Mr Aki Karihtala – the former Senior Vice President of Exel and the International Nordic Walking Federation (INWA), which took place on 22\textsuperscript{nd} February 2013 in Helsinki, Finland (Appendix 7), and a series of conversations with Dr Birgitta Sandberg, a Post-Doctoral Researcher at the University of Turku, Finland from March to May 2013. On 24\textsuperscript{th} January 2014, I conducted an additional audio recorded face-to-face, in-depth interview with Dr Catherine Hughes - director of British Nordic Walking in Nottingham, obtaining information about the introduction and development of Nordic walking in the United Kingdom (Appendix 8).

The topics for each conversation with Nordic walking professionals were agreed before audio-recording and included: origins, history, current status and future of Nordic walking, Nordic walking equipment (walking poles) and benefits of Nordic walking. The unstructured character of the interview processes also intended to discuss other topics related to Nordic walking, which were important and relevant for the interviewees. During the final stage of my study, I conducted the comparative analysis. All empirical findings from Nordic walking and rambling studies were integrated to achieve methodological triangulation and complementarity of the results. My study aimed to reveal whether there was an overarching motivation for well-being between the Nordic walking practitioners and ramblers, and to construct new knowledge with regards to how these two leisure walking practices contribute to mental well-being.
3.4. SAMPLING PROCESS AND STUDY PARTICIPANTS

One of the main concerns of social research is to make sure that enough data are collected in a constant manner to secure the reliability and validity of the study. There are two kinds of sampling techniques available: probability and non-probability. Probability sampling is based on the idea that chosen people, as a sample, are a representative cross-section of the population (Tashakkori and Teddlie, 1998). Non-probability sampling is a method of selecting a sample when the researcher feels it is not feasible to include a sufficiently large number of examples in the study and there is not sufficient information about the population (Kumar, 2005; Denscombe, 2007).

The character of this study called for choosing a non-probability sampling method. Therefore, I needed to establish the general characteristics of the targeted population. The selective process aimed at reaching men and women who practice Nordic walking and rambling and met the following criteria:

- U.K. residents,
- in the case of Nordic walking, members of one of the British Nordic walking organisations,
- in the case of rambling, adults who were members of the Ramblers’ Association,
- adults preferably aged 50+. In the case of ramblers, 20-30 and 30-40 years old rambling groups were excluded from the data collection procedures. The age limitation was introduced so the results of this study could be representative of the British rambling population as a whole (see: Sport England, 2009; Ramblers Association, 2010b).

Since the data collection process was divided into two parts: online surveys and semi-structure interviews, the non-probability sampling methods and sample sizes were different for each part of the study. For the purposes of the quantitative studies,
I chose a purposive sampling method to recruit participants. The purposive sampling involved selecting people who met the aforementioned criteria to produce the most valuable data for the purpose of the comparison between the walking groups. Brewer and Hunter (1989) stated that purposeful sampling relies on the researcher’s theoretical and empirical understanding of the particular research subject since the theoretically significant units tend to be included in the research. In the study, I targeted the specific populations of Nordic walking and rambling practitioners that were thought to be more likely to engage and explore their own thoughts and feelings as a result of their primary interest. In the quantitative studies, I e-mailed invitations to participate in the surveys to Nordic walking instructors, using two Nordic walking organisations’ databases and chairmen of local rambling groups via the Ramblers’ Association list of all local rambling groups in the United Kingdom. I strived to obtain as wide a spread of individuals as possible. I contacted Nordic walking instructors. Ramblers were asked to forward the email with participant information about the research, the invitation and the link to the online surveys to all group members. In total, 220 Nordic walking practitioners and 288 ramblers completed the online surveys. For the qualitative studies, I chose a convenience sampling method. This type of sampling is based on participants’ availability, ease of data collection and limited resources available. In the qualitative studies, I approached Nordic walking practitioners and Ramblers during several walking festivals in the summer of 2014, in the United Kingdom. The qualitative method of data collection consisted of undertaking semi-structured interviews with the events’ participants. In total I interviewed 13 ramblers and 12 Nordic walking practitioners. The detailed sampling process for each study is presented in the following chapters.
3.5. EVALUATION OF THE MIXED-METHOD RESEARCH STUDY

Evaluating the quality of the research study involves judging how reliable and valid the data collection and analysis are. In this study, I employed both quantitative and qualitative methods, so the different criteria for the evaluation were used. In the quantitative study, validity and reliability are evaluative criteria to ensure objectivity of the research. Validity refers to the solid representation of a phenomenon with the research findings, and it is represented by face, criterion, construct, content, concurrent, convergent, discriminant, predictive and statistical criteria (Bryman and Crammer 2005; Gray, 2009). Reliability is concerned with the consistency of the findings and their replication on different occasions using the same methods (Plano-Clark and Creswell 2008). Reliability has two different criteria - internal and external. External reliability requires that the same measurement instruments yield consistent results over repeated observations or measurements under the same conditions each time. Internal reliability measures the consistency of results across items with the scale (Bryman and Crammer 2005; Creswell, 2009).

In the qualitative research, the findings are evaluated by their trustworthiness and authenticity, which replace validity and reliability of the quantitative study. Trustworthiness of results is represented by four criteria: credibility, transferability, dependability and confirmability. This thesis uses a combination of qualitative and quantitative studies which have the potential to achieve the methodological triangulation of the findings. Combining the quantitative and qualitative approaches as different ways of examining the same research problem (between methods triangulation) can reduce the bias of one measure and enhance the generalisation of findings, if they provide mutual confirmation. In addition, crosschecking findings that emerge from quantitative and qualitative data enhances internal validity (Greene et al.,
1989; Bryman, 1996). Furthermore, attaining clarification of the results from the qualitative and quantitative methods (complementarity) increases interpretability and meaningfulness of the findings. Therefore, using the mixed method approach in the study aims to provide a platform to achieve the consistency in findings and increase the validity of the research.

3.5.1. Reliability and Validity

In order to satisfy the criterion of reliability (i.e. replication), I based the selection of items in the study questionnaire on the theoretical foundations of empirical work that underwent several statistical tests for the robustness of the results. Moreover, I tested the internal consistency of WEMWBS. The scores were high (Cronbach’s alpha= 0.913 for the Nordic walking group and Cronbach’s alpha= 0.933 for the rambling group). This suggests that the scale was a reliable instrument for measuring the mental well-being of the study samples. In addition, to ensure the external reliability, I explicitly explained the design of this study and the sequence of approach in the thesis to ensure its repeatability with similar consistency in the measurement, using the same instruments. However, in social sciences there are various factors beyond the control of the researcher, which affect the reliability of the research instrument, such as the wording of questions, as respondents may interpret questions differently, physical settings, respondents’ moods or the nature of interactions (Kumar, 2005). The validity of the study serves the purpose of checking the quality of the data and the accuracy of the results (Plano-Clark and Creswell, 2008). In order to satisfy the criterion of research validity, I assessed content, concurrent and construct validity of this study. Content validity measures to what extent the data provided an adequate sampling of the focal concept. In this study, content validity was addressed by ensuring that the items in the
questionnaire reflected the findings from the previous empirical work in the fields of leisure walking, leisure-time physical activity and Nordic walking. Also, I ensured they were acceptable to respondents as tested in the quantitative pilot study. Concurrent validity is related to comparing the results from an established test instrument, which is given to the same sample at the same time as the questionnaire (Dyer, 2006). In order to fulfil this condition, the online survey distributed to ramblers included two well-being scales (WEMWBS and WHO-5 index) for the assumption of high concurrent validity of the well-being instrument and validity of the findings. Construct validity aims to establish correct operational measures based on theoretical concepts in building a theory. The establishment of construct validity is a complex process and involves several different approaches. Thus, in order to enhance construct validity I decided to use multiple indicators suggested by previous literature in the fields of leisure walking, leisure-time physical activity and Nordic walking to accommodate the complexity of the study.

3.5.2. TRUSTWORTHINESS AND AUTHENTICITY

Trustworthiness is a concept for the assessment of the qualitative research. “It involves efforts to ensure the accuracy and inclusiveness of recordings that the research is based on as well as the effort to test the truthfulness of the analytic claims that are being made about those recordings” (Silverman, 2004, p. 283). Trustworthiness of the qualitative results is represented by four criteria: credibility, transferability, dependability and confirmability. Credibility refers to the internal validity of the research and it is the extent, to which observations represent the social reality. In the qualitative studies, credibility was strengthened by my conscious effort to establish confidence in the accuracy of interpretation by a multi-layered analysis of the interviews. In the
qualitative analyses I first employed the hybrid approach of a deductive and inductive thematic analysis. Then in the last phase I used latent thematic analysis, which focused on examining the underlying ideas and assumptions of the qualitative data. In this process, I move back and forth between the first-level data and general categories that evolved through the theme in order to represent multiple constructions of the social reality given by the research participants, which was reasonably consistent with the themes in previous findings. Transferability focuses on generalisation of the results and determines whether the research findings can relate to other social contexts, when comparing two cases for the similarity (Gray, 2009). In this study, transferability is enhanced by providing an in-depth comparison of participants’ experiences related to two types of leisure walking activities, Nordic walking and rambling. Confirmability assumes that the research findings are not biased but they reflect the research participants’ perspectives. Confirmability of this research study is enhanced by stating explicitly my role as the researcher, who ensures to maintain a neutral role during the process of collecting data, avoided leading questions during the interviews, recorded interviews with participants’ permission, transcribed all the conversations carefully and applied a consistent coding method throughout the data analysis. Authenticity refers to stability of the qualitative findings, which can be improved by various types of triangulation (Gray, 2009). The qualitative studies aim to achieve the methodological triangulation and complementarity. Therefore, all information was collected from the two groups of the participants, using the same interviewing method. Gathered data allowed for different dimensions of the problems to be considered to enhance the authenticity of the research findings.
3.5.3. *The weakness of the mixed methods research study*

Section 3.3 discussed the benefits of mixed methods research. However, this approach also has some weaknesses in the research design, data collection and analysis processes. Firstly, the mixed-method design is more expensive and more time consuming than single qualitative or quantitative methods. Secondly, it requires a high level of skill and experience to undertake each part of the research and integrate them. Plano-Clark and Creswell (2008) suggested that it was better to conduct a mixed methods study with a research team that consisted of the qualitative and quantitative methods experts. This mixed-method research project was carried out by a single researcher. Hence, it may not fully achieve the purposes that the researcher expected. However, in order to overcome the possible weaknesses of this mixed-method study I was supervised by the academics experienced in both, quantitative and qualitative research methodologies and techniques. In addition, while conducting the study, I continued to improve my research skills by undertaking self-training for the qualitative and quantitative methods.

Another significant problem of the mixed-method design is the integration of the qualitative and quantitative data findings. Gray (2009, p. 215) explained that sometimes discrepancies in the research findings emerge due to the wording of questions since qualitative methods use open-ended questions whereas quantitative ones try to produce numerical responses, which add more complexity rather than validation and congruence of the findings. According to Bryman (2007), barriers in integrating the qualitative and quantitative findings can be grouped in three categories:
- barriers related to the intrinsic aspects of the qualitative and quantitative methods,
- barriers related to the institutional context of a mixed-methods research,
- barriers related to the skills and preferences of the researcher.

The first category of barriers refers to dominant and sequential types of mixed-method studies, in which it may be difficult to integrate the two parts of the research. The second category refers to various preferences of the audience who may have biases or prefer one research to the other. The third barrier includes methodological preferences and skills of the researcher who may view one type of the research study as more interesting than the other may. The main purpose of the study is to combine the results of the quantitative and qualitative studies to provide multiple perspectives on the walking activities. The integration of the Nordic walking and rambling findings are presented in sections 5.3 and 6.3 of the thesis. I follow the guidance step-by-step (Creswell, 2015, p. 85), using a side-by-side table for exploring and comparing the socio-environmental influences on Nordic walking and rambling, leisure pursuits and their benefits on mental well-being. The integration of quantitative and qualitative findings aims to overcome the limitation of using singular methods and achieve a maximum integration in conducting a concurrent mixed-methods study.
3.6. ETHICS

In this study, I implemented the University of Bolton Code of Practice for Research Students and Supervisors (Board of Studies for Research Degrees, 2005) and University Code of Practice on Ethical Standards for Research Involving Human Participants (Board of Studies for Research Degrees, 2006) in order to ensure ethical conduct of the research. In addition, prior to the commencement of this study, I submitted an ethics application (RE1) to the School Research Ethics Officer and the project was granted ethical approval. During the process of data collection, I operated in an honest and open manner with respect to the investigation, avoiding deception. I used no persuasion to recruit the study participants and none of the participants were forced into helping me with this research. I ensured I clearly explained the purpose of the study, expectations about participants’ contribution, informed consent, the right to withdraw from the study, confidentiality and security of data to all participants in the participation information sheet in the pilot studies (Appendix 1 and 2) and during the main data collection process. In the case of online surveys, I included all information in the emails with the invitation to the surveys and the introductory explanation when voluntarily completing the survey (Appendix 3 and 4). Completion of the survey was considered as informed consent. In the case of interviewees, in addition to a written copy of the Participation Information Sheet handed out before the interview, I gave a verbal explanation and obtained informed verbal consent to record the conversations from all participants (Appendix 5 and 6). At all times, it was made clear that the interviewees could withdraw from the study at any stage. In relation to confidentiality and anonymity, I assured all participants of the confidentiality of the research data and the safety of stored data. All information and notes I collected during this study were stored in accordance to the Data Protection Act, 1998 and the University of Bolton policy. In addition, it was
reinforced that the information provided during the interviews and the participants would be guaranteed anonymity. Thus, the names of participants do not appear throughout the thesis. They are catalogued by the use of letters in the pilot study and letters and numbers in the main studies. With the regards to the use of Warwick-Edinburgh Mental Well-Being Scale (WEMWBS), I was granted the authors’ approval after completing the “Initial information sheet for users of WEMWBS”.

3.7. CHAPTER SUMMARY

In this chapter I presented the methodological choices that guided this research study. Firstly, I described the research paradigm and the rationale for adoption of a mixed-methods design for the study. Then, I outlined the overall procedure of this study. Based on the research purposes and overall research question, I designed the simultaneous, equivalent mixed-methods study. In addition, the explicit description of the methods for sampling, data collection and analysis enabled me to reveal different aspects of the leisure walking practices. Integral to the methodological discussion was the consideration of the reliability and validity of this study. The chapter concluded with addressing the ethical issues of voluntary participation, confidentiality and the security of the collected data.
CHAPTER 4

PILOT STUDIES

This chapter presents the design of the pre-testing stage for the data collection process. Two pilot studies were used to test the design and questions. Pilot studies are recommended for any type of research as they assess the adequacy of the research design and instruments used and help to uncover some insights that previously may not have been apparent (Denzin and Lincoln, 1998). In my research study, the pilot surveys helped me with the choice of sampling methods, size of samples and reduction of non-response rates.

4.1. PILOT CLOSE-ENDED QUESTIONNAIRES

The selected instrument for piloting the main data collection was a survey, which involved a systematic collection of data by close-ended questionnaires. The first pilot survey consisted of three close-ended questionnaires distributed to the same group of the research participants over a period of twelve weeks. The initial questionnaire, conducted on 27th April 2012, consisted of categorical questions regarding socio-economic characteristics (age, gender, marital status and employment status), and motives for Nordic walking and other types of physical activities practiced in participants’ free time. The ordinal questions aimed to assess length of practicing Nordic walking and perceived health status. In the mid-time survey, conducted on 8th June 2012, the participants were asked to indicate the strength of agreement or disagreement with the statements regarding perceived changes in mood, health and physical performance since starting their participation in the Nordic walking sessions.
The final survey, conducted on July 20\textsuperscript{th}, 2012, included questions that assessed socio-environmental factors, such as weather, location, access and aesthetics of venue, family, friends and community support, which may have influenced regular participation in Nordic walking sessions. In addition, all close-ended surveys included the Short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS) in order to measure the participants’ mental well-being. All surveys concluded with a request to provide dates of birth, which were used to marry the questionnaires to the respondents during data analysis in order to evaluate potential changes in mental well-being over time (Appendix 1).

4.1.1. PARTICIPANTS AND PROCEDURES

As introduced in section 3.5.1 in Chapter Three, the data were collected from fifteen participants from the “Active Living” Wigan group, who took part in weekly walks at the Three Sisters Park, Ashton-in-Makerfield in Wigan Borough. I approached the Nordic walking group on 20\textsuperscript{th} April 2012, a week before administering the initial questionnaire, to introduce myself, the research topic and objectives. The longitudinal pilot study was conducted over 12 weeks. All participants were provided with an information sheet attached to the questionnaires, which included a brief description of the research study, an explanation of the survey purpose and my contact details. In addition, I provided the information about voluntary completion of the questionnaires, assurance of privacy, anonymity and confidentiality of the respondents. All questionnaires were administered and collected personally in order to establish a direct contact with the research participants and to discuss any queries during pilot surveying.
4.1.2. PILOT STUDY RESULTS AND RECOMMENDATIONS

Dyer (2006) reported that longitudinal surveys have two disadvantages. Firstly, unpredicted events may introduce a confounding influence to the results. Secondly, the initial sample may be reduced over time, which affects the character of sample and compromises the comparability of the results. The procedures of collecting and analysing questionnaires from the same group of Nordic walking practitioners in order to record potential changes in individual mental well-being was unsuccessful due to missing data. Nordic walking sessions were free and open for everyone. Therefore, it was difficult to administer and collect questionnaires from the same group of people to gain satisfactory data due to the Nordic walking practitioners’ irregular participation patterns. I was able to record changes of only three participants who took part in two consecutive surveys. None of the walkers took part in all three surveys. Therefore, I decided not to use a longitudinal method of data collection as it proved unreliable in the given fieldwork settings. Another issue was the process of survey distribution. The initial questionnaire was administered after the Nordic walking session, and due to bad weather conditions, the participants took their questionnaires home. However, most questionnaires were not returned during the next session. Therefore, I asked participants to complete the second and final questionnaires immediately after Nordic walking sessions, providing them with pads and pens. Despite this, many participants were unwilling to stay after sessions to complete the forms. As a result, the overall response rate in the group was low. In general, conducting a longitudinal survey on a group of Nordic walking practitioners was a very useful experience as it offered me an opportunity to improve my study methodology, to test the mental well-being scale, to
develop questions, and choose another sampling method and a different way of collecting data.

As a result, I outlined the alterations for the main quantitative study as follows:

- Using the standard 14-item WEMWBS instead of the 7-item version as the official users’ guide provided guidelines and validation only for the full WEMWBS.

- Choosing a cross-sectional design instead of a longitudinal design. The new questionnaire aimed to capture the state of mental well-being of Nordic walking practitioners, which is more time and data efficient.

- Using purposive sampling instead of a convenience sampling method, which involved selecting people who met the aforementioned criteria to produce the most valuable data. Purposive sampling relies on the researcher’s theoretical and empirical understanding of the particular research subject and thus, can succeed in achieving a true cross-section of a population (Gray, 2009).

- Development of an online survey instead of self-administered questionnaires. The benefits of the Internet-based questionnaire lie in the access to a larger and geographically diverse sample in a relatively short time with low amounts of labour and cost, and it also preserves the anonymity of participants (e.g. Stieger and Reips, 2008).
4.2. PILOT OPEN-ENDED QUESTIONNAIRES

The choice of open-ended questionnaire as a research instrument for the qualitative pilot study was dictated by no-responses from over thirty local Nordic walking practitioners. I conducted the questionnaire with a group of International Nordic walking instructors from September 2012 to December 2012. The purpose of open-ended questions was to simulate the interview questions since the procedures for developing questionnaires and interviews are similar. Kumar (2005) explained differences between these two methods of data collection:

“In questionnaires, respondents read the questions, interpret what is expected and then write down the answers. During an interview the researcher asks questions and records respondents’ replies. However, in the case of questionnaires there is no one to explain the meaning of questions to respondents, so it is important that questions are clear and easy to understand” (Kumar, 2005, p. 126).

The aim of the study was to explore various aspects of Nordic walking related to motivation, participation in the activity and influences on well-being. Also, the pilot study allowed for testing the clarity and coherence of questions for the interviewing process, improving wording and altering questions for the main data collection. The questionnaire consisted of seventeen questions grouped in five sections. The first part of the questionnaire included categorical questions, which described participants’ socio-demographic characteristics (age, gender, nationality, marital status and employment
status) (Appendix 2). The second part collected information about career background, motives for practicing Nordic walking, and becoming a Nordic walking instructor. Next, respondents shared information about the Nordic walking groups, means of advertising and promoting Nordic walking in their local communities. The third part investigated perceived differences between ordinary walking and Nordic walking and the potential benefits of Nordic walking on mental well-being. The fourth part focused on perceived social and environmental barriers that may have affected regular participation and enjoyment in Nordic walking. The questionnaire concluded with a request to share comments and opinions on the other aspects of Nordic walking.

4.2.1. PARTICIPANTS AND PROCEDURES
A low response rate from British Nordic walking practitioners who agreed to participate in the qualitative pilot study was the reason for approaching an international group of Nordic walking instructors. The Nordic walking instructors were contacted electronically via the INWA instructor database and LinkedIn.com website, and sent an introductory email, in which I introduced myself, described the study, its purposes and requested those interested to respond to the message. All instructors interested in the study received a written open-ended questionnaire in a word.doc format including a research information sheet. Both documents were in English. The information sheet included the purpose of the study, a broad indication of what the survey covered, my contact details and assurances of confidentiality and anonymity. The participants were asked to complete the questionnaire to the best of their knowledge on the subjects. To retain respondents’ anonymity the questionnaires were identified by the dates of completion. For further anonymity, I then replaced the dates with capital letters.
4.2.2. DATA ANALYSIS

The questionnaires were imported to qualitative-data-management software MAXQDA 10 (VERBI, 2010) and thematically analysed. Thematic analysis provides a robust, systematic framework for coding qualitative data and for then using that coding to identify patterns across the dataset (Braun and Clarke, 2014, p. 1-2). This type of analysis organises and reports patterns in data. As a qualified Nordic walking instructor, I ensured that my personal bias and subjective views needed to be eliminated from the analysis in order to achieve as high a degree of objectivity as possible. Therefore, I began analysing data with multiple reading and re-reading of the text in order to become familiar with the data. Next, I identified and coded recurring phrases and keywords in the text. The highlighted fragments of text were organised into potential themes.

The analysis provided four themes:

1) characteristics of Nordic walking,
2) motives for Nordic walking,
3) social aspects of Nordic walking,
4) barriers to Nordic walking.

The subsequent step of the analysis focused on reviewing and refining the themes, and identifying the sub-themes. When the themes and sub-themes were refined, I generated a thematic map of the data analysis (table 2).

Readers must note that, although each theme is presented separately, they are not mutually exclusive. The broad nature of the topic means that the themes are interlinked.
<table>
<thead>
<tr>
<th>Main themes</th>
<th>Sub-themes</th>
<th>Sub-themes</th>
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<tbody>
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<td>Physical therapy</td>
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<td>Suitable for everyone</td>
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<td></td>
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<td><em>Extensive socialising during workout</em></td>
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</table>

Table 2. Summary of a coding frame.
4.2.3. PILOT STUDY FINDINGS

Socio-demographic characteristics

The detailed socio-demographic characteristics of the study participants, including gender, nationality, age group, career background and length of employment as a Nordic walking instructor are presented in table 3.

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<tr>
<th>No.</th>
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<th>Nationality</th>
<th>Age group</th>
<th>Years as instructor</th>
<th>Career Background</th>
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<td>40 - 49</td>
<td>1-2 years</td>
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<td>Up to 1 year</td>
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<td>3-4 years</td>
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<tr>
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<td>40 - 49</td>
<td>2-3 years</td>
<td>Communication</td>
</tr>
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<td>Male</td>
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<td>Less than 40</td>
<td>2-3 years</td>
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</tr>
<tr>
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<td>More than 5</td>
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<tr>
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<td>50 - 59</td>
<td>1-2 years</td>
<td>Marketing and sales</td>
</tr>
<tr>
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<td>Male</td>
<td>British</td>
<td>More than 70</td>
<td>2-3 years</td>
<td>Engineering</td>
</tr>
</tbody>
</table>

Table 3. Socio-demographic characteristics of Nordic walking instructors
Fourteen Nordic walking instructors responded and completed the open-ended questionnaires. The sample comprised of nine females and five males. Eleven participants were married and three were single. In terms of age, three participants were under 40 years old, three were in the 40-49 age group, five participants were in the 50-59 age group, one participant was in the 60-69 age group and two participants were over 70 years old (figure 17).

![Figure 17. Age of Nordic walking instructors](image)

Eight participants had their own Nordic walking businesses, four respondents were in employment and two were retired (figure 18).

![Figure 18. Employment status of Nordic walking instructors](image)
In terms of professional involvement, one participant was a Nordic walking instructor for less than 1 year, two were instructors for 1-2 years, four participants were instructors for 2-3 years, two participants were instructors for 3-4 years and five participants were instructors for more than 5 years (figure 19).

![Figure 19: Length of employment as Nordic walking instructors](image)

**Theme 1: Characteristics of Nordic walking**

All instructors perceived Nordic walking as an “inclusive activity” and “suitable for everyone” regardless of age, fitness and health status. As a Canadian instructor stated: “all ages that can walk qualify. Those who choose walking as their form of exercise” (M). Nordic walking practice varies from social to competitive modes and it can be practiced at three levels of advancement depending on health needs and the stamina of practitioners. A German instructor explained that “with Nordic walking, unless your doctor says no, there is no reason that you cannot participate at your own speed and pace. What you put in is what you get out” (I). According to the instructors, the most common group that practiced Nordic walking were a “mixture of mums, self-employed and retired ladies with ages ranging from 38-71” and older people with “an average age above 60”. Moreover, a few instructors from the USA and France offered Nordic
walking sessions to children and adolescents. “I made an initiation to 13 years old people at school. It was really appreciated, a great experience” (J).

The activity offers all practitioners “a full body workout, which burns more calories and takes all the stress and strain off the joints”. Also, it is an effective workout due to the active use of specially designed walking poles, which as many participants stated “give walking a purpose”. For many, the walking poles offered benefits of coordination and synchronisation, “they gave purpose and rhythm to the walk and more length and speed to the steps” (K). The use of poles in Nordic walking also benefits coordination and synchronisation, it reduces the impact on the joints, allowing for walking faster and longer without feeling tired “It gives a purpose to walking, helps those with balance and joint problems to walk further” (L).

According to the instructors, walking with poles was more effective than ordinary walking by bringing instant physical and mental benefits of exercising. “Everyone feels the benefits right away and from that comes confidence” (B). Participants disclosed that they felt the difference in intensity and body engagement in Nordic walking. “A full body workout by using your arms; you can get faster and go longer distances as you increase your walks” (E). Furthermore, many instructors stated that the increased intensity and body engagement in Nordic walking allowed practitioners to achieve health and fitness related goals. In particular, a Dutch instructor who was a physiotherapist recommended the activity to his patients “I find it a good method to let my patients exercise and get a better physical condition. It decreases the weight on the joints and therefore can be done by people with joint problems” (H). Another British instructor viewed Nordic walking as a valid form of rehabilitation for the cancer patients. “My fellow instructor runs a special session at a cancer rehab unit once a week
which is funded by the charity itself. She sees this to be where Nordic walking can do the most good” (A).

Achieving health and fitness related goals through Nordic walking were sources of overall happiness and satisfaction for all practitioners. As a Dutch instructor stated: “I had some patients who couldn’t walk well in normal life. With Nordic walking, they found that they can walk longer distances, also walking without the poles improved. They were very happy about that” (H).

**Theme 2. Motives for Nordic walking**

The common motivation for participation in Nordic walking was a mixture of extrinsic type of motivations, which referred to body-related motives, such as health and fitness. Several participants stated that they viewed it as beneficial for “developing fitness” and “started Nordic walking for their own health and wellness benefits”. Others took up Nordic walking as an alternative exercise to running and cycling in order to exercise the whole body. An American instructor practiced Nordic walking to maintain fitness throughout the year “I’m an avid cross country skier, and it seemed a natural fit to me, especially given its roots in Nordic skiing” (F).

Nordic walking is frequently used as a form of physical activity in rehabilitation programs. Therefore, several respondents stated that they started practicing Nordic walking as a rehabilitation activity to recover from various leg injuries. A British instructor said: “I had fallen down a pot hole running and badly damaged my ankle so I wanted something that I could do to get my weight off without damaging myself again” (C). Furthermore, Nordic walking was perceived as an opportunity for a leisure career. Many practitioners started Nordic walking in order to share its health and fitness benefits and encourage people to be more physically active. “To pass on my knowledge
to others and to get people of all ages to become fitter and to keep mobile after injury, surgery and getting older” (E). A few respondents were motivated by personal factors, such as passion for Nordic walking. “It was the next logical step in my love of the activity and my professional life” (B).

In many countries, the activity seemed to be commercialised and Nordic walking instructors acted as the main distributors of the Nordic walking poles. Therefore, for several instructors the main motivation for practicing Nordic walking were many external rewards, such as financial gains. The main reason for becoming instructors was to “promote the Nordic walking poles business” and “reach a larger number of customers”. In other cases, the local organisations were in need of Nordic walking instructors to develop a Nordic walking instructor network and promote the activity in local communities. A Danish instructor became engaged with the activity when “The National Association of Elderly (AeldreSagen) needed voluntary instructors and arranged professional courses” (D).

**Theme 3. Social aspects of Nordic walking**

Nordic walking is a group activity that allows social interactions. Instructors reported that the activity was “very sociable” and the most beneficial aspect of Nordic walking was the opportunity for “conviviality, group sharing experience” whilst exercising. “They can have a good chat and feel like they have had a good workout” (K). Moreover, social relationships formed during Nordic walking were important for many adults and motivated them for regular participation, which in turn strengthened friendships, stimulated emotional closeness and a sense of belonging to a group.
Group Nordic walks created supportive sociality, which for many participants developed beyond the workout and became a centre of their social lives. “I know that it has helped increase people’s social circle, which has led to holidays together, dog sitting, coffees etc., so I think it has helped quality of life as well” (K). Many Nordic walking practitioners became close friends and did other things together, which improved their social lives and diminished feelings of loneliness. “It is very sociable, and, I have found that people who are now on their own (lost a partner) got the opportunity to make new friends and not be on their own” (E).

Furthermore, close emotional bonds between the practitioners in a group enhanced feelings of mental relaxation and enjoyment by not worrying about their physical appearance during the workout. “My walkers tell me they feel relaxed when they walk not worrying that anyone is judging them looking at their weight etc. They can just go out for an enjoyable walk and chat whilst burning calories” (C).

The importance of the social aspect in Nordic walking can also be noticed in the promotion of the activity, which tended to focus on a word-of-mouth communication between the Nordic walking practitioners and non-practitioners. A British instructor recalled that he was introduced to Nordic walking when “walking a 47 mile charity walk, and I was getting a swollen ankle due to a metal plate in my let, so a friend recommended Nordic Walking” (E). The respondents disclosed that they often learnt about the activity and its benefits through their friends and family members who had already practiced Nordic walking. A British instructor recalled: “My family in Germany do Nordic walking regularly and introduced me to it in 2005” (N). Peer recommendation is a successful form of Nordic walking promotion due to the informative role of instructors whose key role is to share their knowledge and promote the activity. The instructors also advise on specifications of Nordic walking equipment,
technique and health benefits of the activity. “The first time I heard about Nordic walking was from a Nordic walking instructor who invited me to try” (G).

Theme 4. Barriers to Nordic walking

In terms of the perceived constraints to Nordic walking, three types of barriers were identified: environmental, social and psychological.

Environmental barriers to Nordic walking referred to the weather and seasonal conditions, which prevented participation in the activity. According to the American instructor, “weather is the No. 1 obstacle in maintaining a Nordic walking program” (F). Similarly, a British instructor stated that “weather has been our biggest barrier this year. A poor summer and all the flooding through the winter has meant I have had to cancel walks due to severe weather warnings” (C). In addition, darkness during the autumn and winter months prevented Nordic walking practitioners from using the walking poles correctly.

A: “When the evenings get dark it is hard to Nordic walk due to not being able to walk on grass. In the dark you only want to walk on lit pavements but a lot of people prefer grass walking as they can use the poles properly”.

Another environmental barrier to Nordic walking was access to aesthetically pleasing natural environments. The instructors noted that walking in the same settings prevented them from enjoying the workout in the long term as walking “the same routes every time is less inspiring”, which may suggest that repetitiveness of the physical environment could negatively influence participation in group Nordic walking sessions.
In terms of social influences, according to the respondents, social support and companionship were important positive aspects of the activity. However, a few instructors claimed that socialising as a key motivation for participation in Nordic walking, might have been detrimental to achieving health benefits from the activity. “As a group of instructors… we have found that they don’t want to do any strength drills with tubes or things like that, they just like to walk and have a good chat” (K). In particular, extensive socialising between adults during Nordic walking practice prevented practitioners from focusing on correct walking technique, which resulted in not getting the full workout and reducing health benefits from the activity.

D: “I seem to detect many participants’ superficial wish to partake in an activity, that they can speak about with family and friends as well as pretend to be active, rather than engage in a real effort to improve health and strength”.

Psychological barriers to Nordic walking referred to a lack of common awareness of Nordic walking and its health benefits, as well as a negative image of walking with poles. In this study many instructors stated that walking with poles had an unattractive image, especially amongst the British general population. “British people do not like to look silly, hence not willing to Nordic Walk, understanding that it is not just for older people, poles are not walking sticks” (L).

Correspondingly, Shove and Pantzar (2005) stated that in the United Kingdom, there is a misunderstanding of the use of Nordic walking poles during a group workout on flat surroundings, which cause a psychological barrier to Nordic walking and discouraging people to take up the activity and exercise in public spaces.
4.2.4. DISCUSSION

The suitability of Nordic walking was seen as wide-ranging and depended on personal capabilities, interests, as well as physical and social needs. The study’s findings suggested that in general, participation in the activity was driven by the autonomous forms of extrinsic motivation (Ryan and Deci, 2000), since the majority of participants recognised the core values of health and fitness benefits of Nordic walking (e.g. Piotrowska, 2011). Moreover, this pilot study supported the previous research advocating that Nordic walking is beneficial for people in rehabilitation programs, recovering from leg injuries and those who looked for an alternative exercise to running or cycling (e.g. Sprod et al., 2005; Knobloch and Vogt, 2006; Hagen et al., 2011; Morgulec-Adamowicz et al. 2011). Furthermore, the previous research also suggested that the activity was beneficial for female breast cancer survivors of all ages, where the need for conditioning of the upper body seems apparent (e.g. Sprod et al., 2005; Fischer et al., 2015). The physical benefits of Nordic walking were found in an active and correct use of the walking poles, which added speed and distance to the workout routine. The literature indicates that due to the active use of poles, Nordic walking participants engage the upper and lower body in the workout. The correct walking technique reduces the impact of walking on the knees and increases the exercise intensity without raising perceived exertion compared to ordinary walking, which allows for feelings of the instant fitness benefit of exercising, resulting in faster and longer strides (e.g. Kukkonen-Harjula et al., 2007; Breyer et al., 2010). Hence, Nordic walking is often recommended to older people as a safe form of exercising in order to maintain levels of physical activity and retain health. Kukkonen-Harjula and colleagues (2007) suggested that Nordic Walking was considered as one of the fastest growing forms of recreation especially among middle-aged and elderly adults. In this study, participation in Nordic
walking was seen as an opportunity for a new leisure career in personal training or sport equipment distribution. The passion for the activity and pursuit of a career in leisure, which is developed through progression in skills, knowledge and abilities related to the participation in the activity, indicates a commitment and affective attachment, which is associated with the concept of serious leisure (e.g., Stebbins, 2008; Heo et al., 2013).

In terms of social influences on participation in Nordic walking, the findings of this pilot study suggested that Nordic walking was a highly sociable activity, in which companionship and friendship were important for practitioners. The social world of Nordic walking was enhanced by close social bonds within walking groups and sharing positive experiences that helped strengthen a sense of belonging and diminish feelings of loneliness. Companionship and friendship in a group were important positive aspects of Nordic walking, which grew beyond the activity participation, and helped to improve the social well-being of practitioners. This adds to the academic literature proposing that companionship and social support are the strongest influences on participation in physical activity (e.g., Stahl et al., 2001; Staats and Hartig, 2004; Courneya et al., 2000; Fletcher et al., 2008; Mathews et al., 2010). However, a few instructors reported that extensive socialising between the participants, undermined getting further health benefits from the activity. Nevertheless, the social benefits of Nordic walking tended to outweigh its shortcomings. In particular, the social support of Nordic walking instructors was an important factor for initial and regular activity participation when facing the psychological barrier of an unattractive image of walking with poles. The role of instructors was to provide a friendly atmosphere and positive feedback, which aimed to diminish the mental barrier to Nordic walking and provide satisfaction in the activity (Gotowski and Zurawik, 2013). Nordic walking instructors shared their knowledge on the benefits of walking with poles, and created a supportive and friendly environment, in
which practitioners felt comfortable and relaxed. In terms of the environmental barriers to Nordic walking, the weather and seasonal conditions were the most common obstacle against regular participation, which corresponds with several studies that acknowledged the weather and seasonal aspects of the natural environment as negative effects on the levels of outdoor activities (e.g. Rutt and Coleman, 2005; McGinn et al., 2007). An additional environmental barrier reported by the instructors was access to diverse natural environments. Similar conclusions were drawn from the study conducted by Kassavou and colleagues (2015), who argued that repetitiveness of the environmental stimuli tended to negatively influence participation in walking.

In conclusion, in this pilot study an ecological perspective for investigating the participation in Nordic walking explored various individual, social, and environmental variables. At an individual level, the main motives for engagement in Nordic walking referred to health and fitness benefits of the activity. Social influences on participation in the activity were linked to companionship and friendship in a group, as well as the social support of Nordic walking instructors. Environmental factors affecting participation in Nordic walking were associated with the diversity of built and natural environments. Therefore, by considering personal and socio-environmental influences on activity engagement, this study suggested that Nordic walking was found to bring instant physical and social benefits of outdoor exercising.

4.2.5. Pilot Study Limitations and Recommendations

This pilot study is one of the first to examine potential relationships between Nordic walking socio-environmental influences and well-being. This study had several limitations. This research study provides descriptive accounts of a very small number of international Nordic walking instructors, who had a subjective view of the activity.
Thus, the experiences and perceptions of fourteen instructors may not reflect the experiences of other Nordic walking instructors and practitioners and should not be generalised to a wider population of Nordic walking practitioners. In addition, selection bias could potentially exist within the sample, because recruitment of participants depended on voluntary participation. It is possible that different results might emerge if non-volunteer individuals shared their experiences and knowledge on the subject. Finally, although I offered an interpretation of the data, my interpretation was subjective and readers are also able to draw their own conclusions.

The objective of the study was to explore various aspects that enhanced or hindered experiences of engagement in Nordic walking in order to test the quality and coherence of questions for the interviewing process in the qualitative research study into Nordic walking. Despite methodological limitations, this pilot study suggested that Nordic walking was viewed as a suitable activity for everyone who searched for an opportunity for exercising with the intention for socialising and improving health. This pilot study helped with developing topics and categories for the interviewing process. The additional recommendations were made as follows:

1) semi-structured interviews. This design offers flexibility, and depending on the answers, the order of questions may change, some questions may be omitted and other added to explore the topics of discussion.

2) Convenience sampling instead of purposive sampling method, which is based on restricted availability of the study participants.

This is one of the first studies to examine the potential relationship between Nordic walking and mental well-being. The results indicate that an important aspect of Nordic walking is building and maintaining strong social relationships within the group, which
offer social and emotional support. The findings are based on opinions of Nordic walking instructors, but it may be premature to reach definitive conclusions.

4.3. CHAPTER SUMMARY

The quantitative and qualitative pilot studies were conducted to test their effectiveness with regards to the survey design, categories of questions, sampling methods and size of samples. Having analysed their usefulness for the main stage of data collection, the following general recommendations were made:

- That a cross-sectional design be adopted for the main studies.
- That questionnaires be administered via the Internet for the main quantitative study.
- That purposive sampling is used for the quantitative data collection.
- Semi-structured interviews to be used for the qualitative study.
- Convenience sampling to be chosen for the qualitative data collection.

Moreover, by considering socio-environmental influences on individual participation in Nordic walking, these preliminary findings helped in the development of the main themes for the interviewing process. Therefore, in the next step of my research, my task is to establish whether issues identified in this study apply more generally to a wider selection of Nordic walking practitioners.
CHAPTER 5

QUANTITATIVE AND QUALITATIVE INVESTIGATIONS INTO NORDIC WALKING AND MENTAL WELL-BEING

In this chapter I address the design of the study into Nordic walking and mental well-being. I provide a comprehensive picture about how I analysed the quantitative and qualitative data from British Nordic walking practitioners in order to determine the effects of the activity on mental well-being and the significant socio-environmental influences for engaging in Nordic walking in accordance with the study objectives. The chapter concludes by comparing the results with the existing literature.

5.1. QUANTITATIVE STUDY INTO NORDIC WALKING

In order to collect cross-sectional data, I used a close-ended questionnaire. Creswell (2009) suggests that questionnaires are an appropriate method for collecting data from a large number of research participants in an unobtrusive manner, whilst reducing researcher bias. The information gathered from questionnaires is categorised as factual data, which reveal opinions or personal attitudes (Denscombe, 2007). Closed-ended questionnaires are straightforward and easily turned into quantitative data that can be analysed statistically. The advantages of close-ended questionnaires are standardisation of questions; ability to reach large number of respondents at low cost; anonymity of respondents; lack of interviewer bias and straightforward data analysis (Oppenheim, 2003; Gillham, 2007).
5.1.1. Design of the Questionnaire

The online survey consisted of five main parts (Appendix 3):

1. Introduction

The introduction included the name of the survey, introduction to the study, purpose of the study, request for help in the research by completing the questionnaire, broad indication of what the questionnaire covered, my own contact details together with the assurance of confidence and anonymity.

2. Socio-demographic data

Socio-demographic information, such as age, gender, marital status and employment status was collected as nominal data. I used a specific rationale to develop the age categories. The age groups corresponded with the empirical knowledge confirmed by scientific findings of Breuer and colleagues (2011), Knapik and colleagues (2014) and Ossowski and colleagues (2014), which suggested that Nordic walking was a popular activity among older (50+) adults. Next, I gathered the data on the individual length of engagement in Nordic walking practice, motives for Nordic walking and other types of walking activities practiced in leisure time. The questions regarding motives for practicing Nordic walking (i.e. improving health, weight control, socialising, improving mood and improving longevity) were adapted from the works of: (Burton et al, 2005; Blacklock et al, 2007; Litt et al, 2011; Davies et al, 2012 & Ferrand et al, 2012). The categories for other types of walking activities practiced in free time were designed to highlight the overlaps between Nordic walking and rambling groups.
3. Socio-environmental influences on regular participation in Nordic walking

I employed an ordinal scale to assess the role of social and environmental factors that affected individual participation in Nordic walking. In this section, respondents indicated the level of agreement and disagreement with seven statements regarding the degree of importance of weather, location, access, aesthetics, family and friends support, using a Likert scale: 1 (definitely yes) to 5 (definitely not). The statements were adapted from previous academic works on the ecological approach to participation in physical activity (e.g. Humpel et al., 2004; Ball et al., 2007; Cerin et al., 2010).

4. Perception of individual health, mood and physical activity.

I used an ordinal scale to self-assess the participants’ physical and mental health. The respondents indicated to which extend Nordic walking affected their perception of health, mood and fitness, using a Likert scale: 1 (definitely yes) to 5 (definitely not). The participants also rated their health on a scale from 1 (very poor) to 5 (very good).

5. Mental Well-being Scale

The last section of the questionnaire included the Warwick Edinburgh Mental Well-being Scale (WEMWBS), which contained 14 statements reported to measure the concept of mental well-being. The respondents rated each statement on a 5-item a Likert scale from 1 (none of the time) to 5 (all of the time). The questionnaire concluded with an expression of thanks for participation in the study.
5.1.1.1. Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

There is increasing interest in the concept of positive mental health and its contribution to all aspects of human life. Existing instruments have different conceptualisations of well-being (Tennant et al., 2007). The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) was developed to measure the positive mental well-being of groups of adults across Europe (Maheswaran et al., 2012). The WEMWBS was based on the Affectometer 2, a 20-item scale to measure mental well-being, which was developed in New Zealand and validated in the United Kingdom. The new scale was refined to 14 items and validated on a student sample from Warwick University and the University of Edinburgh with a student sample of 348, and a general Scottish population sample of 1749 (Tennant et al., 2007). The Warwick-Edinburgh Mental Well-Being Scale was funded by the Scottish Executive National Programme for improving mental health and well-being, commissioned by NHS Health Scotland, developed by the University of Warwick and University of Edinburgh, and it is jointly owned by NHS Health Scotland, the University of Warwick and the University of Edinburgh. The scale consists of 14 positively worded statements, which assess positive affect (optimism, relaxation, cheerfulness), interpersonal relationships, positive functioning (energy, self-acceptance, clear thinking), positive development, competence and autonomy in the general population (Stewart-Brown et al., 2009). However, a limitation of WEMWBS lies in the absence of items relating to spirituality and purpose in life. The scale is easy to administer. Individuals are asked to tick boxes that best describe experiences in the previous two weeks. WEMWBS differs from other scales of mental health as it covers only positive aspects of mental well-being. Scoring consists of a 5-point Likert scale (1 = none of the time, 2 = rarely, 3 = some of the time, 4 = often, 5 = all of the time).
overall score of WEMWBS is calculated by totalling the scores for each item with equal weights, and the total scores range from 14 to 70 and higher scores correspond with higher levels of mental well-being (Tennant et al., 2007; Stewart-Brown et al., 2008, 2009). The WEMWBS results should be presented as a mean score for the population of interest with either a standard deviation or a 95% confidence interval. In general, the Scottish population sample of 1749, which is taken as a baseline measurement for all studies, had a mean result of 50.7.

WEMWBS scores followed a fairly normal distribution with only a slight right skew (Figure 20), which means that WEMWBS can capture the full spectrum of positive mental health without showing ceiling effects in population samples (Stewart-Brown et al., 2008). Although, for practical purposes a sample of 100 participants is considered adequate for a power of 80%, a significance level of 0.05, a standard deviation of 8.8 and a target difference of 5 points (Stewart-Brown et al., 2008).

![Figure 20. Distribution of WEMWBS scores for general population. Source: Stewart-Brown and Janmohamed, 2008.](image)
In a general population study (n=1749), significant differences with marital status were found as married participants or those living as a couple had significantly higher mental well-being scores than widowed, divorced and separated groups. Higher scores were noted for owner-occupiers than those who rented their homes (p<0.01). Unemployed participants reported significantly lower mental well-being scores than those working or studying (p<0.01), although no significant differences were found between those who were retired compared to each of the other four employment categories (Stewart-Brown et al., 2008). In addition, significant differences in mental well-being were found for each of the five categories of self-perceived health status ranging from very good to very poor. No significant patterns were found between mental well-being scores and gross household income per annum or age at terminating education. Moreover, there were no significant differences between age and gender, as men did not score significantly higher on WEMWBS scores than women. Although, a U-shaped relationship was found for the age category for the participants aged 16-24 and 55-74 the scores were higher.

WEMWBS seems to have good face validity covering a large concept of eudemonic and hedonic well-being. Internal consistency and stability were shown to be good (Cronbach’s alpha=0.91) suggesting its length may be reduced to a shorter seven-item version of scale. Stewart-Brown and colleagues (2009) using Rasch analysis found that the Short Warwick Edinburgh Mental Well-being Scale (SWEMWBS) showed robust measurement properties.

WEMWBS has been used in the Scottish Health Survey (Rutherford, 2012) to measure the population’s well-being since the scale was first included in the survey in 2008. Figures for 2008 to 2012 were fairly stable and there were no significant changes in the
mean WEMWBS scores for that period. The changes of means scores are presented in table 4:

<table>
<thead>
<tr>
<th>WEMWBS</th>
<th>2008*</th>
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<th>2009</th>
<th>2010</th>
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<tr>
<td>N</td>
<td>1749</td>
<td>5812</td>
<td>6868</td>
<td>6649</td>
<td>6731</td>
<td>4319</td>
</tr>
<tr>
<td>Mean</td>
<td>50.7</td>
<td>50.0</td>
<td>49.7</td>
<td>49.9</td>
<td>49.9</td>
<td>49.9</td>
</tr>
<tr>
<td>SD</td>
<td>8.79</td>
<td>8.52</td>
<td>8.28</td>
<td>8.54</td>
<td>8.36</td>
<td>8.50</td>
</tr>
</tbody>
</table>

*WEMWBS users’ guide


The rationale for choosing WEMWBS as a prime instrument for measuring mental well-being of the participants lay in the numerous strengths of the scale, its focus on positive wording, short length, simple administration, and scoring. The additional factor for choosing the scale was the stability of the results over time and its validation on a large group of the British population.

5.1.2. PROCEDURES OF DATA COLLECTION

The quantitative data were collected from a group of British Nordic walking practitioners from April 2013 to December 2013. I chose a purposeful sampling method as it drew upon a specific group of practitioners. This type of non-probability sampling offered me the most useful data for the analysis of the relationships between the activity and mental well-being. The detailed rationale for choosing a purposeful sampling for recruiting the study participants was explained in section 3.4 of Chapter Three.

I contacted Nordic walking instructors via email using the British Nordic walking and the Nordic walking UK online databases and asked them to forward the email with participant information about the research and invitation to a survey to their Nordic
walking practitioners. In total, two hundred twenty Nordic walking practitioners completed the online survey on a voluntary basis.

5.1.2.1. INTERNET-BASED METHOD OF DATA COLLECTION

The questionnaire was administered online using the Qualtrics.com website. The benefits of the online surveying lay in the access to a large number of participants from rare populations in a relatively short time with low amounts of labour and cost, and the anonymity of participants (Birnbaum and Reips, 2005; Stieger and Reips, 2008). Internet-based surveys have been used to collect quantitative data from participants for more than a decade (Stieger and Reips, 2008) and nowadays they are the most commonly used web-based assessment method as they are easily constructed, conducted and evaluated. The process of web-based data collection can be described as placing surveys in websites, which are available to participants via the Internet. These web pages are hosted (stored) on any server connected the World Wide Web. Internet-based psychological tests are considered a specific subtype of web surveying, which involves psychometric measurements (Reips, 2012). The internet-based methods are becoming more frequent compared to conventional methodologies of data collection as they offer various benefits for the researcher, such as:

- The ease of access to a large number of demographically and culturally diverse participants, as well as rare and specific populations.
- Truly voluntary participation,
- Avoidance of time constraints,
- Avoidance of organisational problems, such as scheduling difficulties
- Cost saving
- Better generalisability of findings,
- Greater external validity
- Greater visibility of a research process
- Heightened public control of the ethical standards (Reips, 2008; Reips and Krantz, 2010)

However, there are a number of concerns associated with using the Internet for the data collection, such as sample bias, measurement error, non-respond rates, technical problems and ethical issues (Reips, 2006; Hooley et al., 2012). For example, Internet-based surveys may be biased towards the participants who have access to the Internet, visited the website and chose to respond to the questionnaire (Dyer, 2006). Moreover, the data quality can be influenced by the degree of anonymity, real and perceived privacy and trust, especially when investigating sensitive topics. All these concerns threaten the validity and quality of online versions of surveys. Despite these disadvantages, web-based survey results are directly comparable to the results of traditional pencil-paper surveys. The study conducted by Riva and colleagues (2003) suggested that the Internet-based assessment in psychological research can be a suitable alternative to more traditional paper-based or computer-based measures. Furthermore, Howell et al.’s (2010) study on validation of well-being and happiness surveys for online administration indicated that the results from the Internet-based surveys had similar results to paper-based versions. These findings were taken as support for the reliability, validity and generalisability of the Internet-based Nordic walking and mental well-being survey used in this study.
5.1.3. **DATA ANALYSIS**

This section examines the data sets of the Nordic walking group using descriptive and inferential statistics. Descriptive statistics present the information in terms of means, standard deviations etc. Inferential statistics try to draw conclusions beyond the data by employing the different statistical tests for various levels of measurements (Gray, 2009). In this study, most of the data are of a nominal and ordinal kind. I used non-parametric tests for the statistical analyses. The main statistical non-parametric test employed was Chi-square – \( \chi^2 \), which assessed the relationships between nominal independent variables and dependent variables. The calculation of chi square (\( \chi^2 \)) is based on square differences between the observed (O) and expected (E) frequencies, divided by E.

\[
\chi^2 = \sum \frac{(O - E)^2}{E}
\]

This calculation provides an identification of how much each frequency contributes to the overall association between the variables. If O and E are of the same values, there is no association between the variables. The larger extent to which they are different indicates the stronger association (Blaikie, 2003).

For testing the significant differences between the means of the two groups, I used the t-test for independent samples. This test determines if the means of two unrelated samples differ by comparing differences between two means with the standard error of the difference in the means of different samples. This is done by using Levene’s test for the equality of variances, which measures the difference in the variances of the two samples. If Levene’s test is significant (\( p<0.05 \)) then the variances are unequal and the separate variance estimate is used to calculate a t value. If Levene’s test is not significant (\( p>0.05 \)), the variances are equal then the pooled variance estimate is
employed to calculate the $t$ value (Bryman and Cramer 2005, pp. 176-177). By employing a one-way analysis of variance (ANOVA), I tested the significance of the differences between scores for three or more groups, and the Kruskal-Wallis ANOVA analysed non-parametric variables (Bryman and Cramer, 2005). The test allows for a comparison of the means of ordinal variables for more than three groups. In this study, the Kruskal-Wallis test determined the significant differences between the categories of perceived health and the mean ratings of the respondents’ WEMWBS scores. I performed all statistical analyses using SPSS v.20 (IBM, 2011). When interpreting the results, the key figure is the significance level which measures the probability value ($p$), associated with test statistic. The value of probability ranges from 0 to 1 and indicates the likelihood of the results arising by chance (Dierker, 2013).
5.1.4. Results

A total of 220 British Nordic walking practitioners completed the online questionnaire.

The sample consisted of 45 (20%) males and 175 females (80%) (table 5).

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>175</td>
<td>80%</td>
</tr>
<tr>
<td>Men</td>
<td>45</td>
<td>20%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>220</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 5. Gender of Nordic walking practitioners

The age group distribution, presented in table 6 and figure 21, revealed that 117 (53%) participants were less than 60 years old and 103 (47%) were found in the older age groups (more than 60 years old).

<table>
<thead>
<tr>
<th>Age</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 50</td>
<td>55</td>
<td>25%</td>
</tr>
<tr>
<td>50-59</td>
<td>62</td>
<td>28%</td>
</tr>
<tr>
<td>60-69</td>
<td>75</td>
<td>34%</td>
</tr>
<tr>
<td>70-79</td>
<td>24</td>
<td>11%</td>
</tr>
<tr>
<td>More than 80</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>220</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 6. Age group of Nordic walking practitioners

Figure 21. Age group of Nordic walking practitioners
The marital status of the respondents consisted mostly of married people (71%).

The detailed description is presented in table 7 and figure 22.

<table>
<thead>
<tr>
<th>Marital status</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>21</td>
<td>10%</td>
</tr>
<tr>
<td>Married</td>
<td>157</td>
<td>71%</td>
</tr>
<tr>
<td>Divorced</td>
<td>20</td>
<td>9%</td>
</tr>
<tr>
<td>Widow(er)</td>
<td>14</td>
<td>6%</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>220</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 7. Marital status of Nordic walking practitioners

![Figure 22. Marital status of Nordic walking practitioners](image)
In terms of employment, the sample mostly consisted of retired (43%) and employed (30%) Nordic walking practitioners. The detailed description is presented in table 8 and figure 23.

<table>
<thead>
<tr>
<th>Employment status</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployed</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Employed</td>
<td>66</td>
<td>30%</td>
</tr>
<tr>
<td>Own business</td>
<td>43</td>
<td>19%</td>
</tr>
<tr>
<td>Retired</td>
<td>94</td>
<td>43%</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>6%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>220</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Table 8. Employment status of Nordic walking practitioners

Figure 23. Employment status of Nordic walking practitioners
In terms of length of engagement with Nordic walking, 123 (56%) participants had practised Nordic walking for less than 4 years and 95 (44%) participants had practiced Nordic walking for more than 4 years (table 9 and figure 24).

<table>
<thead>
<tr>
<th>Engagement</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>38</td>
<td>17%</td>
</tr>
<tr>
<td>1-2 years</td>
<td>32</td>
<td>15%</td>
</tr>
<tr>
<td>2-3 years</td>
<td>26</td>
<td>12%</td>
</tr>
<tr>
<td>3-4 years</td>
<td>27</td>
<td>12%</td>
</tr>
<tr>
<td>More than 4 years</td>
<td>95</td>
<td>44%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>218</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Table 9. Length of Nordic walking engagement

![Pie chart showing the percentage distribution of Nordic walking engagement](image)

Figure 24. Length of Nordic walking engagement
The results in table 10 and figure 25 show the other types of walking the respondents practiced in their leisure time. Half of participants practiced general leisure walking (in parks, forests etc), a quarter of respondents belonged to rambling clubs, 9% practiced other types of walking, such as for transport or utilitarian purposes. Only 6% only practiced Nordic walking on its own.

<table>
<thead>
<tr>
<th>Walking activities</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leisure walking</td>
<td>111</td>
<td>51%</td>
</tr>
<tr>
<td>Rambling</td>
<td>54</td>
<td>25%</td>
</tr>
<tr>
<td>Other type of walking</td>
<td>19</td>
<td>9%</td>
</tr>
<tr>
<td>Only Nordic walking</td>
<td>12</td>
<td>6%</td>
</tr>
</tbody>
</table>

Table 10. Other types of leisure walking activities

Figure 25. Other types of leisure walking activities

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In terms of perceived health status, the majority of the respondents regarded themselves as in very good (52%) health. Less than a half of the sample (45%) considered their health as good (24%) or average (21%). Only 3% considered their health as poor (table 11, figure 26).

<table>
<thead>
<tr>
<th>Health status</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>9</td>
<td>3%</td>
</tr>
<tr>
<td>Average</td>
<td>45</td>
<td>21%</td>
</tr>
<tr>
<td>Good</td>
<td>114</td>
<td>52%</td>
</tr>
<tr>
<td>Very Good</td>
<td>52</td>
<td>24%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>220</td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Table 11. Perceived health status of Nordic walking practitioners

![Figure 26](image-url). Perceived health status of Nordic walking practitioners
OBJECTIVE 1: TO EVALUATE THE EFFECTS OF NORDIC WALKING ON MENTAL WELL-BEING, USING THE WARWICK-EDINBURGH MENTAL WELL-BEING SCALE (WEMWBS)

The WEMWBS was completed by 220 British Nordic walking practitioners. As I explained in detail in section 5.1.1.1., the instrument was designed to measure the positive mental well-being of groups of adults. The WEMWBS results are presented as a mean score for the population, which range from 14 to 70 and higher scores correspond with higher levels of mental well-being. The results in table 12 and figure 27 indicated that on average Nordic walking practitioners had higher mental well-being (m=52.35, SD= 7.64) than the general population (m=49.9, SD= 8.50) in 2012 (see p. 155).

<table>
<thead>
<tr>
<th></th>
<th>Nordic walking (N=220)</th>
<th>General population (N=4319)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>52.35</td>
<td>49.9</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>7.64</td>
<td>8.50</td>
</tr>
</tbody>
</table>

Table 12. Comparison of WEMWBS scores between Nordic walking practitioners and general population.

Figure 27. Distribution of WEMWBS scores frequencies for Nordic walking practitioners.
In terms of gender, male Nordic walking practitioners had higher mental well-being scores than females (table 13).

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male (n=45)</th>
<th>Female (n=175)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>53.09</td>
<td>52.35</td>
</tr>
</tbody>
</table>

Table 13. WEMWBS scores and gender of Nordic walking practitioners

In terms of age, Nordic walking participants in the 70-79 age group had, on average, higher WEMWBS scores than other age groups (table 14).

<table>
<thead>
<tr>
<th>Age</th>
<th>less than 50 (n=55)</th>
<th>50-59 (n=62)</th>
<th>60-69 (n=75)</th>
<th>70-79 (n=24)</th>
<th>more than 80 (n=4)</th>
<th>Total (N=220)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>51.80</td>
<td>50.73</td>
<td>53.23</td>
<td>54.96</td>
<td>52.75</td>
<td>52.35</td>
</tr>
</tbody>
</table>

Table 14. WEMWBS scores and age group of Nordic walking practitioners

Nordic walking practitioners who were single scored higher on mental well-being than Nordic walking practitioners in other marital groups (table 15). However, the results were inconclusive due to the small amount of single respondents (n=21). This resulted in the comparison of the largest group: married participants (n=157) with Nordic walking practitioners with other marital statuses (n=63). The findings revealed that married participants had higher mental well-being than the others (table 16). These findings support the Stewart-Brown and colleagues (2008) study results that married participants had significantly higher mental well-being than respondents did in other marital groups.

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Single (n=21)</th>
<th>Married (n=157)</th>
<th>Divorced (n=20)</th>
<th>Widow(erg) (n=14)</th>
<th>Other (n=8)</th>
<th>Total (N=220)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>54.05</td>
<td>52.55</td>
<td>52.25</td>
<td>48.07</td>
<td>51.50</td>
<td>52.35</td>
</tr>
</tbody>
</table>

Table 15. WEMWBS scores and marital status of Nordic walking practitioners
In terms of employment, the unemployed respondents (n=4) reported lower mental well-being scores than the others (table 17), which was in line with the general population study (Stewart-Brown et al., 2008). Although, the results were inconclusive due to the small size of the sample. The additional comparison of the employment statuses revealed that the retired Nordic walking practitioners (n=94) scored higher on mental well-being than the others (n=126) (table 18).

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Unemployed</th>
<th>Employed</th>
<th>Own business</th>
<th>Retired</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=4)</td>
<td>(n=66)</td>
<td>(n=43)</td>
<td>(n=94)</td>
<td>(n=13)</td>
<td>(N=220)</td>
</tr>
<tr>
<td>Mean</td>
<td>48.50</td>
<td>51.58</td>
<td>51.47</td>
<td>53.84</td>
<td>49.54</td>
<td>52.35</td>
</tr>
</tbody>
</table>

Table 17. WEMWBS scores and employment status of Nordic walking practitioners

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Retired</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=94)</td>
<td>(n=126)</td>
</tr>
<tr>
<td>Mean</td>
<td>53.84</td>
<td>51.23</td>
</tr>
</tbody>
</table>

Table 18. WEMWBS scores of Nordic walking practitioners: retired versus others
In terms of the length of Nordic walking engagement, the respondents who practiced Nordic walking for more than 4 years (n=95) had higher mental well-being scores than those who practiced for less than 4 years (n=123) (table 19).

<table>
<thead>
<tr>
<th>Length of practice</th>
<th>Less than 4 years</th>
<th>More than 4 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=123)</td>
<td>(n=95)</td>
</tr>
<tr>
<td>Mean</td>
<td>50.70</td>
<td>54.44</td>
</tr>
</tbody>
</table>

Table 19. WEMWBS scores and employment status of Nordic walking practitioners

In terms of self-perceived health status, there was a rising trend in mental well-being scores in each of the categories (table 20). This suggests that better perception of individual health is associated with better mental well-being. The results were supported by the findings from the general population study (Stewart-Brown et al., 2008).

<table>
<thead>
<tr>
<th>Health status</th>
<th>Poor (n=9)</th>
<th>Average (n=45)</th>
<th>Good (n=114)</th>
<th>Very good (n=52)</th>
<th>Total (N=220)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>45.89</td>
<td>49.04</td>
<td>52.47</td>
<td>56.04</td>
<td>52.35</td>
</tr>
</tbody>
</table>

Table 20. WEMWBS scores and self-perceived health status of Nordic walking practitioners
OBJECTIVE 2: TO INVESTIGATE SOCIO-ENVIRONMENTAL INFLUENCES ON NORDIC WALKING, USING THE SPECIALLY DESIGNED QUESTIONNAIRE.

Table 21 and figure 28 show that the majority of the respondents (88%) practiced Nordic walking to improve health. The second common motivation was to feel good about oneself (58%). Fifty three per cent of the participants practiced Nordic walking to control their weight and 52% to socialise. Only one third of respondents considered improving longevity through Nordic walking.

<table>
<thead>
<tr>
<th>Motives</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving heath</td>
<td>193</td>
<td>88%</td>
</tr>
<tr>
<td>Feeling good about oneself</td>
<td>128</td>
<td>58%</td>
</tr>
<tr>
<td>Weight control</td>
<td>116</td>
<td>53%</td>
</tr>
<tr>
<td>Socialising</td>
<td>115</td>
<td>52%</td>
</tr>
<tr>
<td>Improving longevity</td>
<td>76</td>
<td>35%</td>
</tr>
</tbody>
</table>

Table 21. Motives for Nordic walking

Figure 28. Motives for Nordic walking
Examination of the social and environmental factors that influenced participation in Nordic walking, revealed that the majority of participants indicated social support as important factor, and environmental influences were less important for regular participation in Nordic walking (table 22 and figure 29). The key influences on Nordic walking participation were the instructors (n=182, 88%). The second important level of support was family (n=148, 77%) followed by friends (n=130, 74%).

<table>
<thead>
<tr>
<th>Socio-environmental influences</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor support</td>
<td>182</td>
<td>88%</td>
</tr>
<tr>
<td>Family support</td>
<td>148</td>
<td>77%</td>
</tr>
<tr>
<td>Friends support</td>
<td>130</td>
<td>74%</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>80</td>
<td>43%</td>
</tr>
<tr>
<td>Location</td>
<td>70</td>
<td>39%</td>
</tr>
<tr>
<td>Access</td>
<td>66</td>
<td>36%</td>
</tr>
<tr>
<td>Weather</td>
<td>50</td>
<td>29%</td>
</tr>
</tbody>
</table>

Table 22. Social and environmental influences in Nordic walking

Figure 29. Social and environmental influences in Nordic walking
From the descriptive analyses of the statistical information from the group of British Nordic walking practitioners, the exploratory analyses examine hypotheses in terms of gender, age groups, employment status, length of Nordic walking practice and perceived health status in order to ensure whether there are any significant differences in:

1. The role of gender in Nordic walking as a significant factor that relates to mental well-being.
2. The role of age in Nordic walking as a significant factor that relates to mental well-being.
3. The role of employment in Nordic walking as a significant factor that relates to mental well-being.
4. The length of Nordic walking engagement as a significant factor that relates to mental well-being.
5. Perceived health status of Nordic walking practitioners as a significant factor that relates to mental well-being.
6. Socio-environmental influences as significant factors in Nordic walking that relate to mental well-being.

The following is a summary of the significant findings.
1. **What is the role of gender in Nordic walking and how does it relate to mental well-being?**

The Chi-square test revealed the significant differences between male (n=45) and female (n=175) respondents with regards to motives for Nordic walking and social influences on regular participation. Socialising ($\chi^2=8.354; \text{df}=1; p<0.005$) and feeling good about oneself ($\chi^2=5.922; \text{df}=1; p<0.05$) were significantly more important motives for Nordic walking participation for female respondents (table 23).

<table>
<thead>
<tr>
<th>Motives</th>
<th>Male (n=45)</th>
<th>Female (n=175)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socialising</td>
<td>15</td>
<td>100</td>
</tr>
<tr>
<td>Feeling good about oneself</td>
<td>19</td>
<td>109</td>
</tr>
</tbody>
</table>

Table 23. Significant relationships between gender and motives for Nordic walking

In terms of social influences, the instructor support ($\chi^2=7.577; \text{df}=1; p<0.01$) and support of friends ($\chi^2=5.035; \text{df}=1; p<0.05$) were significantly important for female Nordic walking practitioners (table 24).

<table>
<thead>
<tr>
<th>Social factors</th>
<th>Male (n=45)</th>
<th>Female (n=175)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructor support</td>
<td>32</td>
<td>150</td>
</tr>
<tr>
<td>Friends support</td>
<td>22</td>
<td>108</td>
</tr>
</tbody>
</table>

Table 24. Significant relationship between gender and social factors in Nordic walking
2. What is the role of age in Nordic walking and how does it relate to mental well-being?

The Chi-square test indicated that for Nordic walking practitioners who were less than 60 years old, weight control ($x^2=5.057; \text{df}=1; \text{p}<0.05$) and health improvement ($x^2=4.87; \text{df}=1; \text{p}<0.05$) were the significant motives for Nordic walking. For the participants who were more than 60 years old, improving longevity ($x^2=10.526; \text{df}=1; \text{p}=0.001$) was a significant motivator for the activity (table 25).

<table>
<thead>
<tr>
<th>Motives</th>
<th>Less than 60 (n=117)</th>
<th>More than 60 (n=103)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight control</td>
<td>70 60%</td>
<td>46 45%</td>
</tr>
<tr>
<td>Improving health</td>
<td>108 92%</td>
<td>85 82%</td>
</tr>
<tr>
<td>Improving longevity</td>
<td>29 25%</td>
<td>47 46%</td>
</tr>
</tbody>
</table>

Table 25. Significant relationships between age and motives for Nordic walking

An independent samples t-test examined significant differences between age groups and mental well-being (table 26), and the test revealed that the respondents who were more than 60 years old reported significantly higher scores on WEMWBS.

<table>
<thead>
<tr>
<th></th>
<th>Less than 60 (n=117)</th>
<th>More than 60 (n=103)</th>
<th>T-test significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEMWBS mean</td>
<td>51.23</td>
<td>53.61</td>
<td>$t = -2.329, \text{df} = 218, \text{p}&lt;0.05$</td>
</tr>
</tbody>
</table>

Table 26. Significant relationships between age and WEMWBS scores of Nordic walking practitioners
3. What is the role of employment and how does it relate to mental well-being?

The Chi-square Test indicated that for those participants who were not retired, the significant motive for Nordic walking was improving health ($x^2=7.208; df=1; p<0.01$) and for retired respondents it was walking to improve longevity ($x^2=10.916; df=1; p=0.001$) (table 27).

<table>
<thead>
<tr>
<th>Motives</th>
<th>Retired (n=94)</th>
<th>Other (n=126)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving health</td>
<td>76 80%</td>
<td>117 92%</td>
</tr>
<tr>
<td>Longevity</td>
<td>44 47%</td>
<td>32 25%</td>
</tr>
</tbody>
</table>

Table 27. Significant relationships between employment status and motives for Nordic walking: retired versus others

Socialising was a significant motive for the employed Nordic walking practitioners ($x^2=4.689; df=1; p<0.05$) (table 28).

<table>
<thead>
<tr>
<th>Motives</th>
<th>Employed (n=66)</th>
<th>Others (n=154)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socialising</td>
<td>42 63%</td>
<td>73 48%</td>
</tr>
</tbody>
</table>

Table 28. Significant relationships between employment status and motives for Nordic walking: employed versus others

Access was the significant environmental influence on Nordic walking participation for the employed respondents ($x^2=4.201; df=1; p<0.05$) (table 29).

<table>
<thead>
<tr>
<th>Environmental factors</th>
<th>Employed (n=66)</th>
<th>Others (n=154)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td>27 46%</td>
<td>39 31%</td>
</tr>
</tbody>
</table>

Table 29. Significant relationships between employment and environmental influences in Nordic walking
An independent samples t-test examined significant differences between employment statuses and mental well-being. The test revealed that retired participants reported higher mental well-being (table 30).

<table>
<thead>
<tr>
<th>Employment status</th>
<th>T-test significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retired (n=94)</td>
<td>Others (n=126)</td>
</tr>
<tr>
<td>WEMWBS mean</td>
<td>53.84</td>
</tr>
<tr>
<td></td>
<td>51.23</td>
</tr>
<tr>
<td></td>
<td>t = 2.537, df = 218, p&lt;0.05</td>
</tr>
</tbody>
</table>

Table 30. Significant relationships between employment status and mental well-being of Nordic walking practitioners

4. How important is the length of engagement in Nordic walking and how does it relate to mental well-being?

The chi-square test indicated that weather ($x^2=9.081; df=1; p<0.005$), location ($x^2=6.7; df=1; p=0.01$) and access ($x^2=5.465; df=1; p<0.05$) significantly affected Nordic walking participation for the respondents who practiced for less than 4 years (table 31).

<table>
<thead>
<tr>
<th>Environmental factors</th>
<th>Less than 4 years (n=123)</th>
<th>More than 4 years (n=95)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weather</td>
<td>37</td>
<td>12</td>
</tr>
<tr>
<td>Location</td>
<td>48</td>
<td>20</td>
</tr>
<tr>
<td>Access</td>
<td>43</td>
<td>21</td>
</tr>
</tbody>
</table>

Table 31. Significant relationships between lengths of Nordic walking engagement and environmental influences
An independent samples t-test revealed that there was a significant difference between the length of Nordic walking engagement and mental well-being. The participants who practiced Nordic walking for more than 4 years reported significantly higher mental well-being (table 32).

<table>
<thead>
<tr>
<th>WEMWBS mean</th>
<th>Less than 4 years (n=123)</th>
<th>More than 4 years (n=95)</th>
<th>T-test significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>50.70</td>
<td>54.69</td>
<td>t = -3.972, df = 216, p&lt;0.001</td>
</tr>
</tbody>
</table>

Table 32. Significant relationships between lengths of Nordic walking engagement and WEMWBS scores of Nordic walking practitioners.

In addition, the chi-square test revealed that Nordic walking practitioners who practiced the activity for more than 4 years had significantly higher WEMWBS scores ($x^2=20.25; df=1; p<0.0001$) (table 33) and perception of own health ($x^2=24.771; df=3; p<0.0001$) (table 34).

<table>
<thead>
<tr>
<th>WEMWBS scores</th>
<th>Less than 4 years (n=123)</th>
<th>More than 4 years (n=95)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low scores (14-42)</td>
<td>50 64%</td>
<td>19 27%</td>
</tr>
<tr>
<td>High scores (61-70)</td>
<td>28 46%</td>
<td>51 63%</td>
</tr>
</tbody>
</table>

Table 33. Significant relationships between length of Nordic walking engagement and WEMWBS scores of Nordic walking practitioners.

<table>
<thead>
<tr>
<th>Health status</th>
<th>Less than 4 years (n=123)</th>
<th>More than 4 years (n=95)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>9 7%</td>
<td>0 0%</td>
</tr>
<tr>
<td>Average</td>
<td>31 25%</td>
<td>13 14%</td>
</tr>
<tr>
<td>Good</td>
<td>67 55%</td>
<td>46 48%</td>
</tr>
<tr>
<td>Very good</td>
<td>16 14%</td>
<td>36 38%</td>
</tr>
</tbody>
</table>

Table 34. Significant relationships between length of Nordic walking engagement and perceived health status.
5. How does perceived health status relate to mental well-being?

The chi-square test revealed there was a significant relationship between perceived health status of the respondents and their WEMWBS scores ($x^2=30.42; \text{df}=3; p<0.0001$) (table 35).

<table>
<thead>
<tr>
<th>Health status</th>
<th>Low WEMWBS (14-42)</th>
<th>High WEMWBS (61-70)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>4 6%</td>
<td>0 0%</td>
</tr>
<tr>
<td>Average</td>
<td>25 35%</td>
<td>7 9%</td>
</tr>
<tr>
<td>Good</td>
<td>37 52%</td>
<td>44 56%</td>
</tr>
<tr>
<td>Very good</td>
<td>5 7%</td>
<td>28 35%</td>
</tr>
</tbody>
</table>

Table 35. Significant relationships between WEMWBS scores and perceived health status of Nordic walking practitioners

A one-way ANOVA examined whether there were significant differences between the self-reported health status and mental well-being of Nordic walking practitioners (table 36).

<table>
<thead>
<tr>
<th></th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>1576.601</td>
<td>3</td>
<td>525.534</td>
<td>10.120</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>Within groups</td>
<td>11217.144</td>
<td>216</td>
<td>51.931</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12793.745</td>
<td>219</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 36. Significant differences between self-reported health status and mental well-being of Nordic walking practitioners
The results revealed statistically significant differences among the groups, F (3, 216) =10.120; p<0.001. Post-hoc Scheffe tests indicated statistically significant differences between all categories of self-reported health: poor (M=45.89, SD=8.162), average (M=49.04, SD=6.241), good (M=52.47, SD=8.064) and very good (M=56.04, SD=5.639). The results suggested that Nordic walking practitioners who perceived their health as very good had significantly higher WEMWBS scores compared with those of other health statuses (table 37).

<table>
<thead>
<tr>
<th>Health status</th>
<th>Mean difference</th>
<th>Standard error</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>10.150</td>
<td>2.602</td>
<td>p&lt; 0.005</td>
</tr>
<tr>
<td>Average</td>
<td>6.994</td>
<td>1.467</td>
<td>p&lt; 0.001</td>
</tr>
<tr>
<td>Good</td>
<td>3.565</td>
<td>1.206</td>
<td>p&lt; 0.05</td>
</tr>
</tbody>
</table>

Table 37. Significant differences between all categories of self-reported health of Nordic walking practitioners

In addition, the Kruskal-Wallis Analysis of Variance showed a significant relationship between the respondents’ self-reported health statuses and 13 items from the WEMWBS (table 38). The scale item “feeling close to other people” was not statistically significant for self-reported health status, which suggests that social support is equally important for the participants of all health statuses.
<table>
<thead>
<tr>
<th>WEMWBS ITEMS</th>
<th>Poor (n=9)</th>
<th>Average (n=45)</th>
<th>Good (n=114)</th>
<th>Very good (n=52)</th>
<th>ANOVA Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’ve been feeling optimistic about the future</td>
<td>3.33</td>
<td>3.64</td>
<td>3.82</td>
<td>4.02</td>
<td>$x^2=12.732$; df=3; p&lt;0.01</td>
</tr>
<tr>
<td>I’ve been feeling useful</td>
<td>3.22</td>
<td>3.64</td>
<td>3.86</td>
<td>4.13</td>
<td>$x^2=18.867$; df=3; p&lt;0.001</td>
</tr>
<tr>
<td>I’ve been feeling relaxed</td>
<td>3.22</td>
<td>3.44</td>
<td>3.61</td>
<td>3.87</td>
<td>$x^2=14.489$; df=3; p&lt;0.005</td>
</tr>
<tr>
<td>I’ve been feeling interested in other people</td>
<td>3.78</td>
<td>3.89</td>
<td>3.95</td>
<td>4.31</td>
<td>$x^2=11.957$; df=3; p&lt;0.01</td>
</tr>
<tr>
<td>I’ve had energy to spare</td>
<td>2.44</td>
<td>3.07</td>
<td>3.39</td>
<td>3.65</td>
<td>$x^2=27.077$; df=3; p&lt;0.001</td>
</tr>
<tr>
<td>I’ve been dealing with problems well</td>
<td>3.44</td>
<td>3.51</td>
<td>3.66</td>
<td>3.90</td>
<td>$x^2=12.181$; df=3; p&lt;0.01</td>
</tr>
<tr>
<td>I’ve been thinking clearly</td>
<td>3.33</td>
<td>3.33</td>
<td>3.70</td>
<td>3.96</td>
<td>$x^2=17.828$; df=3; p&lt;0.001</td>
</tr>
<tr>
<td>I’ve been feeling good about myself</td>
<td>2.78</td>
<td>3.38</td>
<td>3.65</td>
<td>4.02</td>
<td>$x^2=30.732$; df=3; p&lt;0.001</td>
</tr>
<tr>
<td>I’ve been feeling close to other people</td>
<td>3.33</td>
<td>3.36</td>
<td>3.52</td>
<td>3.79</td>
<td>$x^2=7.489$; df=3; p&lt;0.1</td>
</tr>
<tr>
<td>I’ve been feeling confident</td>
<td>2.89</td>
<td>3.38</td>
<td>3.61</td>
<td>3.90</td>
<td>$x^2=19.173$; df=3; p&lt;0.001</td>
</tr>
<tr>
<td>I’ve been able to make up my own mind about things</td>
<td>3.56</td>
<td>3.89</td>
<td>3.96</td>
<td>4.17</td>
<td>$x^2=10.211$; df=3; p&lt;0.05</td>
</tr>
<tr>
<td>I’ve been feeling loved</td>
<td>3.56</td>
<td>3.44</td>
<td>3.93</td>
<td>4.08</td>
<td>$x^2=12.342$; df=3; p&lt;0.01</td>
</tr>
<tr>
<td>I’ve been interested in new things</td>
<td>3.56</td>
<td>3.56</td>
<td>3.98</td>
<td>4.15</td>
<td>$x^2=15.098$; df=3; p&lt;0.005</td>
</tr>
<tr>
<td>I’ve been feeling cheerful</td>
<td>3.44</td>
<td>3.51</td>
<td>3.85</td>
<td>4.08</td>
<td>$x^2=19.277$; df=3; p&lt;0.001</td>
</tr>
<tr>
<td><strong>TOTAL SCORE</strong></td>
<td><strong>45.89</strong></td>
<td><strong>49.04</strong></td>
<td><strong>52.47</strong></td>
<td><strong>56.04</strong></td>
<td>$x^2=33.918$; df=3; p&lt;0.001</td>
</tr>
</tbody>
</table>

Table 38. Significant relationships between WEMWBS items and perceived health status of Nordic walking practitioners
6. How do social and environmental factors relate to mental well-being?

An independent samples t-test was conducted to examine whether there was a significant difference between perception of social and environmental influences on the mental well-being of Nordic walking practitioners. The results revealed that there were no significant differences between the respondents who perceived socio-environmental factors as important for Nordic walking participation and those who did not.

5.1.5. Discussion

The key findings from this study suggest that health related motives were strongly associated with Nordic walking. These results add to the academic literature that investigated motivation for physical activity (e.g. Booth et al., 2001, Markland and Ingledew, 2007; Davies et al., 2012), and Nordic walking (Church et al., 2002; Piotrowska, 2011; Knapik et al., 2014). For older participants the important motive for Nordic walking was improving longevity - adding years to life that benefits quality of life (Ku et al., 2016), which is related to the concept of active ageing. Active ageing is perceived in terms of maintaining physical health and functioning by remaining involved in activities that are meaningful and purposeful (Bowling, 2008, 2009). Improving longevity through Nordic walking focused on retaining physical health, keeping independence, and maintaining social relationships. In terms of the associations between Nordic walking and mental well-being, Nordic walking practitioners had higher mental well-being scores than the general public. The results correspond with previous findings from McTeer and Curtis (1990), Netz and colleagues (2005) and Blacklock and colleagues (2007), suggesting that the relationship between physical activity, including walking and well-being is direct and positive. Several research studies into Nordic walking have reached similar conclusions. Knapik and colleagues
(2014) study, compared physical and mental health between Nordic walking practitioners with a control group. The study revealed that the levels of physical and mental health were significantly higher in the Nordic walking group. In addition, this study reported a significant difference in mental well-being depending on the length of Nordic walking engagement. Respondents who had practiced the activity for more than four years had significantly better WEMWBS scores and a better perception of their own health than rest of the Nordic walking sample.

This study adds to the literature in Nordic walking indicating that long-term participation in the activity improves mental health. Saulicz and colleagues (2015) reported that after 4 weeks of Nordic walking training, the self-assessment of physical and mental health of middle-aged women improved compared to a control group, and Soboleva and colleagues (2016) stated in their study that Nordic walking had a positive impact on overall health and psycho-emotional state of women aged 50-60.

It is acknowledged that the main reason for enjoying walking activities is socialising, interacting with friends and meeting people, which is also associated with higher levels of participation in activities (e.g. Mullineaux et al., 2001; Bean, 2008). Likewise, Nordic walking as a social activity allows people to move at a pace that facilitates social interactions. The results of this study contribute to the literature suggesting that the social support of friends in Nordic walking was of significant importance. Social support offers emotional closeness and benefits group cohesion, which means that the group is more resistant to disruptive forces (e.g. Courneya and McAuley 1995; Wood et al., 1998). In particular, Nordic walking instructors’ support positively affected participation in the activity. Similarly, McAuley and colleagues (2005) reported that exercising with a leader is proven to maximise social support within the group and has a positive effect on well-being.
In general the environmental influences were of secondary importance for Nordic walking participation, which corresponds with the previous studies conducted by Kavanagh and Bentley (2008) and Burton and colleagues (2005) that indicated environmental factors contributed the least to vigorous-type activities, including walking. However, the further analysis of environmental factors suggest that the weather, location and access were important for the Nordic walking participants who practiced for less than 4 years. These findings contribute to the discussions of the importance of weather aspects in changing the levels of leisure physical activity, including walking (e.g. Rutt and Coleman, 2005). Furthermore, the findings suggest that access was the significant environmental factor for the employed Nordic walking practitioners. Several studies proposed that walking was associated with access to open spaces, aesthetic attributes of location, recreation facilities and sports fields (e.g. Humpel et al., 2004; Owen et al., 2004; Saelens and Handy, 2008). This may be due to the fact that easy access to Nordic walking groups could motivate the regular participation of employed people who look for the exercising option in their limited free time due to occupational duties. Taking these findings into consideration, it may be assumed that regular participation in Nordic walking over a longer period of time in a group setting where friends’ and instructors’ support is readily available has a positive influence on physical health and mental well-being.
5.2. QUALITATIVE STUDY INTO NORDIC WALKING

Qualitative research is highly contextual and concerned with individual meanings of the experiences. It is often used in circumstances where little is known about the phenomenon under investigation. Hence, it can explore and explain the experiences, incorporate people’s own motivations and emotions. In this qualitative study, I collected data during Nordic walking events around the country, and as a researcher, I was the primary instrument of data collection. I employed one-to-one semi-structured interviews, which allowed for highly personalised data by sharing unique experiences and developing individual perspectives on the research topics. Another important purpose for using interviews was to provide a description and support the results of the quantitative study.

5.2.1. DESIGN OF THE INTERVIEWING PROCESS

An interview is one of the main tools for data collection in qualitative research as it allows for exploring and understanding people’s perceptions, meanings and constructions of social realities. The questions used in the interviewing process emerged from the literature review and the conceptual framework. They were complimentary to the survey questions and provided the in-depth explorations of the research topics. I designed the questions to be semi-structured in order to encourage the study participants to speak freely, reconstruct their experiences and provide myself with some control over the topics of conversations. The interviewing process was guided by the list of questions that covered the general research questions (Appendix 5):

1) Socio-demographic characteristic of Nordic walking practitioners.

2) What are your motives for practicing Nordic walking?
3) How important are other people in your Nordic walking practice?

4) How important is natural environment in your Nordic walking practice?

5) What are your positive experiences in Nordic walking practice (related to well-being)?

6) How important are the walking poles in enhancing your Nordic walking experience?

5.2.2. THE ROLE OF THE RESEARCHER

In a qualitative research study, the researcher as a primary instrument of data collection has a scientific responsibility to ensure the quality and validity of the collected knowledge (Kvale, 1996; Yin, 2003; Creswell, 2009). In this study, the researcher – myself, am a certified Nordic walking instructor. I had had the opportunity to participate and lead Nordic walking sessions in Poland, before conducting the fieldwork for this study. As a Nordic walking instructor, I was able to establish a level of credibility with Nordic walking participants. However, I was aware of personal biases when conducting this study. I had pre-existing knowledge and prior experience regarding the activity that could have potentially influenced the interpretation of the data. I wished to gain clarity and eliminate any preconceptions related to my previous Nordic walking experiences as a Nordic walking instructor in Poland. Therefore, during the study fieldwork, I joined local Nordic walking groups, and participated in weekly sessions. Also, I made a significant effort to be as thorough and consistent as possible at all stages of data collection and analysis. I carefully transcribed the interviews, using thematic analysis, and followed a consistent and systematic coding procedure. In addition, I discussed my interpretation of the data with my research supervisors. I believe that my efforts while
collecting and interpreting information from British Nordic walking practitioners contributed to reducing researcher biases and enhancing the integrity of the study.

5.2.3. PROCEDURES OF DATA COLLECTION

The fieldwork was undertaken from May 2014 to August 2014. I conducted 12 interviews with Nordic Walking participants within the boundaries of the United Kingdom. A convenience sampling method, which is based on the availability of the participants, was used in this study. I looked for the participants who were trained in Nordic walking technique or Nordic walking instructors and had various levels of Nordic walking experience. Thus, I decided to approach Nordic walking practitioners during selected social and competitive events. These were: the walking festival in Prestatyn on 17th May 2014, the Nordic walking session in Lytham on 3rd July 2014 and the Nordic walking Marathon in Bristol on 13th July 2014. The process of contacting potential research participants was challenging. Many events’ participants refused to take part in the study due to time constraints or lack of interest in the research. Those who agreed to participate in the study were interviewed. I briefly introduced myself, my research project, and the purpose of the study. I ensured all participants of their anonymity and confidentiality. With permission from the participants, interviews were recorded digitally, using a voice recorder. My main role in the interview was to listen and follow the participants’ answers. Initially, I asked the main questions, which yielded spontaneous answers. However, based on individual answers, I changed the order of questions, omitted some or asked follow-up questions. The follow-up questions provided new information about the topics of discussions, which on a few occasions were crucial for the interview outcomes. After each interview, I handed my contact details and informed all participants about their right to withdraw from the study at any
time. Depending on the respondent, the interviews lasted from seven to twenty minutes. The interviewing process ceased when saturation of the key themes was reached. The overall procedure of the data collection was effective and a substantial amount of information was obtained.

5.2.4. DATA ANALYSIS

All information was thematically analysed, which provided a theoretical freedom in identifying, analysing, reporting detailed and nuanced account of themes within data (Braun and Clarke, 2006). The reliability of thematic analysis is of greater concern due to variations in the interpretation of raw data (Namely et al., 2007). An inductive approach to thematic analysis is data-driven, which requires searching for themes in data before the analysis. A data-driven approach has a greater validity due to its flexibility and openness of results, which are strongly grounded in the data. On the contrary, a deductive approach is theory-driven which means that it is more structured and reliable. The themes are strongly linked to the researcher’s theoretical and analytical interests in the area (Braun and Clarke 2006). In this study, I employed a hybrid approach of a deductive and inductive thematic analysis, as it complemented the quantitative study by conducting the thematic deductive analysis, while allowing the themes to emerge direct from the data sets using an inductive thematic analysis.

The qualitative data analysis consisted of three steps: data reduction, data display and data verification (Miles and Huberman, 1994).

Data reduction involved selecting, simplifying and transforming the data from the transcriptions using the qualitative data analysis, MAXQDA 11 (VERBI, 2014). I reviewed the audio recording of the conversations for accuracy and content and manually transcribed the interviews in order to become familiar with the data. Next, I
Marta Anna Zurawik

thematically analysed the transcripts line by line and summarised in a multi-stage process that began with structural coding: the identification of the main themes according to the research questions.

1) Socio-demographic characteristic of Nordic walking practitioners.

2) Motives for Nordic walking.

3) Importance of social influences on Nordic walking.

4) Importance of environmental factors in Nordic walking.

5) The experiences in Nordic walking related to well-being.

6) Importance of the walking poles in enhancing Nordic walking experiences.

Each theme captured the importance of the data in relation to the research questions and theoretical framework.

The next stage of the data analysis focused on creating inductive codes for each theme, grouping together the codes featuring similar content, and counting the frequencies of each code in the data set. Socio-demographic characteristics were divided into categories 1) gender, 2) marital status, 3) employment status, 4) levels of engagement in Nordic walking. Furthermore, three subthemes related to motives for Nordic walking were identified: 1) exercising, 2) socialising, 3) health. The importance of social influences on the Nordic walking theme was split into three main subthemes 1) no importance, 2) companionship and friendship 3) instructor support. The importance of environmental factors in Nordic walking was divided into two themes 1) no importance, 2) natural environment. The theme of the experiences in Nordic walking related to well-being implied six subthemes: 1) positive feelings, 2) exercising, 3) socialising, 4) natural environment, 5) competitions, 6) health and fitness. The theme exploring the importance of the walking poles in enhancing Nordic walking experiences was split into two categories 1) full body workout 2) relaxing rhythm (Figure 30).
Figure 30. Summary of coding frame for Nordic walking
In the subsequent stage of data reduction, I focused on refining the themes and displaying the relationships between the codes in the data set. The most frequent form of a data display focused on exploring each theme by using text and tables, which supported the study findings. The final step of the data analysis was drawing the conclusions and verification. The meanings emerging through the data needed to be verified through argumentation and validated through a replication of findings (Miles and Huberman, 1994). I evaluated the conclusions by a comparison of the study results with the findings from the scientific literature.

5.2.5. FINDINGS

The results of this qualitative study into Nordic walking describe the experiences expressed by the respondents that emerged according to the general themes:

Socio-demographic characteristics of Nordic walking practitioners

In this study, 12 Nordic walking practitioners were interviewed face-to-face: two were males and ten were females. Eight participants were married, three single and one was widowed. In terms of an employment, five participants had their own businesses, four were employed, one was unemployed and two were retired. In terms of the engagement in Nordic walking, five participants were Nordic walking instructors, six were regular Nordic walking practitioners and one practiced Nordic walker irregularly. The age of the respondents varied from 30 to 70 (mean=51) years old. The socio-demographic characteristics and place of interviewing are listed in table 39.
<table>
<thead>
<tr>
<th>NO.</th>
<th>GENDER</th>
<th>AGE</th>
<th>MARITAL STATUS</th>
<th>EMPLOYMENT STATUS</th>
<th>PLACE OF INTERVIEW</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW 1</td>
<td>Male</td>
<td>30</td>
<td>Single</td>
<td>Own business</td>
<td>Lytham</td>
<td>Instructor</td>
</tr>
<tr>
<td>NW 2</td>
<td>Male</td>
<td>63</td>
<td>Married</td>
<td>Own business</td>
<td>Lytham</td>
<td>Irregular Walker</td>
</tr>
<tr>
<td>NW 3</td>
<td>Female</td>
<td>45</td>
<td>Married</td>
<td>Employed</td>
<td>Bristol</td>
<td>Instructor</td>
</tr>
<tr>
<td>NW 4</td>
<td>Female</td>
<td>65</td>
<td>Married</td>
<td>Own business</td>
<td>Bristol</td>
<td>Instructor</td>
</tr>
<tr>
<td>NW 5</td>
<td>Female</td>
<td>48</td>
<td>Married</td>
<td>Own business</td>
<td>Bristol</td>
<td>Instructor</td>
</tr>
<tr>
<td>NW 6</td>
<td>Female</td>
<td>49</td>
<td>Married</td>
<td>Employed</td>
<td>Bristol</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>NW 7</td>
<td>Female</td>
<td>32</td>
<td>Single</td>
<td>Employed</td>
<td>Lytham</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>NW 8</td>
<td>Female</td>
<td>42</td>
<td>Single</td>
<td>Unemployed</td>
<td>Bristol</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>NW 9</td>
<td>Female</td>
<td>49</td>
<td>Married</td>
<td>Own business</td>
<td>Lytham</td>
<td>Instructor</td>
</tr>
<tr>
<td>NW 10</td>
<td>Female</td>
<td>55</td>
<td>Married</td>
<td>Employed</td>
<td>Bristol</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>NW 11</td>
<td>Female</td>
<td>70</td>
<td>Widowed</td>
<td>Retired</td>
<td>Prestatyn</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>NW 12</td>
<td>Female</td>
<td>68</td>
<td>Married</td>
<td>Retired</td>
<td>Prestatyn</td>
<td>Regular Walker</td>
</tr>
</tbody>
</table>

Table 39. Socio-demographic characteristics of Nordic walking practitioners

**OBJECTIVE 7: TO DISCOVER WHAT SOCIO-ENVIRONMENTAL FACTORS CONTRIBUTE TO LEISURE EXPERIENCES IN NORDIC WALKING, USING SEMI-STRUCTURED INTERVIEWS**

The interviewees enthusiastically discussed the importance of the social aspects of Nordic walking and referred to the activity as “sociable thing to do” or “great fun and social”. Participation in Nordic walking sessions enabled creating new positive social interactions and building friendships with other people. Many participants used similar expressions to describe friendships in a group, such as “I met some good friends through Nordic walking”. The companionship of friends provided new contacts outside of families, offered a sense of belonging to a group, and gave the participants social support when needed. “It’s being part of a group, it’s very social activity we are all equals there, having fun and exercising at the same time” (NW3). Interviewees often found pleasure in “walking and talking” to variety of people, and interacting with different people during Nordic walking sessions.
Furthermore, exercising and socialising in attractive landscapes benefited many participants by offering positive emotions. “It’s great to be outside, meeting people, talking to people, you can exercise while you’re talking to people, so that what it makes it different mentally and physically and makes me feel good” (NW5).

However a couple of interviewees did not find the social support or companionship important for their Nordic walking practice. They were more focused on their personal fitness and health goals than social interactions with others. One person explained: “It’s more about how good it feels, how good it is for me, how fit you are” (NW5).

In contrast, participants who valued social support in Nordic walking often discussed the role of the Nordic walking instructors, in motivating everyone to exercise and achieve personal health and fitness goals. “She always supports me and encourages our group. She is helping me losing my weight - she’s a very nice girl” (NW12).

In addition, Nordic walking instructors played an important role in maintaining enjoyment with the activity by supervising the upholding of the walking technique, offering good advice, and encouragement during the workout. A 63 year-old regular Nordic walking practitioner explained: “He makes the walk less stressful and more enjoyable. He helps with technique, gives some advice how I can improve it, and motivates me to walk further you know. The walk wouldn’t be the same without him” (NW2).

The interviewed instructors also confirmed that social support was important in Nordic walking, and their role was to provide encouragement and assistance to all participants in order to “to achieve their best, to enter the competitive events, to do something they haven’t done before” (NW5). Many instructors mentioned that supervision and maintenance of the correct Nordic walking technique during exercising was important,
“because when you walk right you feel benefits of Nordic walking faster, you can walk further without feeling tired” (NW4). Furthermore, the Nordic walking instructors were responsible for promoting the activity, motivating people to regular practice, developing and strengthening social bonds, and bringing satisfaction into the activity. Therefore, when describing the role of instructors in a group, many often mentioned organising social and competitive events, and encouraging more people to practice Nordic walking. A 30 year-old instructor said: “I take part and organise events, so the challenge for me is to learn how to progress, how to make Nordic walking relevant for those people who look for an intense workout rather than just walking” (NW1). Many interviewees noted that the instructors’ efforts to bring enjoyment in the activity were one of the reasons for continuous participation in the Nordic walking sessions.

In terms of the importance of the natural environment in Nordic walking, all participants somewhat considered various environmental aspects when discussing the pleasures of Nordic walking. However, a couple of participants stated that the environment and its aesthetics had no significant importance as a barrier, enabler, or a motive for the participation in Nordic walking. One person noted that surroundings were “not the main reason to walk”. Another practitioner acknowledged the presence of attractive landscapes when exercising; however, their main focus was on improving Nordic walking technique and the experience of the whole body exercise than scenery. “I mean obviously if it’s nice environment it is more pleasant to walk, but it is more what you do when you are out Nordic walking. It makes you feel better and it doesn’t have to be in a park, or road it can be anywhere” (NW5).

On the contrary, participants who perceived natural environment as an important aspect of Nordic walking discussed aesthetically pleasant landscapes as a source of the positive
and restorative experiences. “Definitely every time when you go out, even if it’s same park, it feels different, nature never gets boring, ever” (NW3).

Describing the role of the environment on their walking experiences, many interviewees declared their fascination and interest with “place, weather, and scenery”.

Many positive experiences in Nordic walking referred to an aesthetical awareness of the settings, which often offered novelty and diverted attention from negative thoughts, and offered opportunity for being away from daily routines and problems. For a 48 year-old regular Nordic walking practitioner, physical settings were important for the practice: “Settings - yes definitely, we walk in the nice countryside, breath fresh air and enjoy the weather, especially when it’s sunny like today” (NW8). Many participants described the experience of Nordic walking, especially rhythmical use of poles, in an ever changing countryside as freeing the mind and letting the worries of the world go away: “once you are out and you have poles with you all the problems are gone” (NW1). Moreover, one respondent who often practiced Nordic walking alone in the park perceived solitary Nordic walking as a source of relaxation, contemplation, and connectedness with nature, which described the experience of Nordic walking, and the sound of the poles hitting the ground, as a sense of freedom.
OBJECTIVE 8: TO DESCRIBE HOW LEISURE PURSUITS IN NORDIC WALKING BENEFIT MENTAL WELL-BEING, USING SEMI-STRUCTURED INTERVIEWS

The most common positive feelings for Nordic walking practitioners were a sense of achievement (13 comments). Happiness (8 comments) and enjoyment (6 comments) were the next positive feelings. Some respondents also named relaxation (5 comments) and freedom (3 comments) as the important feelings gained through Nordic walking (table 40).

<table>
<thead>
<tr>
<th>Positive feelings</th>
<th>Number of comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td>13</td>
</tr>
<tr>
<td>Happiness</td>
<td>8</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>6</td>
</tr>
<tr>
<td>Relaxation</td>
<td>5</td>
</tr>
<tr>
<td>Freedom</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 40. List of positive feelings in Nordic walking

Nordic walking is a diverse outdoor activity that bridges the concepts of leisure and sport. Therefore, for all participants the common motivation for practicing Nordic walking was the opportunity for outdoor exercising. As one person explained “that’s one of main reasons why I walk as I am outdoor person anyway, Nordic walking is just an extension, one of the ways to exercise outdoors” (NW1).

The majority of participants indicated that their reasons for Nordic walking were health and fitness related, such as “to feel good, feel healthy, and be the best you can really, keep fit and healthy” (NW5). In particular, the source of happiness came from the perception of losing weight and becoming fitter without putting too much effort in exercising. “I am happy, because I can exercise, lose weight and don’t sweat much. It’s
a good exercise, because you don’t feel you actually did an hour workout but you are getting fitter” (NW12). Nordic walking practitioners used specially designed walking poles, which allowed for feelings of the instant fitness benefit of exercising. Due to active use of Nordic walking poles, many participants described the movement as an “enhanced walking”.

“I have always been a walker and I have done mountain trekking all my life, and as I get older this is a way of enhancing a walking experience and I love the idea of the full body workout you know using the poles so for me it’s just enhanced walking” (NW4). Perception of Nordic walking as an enhanced walking experience was often explained by participants as the activity “encourages you to go a bit longer, further and faster”. Other women commented “my arms are exercising and pushing me forward. I can walk faster and longer, it’s amazing” (NW11). An important part in enhanced walking is played by Nordic walking poles, as they increased the exercise intensity of walking without increasing perceived exertion, giving the workout a sense of purpose. “They make me use the whole body, take weight off joints, back and walking feels more purposeful with them” (NW5). Some participants perceived Nordic walking as a low impact, whole body workout suitable for everyone, in which “you use your core and your upper body”. Others claimed that they felt at ease as walking with poles “spreads the effort across the whole body”, “exercises your upper arms” and “gives you support”.

In addition, a couple of participants also acknowledged beneficial aspects of Nordic walking on improving posture, relaxing and strengthening neck and shoulders after spending lots of time in office in front of the computer. For others, Nordic walking was chosen as an alternative exercise to other, more strenuous types of physical activity. For a 30-year old man, Nordic walking was viewed as a suitable replacement to running. “I realised running wasn’t for me any longer even though I am still in my 30’s. I thought
there’s no reason to make my knees hurt more than they should. [When Nordic walking] you definitely feel like your upper body works much harder, so you burn more calories. It’s like running but with less stress for the body” (NW1). Another factor associated with Nordic walking was a sense of personal achievement, which had various sources depending on the level of engagement in the activity. For example, Nordic walking practitioners felt a sense of accomplishment when describing their experiences during exercising sessions and competitive events, such as challenging their skills, setting new personal records in walking speed and walking distance. “I did a 10 mile walk and it’s quite nice to say that I can walk 10 miles and I couldn’t walk that far before” (NW8) or by taking part in Nordic walking competitions: “I feel a sense of achievement as it surprises me how fast I can go, I feel like I achieve something” (NW2). A sense of achievement was also present in a group of Nordic walking instructors, who referred to a sense of personal achievement when discussing their role in fitness and health progress of Nordic walking participants. “Feeling a sense of achievement when watching people learn technique and then improve it, it’s very rewarding to see their progress - walking longer distances, losing weight” (NW1). Furthermore, all participants acknowledged that major personal achievements were grounded in the use of Nordic walking poles. The walking poles played a role in achieving a sense of accomplishment by giving walking a purpose - a whole body workout. In addition, for a couple of respondents the walking poles were a source of relaxation. Hearing the rhythm of poles when they hit the ground was a meditative experience.
5.2.6. **DISCUSSION**

The findings from this qualitative study corroborate the results from the quantitative investigation, and show that combinations of autonomous extrinsic and intrinsic motives for Nordic walking were the most common among the study participants. Nordic walking was perceived as a suitable activity for everyone who searched for opportunity for social exercising with the intention of improving health by engaging the whole body in a workout. Furthermore, some respondents chose Nordic walking as a safe, alternative form of exercise to other, more strenuous types of physical activity, since has a low impact on lower extremities, and low injury rates (Hagen et al., 2011).

The current study also adds to the discussion on the beneficial role of walking poles suggesting that Nordic walking poles played an important role in exercising as they allowed for more intense and longer exercising without putting in additional effort. Furthermore, the active use of poles also gave walking a purpose - a whole body workout. The importance of poles during the workout has been investigated by several studies (e.g. Figard-Fabre et al., 2010; Breyer et al., 2010), suggesting that the active use of poles improved the upper body performance and reduced the perception of effort whilst Nordic walking (e.g. Schiffer et al., 2006, 2011; Song et al., 2013). Another important motive for Nordic walking was an opportunity for socialising while exercising. The company of other people, and being part of a social group was found to influence participation in Nordic walking, which offered friendships, and developed a sense of belonging. In addition, social support offered by the Nordic walking instructors was valued by all participants. The instructors offered assistance in achieving individual health related goals by supporting and motivating participants for continuous improvements in order to enjoy the fitness and health benefits of Nordic walking. Furthermore, Nordic walking instructors, played a key role in teaching participants the
correct walking technique and upholding it throughout their workout, and encouraged walkers to participate regularly in the activity. In terms of the importance of natural environment, the results were ambiguous. Some respondents believed that the natural environment had little importance as a barrier or enabler in Nordic walking participation. Particularly, people who were strongly motivated by health purpose of Nordic walking were focused on maintaining correct Nordic walking technique in order to achieve a whole body workout. However, for some participants the aesthetically pleasant natural environments were perceived as a source of positive feelings, such as enjoyment, relaxation and freedom. This contributes to the literature suggesting that walking in the pleasant and calm landscapes benefits mental well-being by diverting attention from negative emotions and thoughts, providing opportunities for relaxation and reflection (e.g. Milligan et al., 2004; Stigsdotter, et al., 2010; Adevi and Martensson, 2013). Another positive feeling in Nordic walking was a sense of achievement. Nordic walking competitions were perceived as an opportunity for improving competence and seeking out challenge, giving a sense of realisation and a sense of control to practitioners. A sense of achievement was often associated with specially acquired skills, knowledge and abilities. Particularly, a feeling of achievement was associated with the fitness aspects of Nordic walking, such as challenging skills, setting new personal records in walking speed and walking distance by taking part in Nordic walking competitions.

In conclusion, the qualitative study findings suggest that Nordic walking is a meaningful physical activity that benefits mental and physical well-being through positive feelings of achievement and enjoyment in outdoor exercising, as well as social well-being through companionship and instructor support in reaching individual health and fitness goals.
5.3. INTEGRATION OF THE FINDINGS

The purpose of this concurrent mixed methods study is to merge the results from quantitative and qualitative studies in order to compare the findings and provide the multiple perspectives of the social and environmental influences on participation in Nordic walking together with exploration of the relationships between Nordic walking and well-being. The rationale for linking the quantitative and qualitative data lies in methodological triangulation and complementarity, which focus on convergence and divergence of the findings. In this study, the quantitative results yielded general trends and relationships while the qualitative results provided in-depth personal experiences of the individuals. I employed a concurrent design to explore and compare the effects of Nordic walking, as leisure pursuits, in terms of socio-environmental influences, and benefits on mental well-being. A popular way to represent the integration in a concurrent study design is a side-by-side table, which arrays both quantitative statistical results and qualitative themes (Creswell, 2015, p. 85).
**OBJECTIVE 12: TO EXAMINE TO WHAT EXTENT QUALITATIVE RESULTS CONFIRM AND CLARIFY QUANTITATIVE RESULTS IN THE NORDIC WALKING STUDY**

<table>
<thead>
<tr>
<th>QUANTITATIVE STUDY</th>
<th>QUALITATIVE STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving health was a significant motive for the not retired participants and for the Nordic walking practitioners who were less than 60 years old.</td>
<td>Important motives for Nordic walking were exercising, improving health, and socialising.</td>
</tr>
<tr>
<td>Socialising was a significantly important motive for females and employed participants.</td>
<td>Nordic walking was chosen as a low impact whole body workout, alternative to running.</td>
</tr>
<tr>
<td>Feeling good about oneself was an important motive for female Nordic walking practitioners.</td>
<td>Another purpose for Nordic walking was losing weight.</td>
</tr>
<tr>
<td>Weight control was a key motive for the participants who were less than 60 years old.</td>
<td>Participants indicated that Nordic walking poles enhanced workout and improved stamina. The poles also allowed for more intense and longer workout. For some, the poles offered a meditative rhythm when Nordic walking.</td>
</tr>
<tr>
<td>Improving longevity was the significant motive for the older (more than 60), and retired participants.</td>
<td>The companionship and friendship in a group were sources of positive emotions and offered a sense of belonging.</td>
</tr>
<tr>
<td>The instructors’ support and support of friends were significantly important for female Nordic walking practitioners.</td>
<td>The key role in social support played Nordic walking instructors. The instructors supervised the progress of walkers, motivated them to regular participation and provided an overall positive experience of the activity.</td>
</tr>
</tbody>
</table>
Access was the significant environmental factor for the employed participants. For the respondents who practiced Nordic walking for less than 4 years, weather, location and access were significantly important factors in the activity participation.

Aesthetically pleasant environment was perceived as a source of the positive feelings, such as enjoyment, relaxation and freedom. For respondents who focused on their personal fitness and health goals, the physical environment had no importance in participation in Nordic walking.

In terms of the WEMWBS mean results, the study participants scored higher on mental well-being than the general public. The respondents who practiced Nordic walking for more than 4 years had significantly better WEMWBS scores and better perception of health.

The most common enjoyable experiences in Nordic walking were related to the whole body workout and socialising while exercising. A common positive feeling was a sense of achievement associated with challenging individual skills (improving speed of walking and distance), and during Nordic walking competitive events.

There was a significant relationship between participants’ self-reported health status and their WEMWBS scores. There was a significant relationship between participants’ self-reported health status and 13 items from WEMWBS, apart from feeling close to other people.

The instructors referred to a sense of achievement when observing the fitness progress of Nordic walking participants. Other positive feelings were happiness enjoyment and relaxation, which were associated with outdoor exercising and socialising.

<table>
<thead>
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</tr>
<tr>
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</tr>
<tr>
<td>The respondents who were more than 60 years old) and retired participants reported higher scores on WEMWBS.</td>
<td>The instructors referred to a sense of achievement when observing the fitness progress of Nordic walking participants.</td>
</tr>
<tr>
<td>There was a significant relationship between participants’ self-reported health status and their WEMWBS scores.</td>
<td>Other positive feelings were happiness enjoyment and relaxation, which were associated with outdoor exercising and socialising.</td>
</tr>
</tbody>
</table>

Table 41. Merged results of quantitative and qualitative studies into Nordic walking.
5.4. GENERAL DISCUSSION

The merged results from the pilot, quantitative and qualitative studies into Nordic walking revealed that the activity was practiced mostly by women who were less than 60 years old. The most common motives for Nordic walking were associated with health, social affiliation and pleasure in the physical activity itself, which was perceived as a means to improve and maintain fitness and mobility. Health benefits of Nordic walking were associated with the active use of the Nordic walking poles, which lay in spreading the load over the entire body. Moreover, for older respondents, the important motive for Nordic walking was improving longevity. The efforts of the elderly walkers directed to reduce the effects of ageing, to be physically active and keep their independence (e.g. Bowling, 2008, 2009). In terms of social influences, an important role in Nordic walking participation was social interactions. In particular, female and employed walkers were motivated by opportunities for socialising while exercising. This study adds to the body of research suggesting that adults are more likely to become active and maintain an active lifestyle if they have opportunities to interact with friends, communicate with others and share experiences (e.g. Mullineaux et al., 2001; Darker et al., 2007b; Bean et al., 2008; Cerin et al., 2010; Caperchione et al., 2011; Doughty, 2013). Nordic walking is based on group dynamics, where the instructors offer social support, develop and strengthen social bonds, peer sharing, and problem solving to overcome barriers associated with Nordic walking. Social support in a group provided emotional closeness and instrumental assistance in motivating participants for improving in Nordic walking technique, and encouraging walkers to achieve personal fitness and health goals.
In terms of the environmental influences, the findings are diverse. The quantitative study suggested that in general, the physical environment was of a secondary importance for the participation in Nordic walking. However, the weather, location and access to recreation spaces were important factors for the participants who Nordic walked for less than 4 years. The qualitative study suggests that Nordic walking in natural environments was a source of enjoyment, relaxation and freedom from daily responsibilities. Natural environments are suitable settings for meaningful physical activity. The study contributes to the discourse of the benefits of walking in attractive landscapes that facilitates fascination with countryside, the experience of being away and diverts attention from negative emotions and thoughts (e.g. Kaplan, 2001; Morris, 2003; Milligan et al., 2004; Roe and Aspinall, 2011). Furthermore, the quantitative study reported that regular Nordic walking over longer periods of time had a positive influence on mental well-being, especially for older and retired participants. Also, the findings from the qualitative study revealed that well-being was mostly enhanced by a sense of achievement associated with challenging individual skills, such as increasing speed of walking and distance during competitive events. The relationships between Nordic walking and well-being explored in these studies supports the concept of the activity as a meaningful leisure pursuit. The merged findings add to the academic literature suggesting that Nordic walking benefits physical and social well-being through positive feelings related to the companionship and social support of instructors in outdoor exercising. Nordic walking also benefits mental well-being by providing the options for exploring personal capacities and developing skills, which contributes to a sense of achievement and self-worth, leading to feelings of satisfaction with the activity.
CHAPTER 6

QUANTITATIVE AND QUALITATIVE INVESTIGATIONS INTO RAMBLING AND WELL-BEING

This chapter describes the design of the quantitative and qualitative studies into rambling and mental well-being. It provides the outline how the data were collected and analysed to determine the effects of leisure walking on mental well-being and the significant socio-environmental influences for engaging in rambling. The chapter concludes with the discussion of the merged findings.

6.1. QUANTITATIVE STUDY INTO RAMBLING

A survey design provides a numeric description of some fraction of a population through asking questions, which enables a researcher to generalise the findings from a sample of responses to a population (Creswell, 1994, p. 117). A questionnaire is a survey instrument, through which people are asked to respond to the same set of written questions in a predetermined order. In this quantitative study, the design of the survey followed a standard format and consisted of five main parts (Appendix 4):

1. Introduction.

The first section included the name of the questionnaire, introduction and purpose of the study, request for help with the research by completing the questionnaire, a broad indication of what the questionnaire covered the researcher’s contact details and the assurance of confidence and anonymity.
2. Socio-demographic data.

Socio-demographic information, such as age, gender, marital status and employment status were collected. The question regarding the length of rambling engagement was of an open type, since the activity has been popular among the British population for over 80 years, and it was difficult to follow the categories of engagement used in the Nordic walking survey. I adapted the questions regarding motives for rambling participation (i.e. improving health, weight control, socialising, improving mood and improving longevity) from the Nordic walking survey. My rationale for developing particular motives for leisure walking was based on the broad literature review and adapted from the research studies (Burton et al, 2005; Blacklock et al, 2007; Litt et al, 2011; Davies et al, 2012; Ferrand et al, 2012).

3. Familiarity of Nordic walking.

The questions about the use of walking poles when rambling, an individual knowledge of Nordic walking and the engagement in Nordic walking were designed to highlight similarities and differences between Nordic walking and rambling practitioners.

4. Socio-environmental influences on regular participation in rambling.

Similar to the Nordic walking study, the questionnaire included seven statements that assessed the role of social and environmental factors in individual participation in rambling. The respondents indicated the degree of the importance of weather, location, access, aesthetics, family, friends and walking leader support using a Likert scale: 1 (definitely yes) to 5 (definitely not). The statements were adapted from the academic works of Humpel et al, (2004), Ball et al, (2007) and Cerin et al, (2010).
5. Perception of individual health, mood and physical activity.

Using a Likert scale, the participants rated their perception of health, from 1 (very poor) to 5 (very good), mood and fitness 1 (definitely yes) to 5 (definitely not).

6. Mental Well-being Scale.

Similar to the Nordic walking questionnaire, respondents were asked to rate Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) statements using a 5-item scale from 1 (none of the time) to 5 (all of the time). In addition, I included the WHO-5 Well-Being Index in the rambling questionnaire. The WHO-5 Well-Being Index measures overall mental well-being, hence it was added for the comparison of the WEMWBS results from the same sample at the same time in order to enhance the concurrent validity of the findings with regards to mental well-being. Readers must note that the survey for a rambling group was designed, when I had already been collecting data from the Nordic walking groups. Therefore, I could not add the WHO-5 to the Nordic walking questionnaire as it would have resulted in a loss of the majority of already collected data.

6.1.1. WHO-5 WELL-BEING INDEX

The WHO-5 Well-Being Index measures overall mental well-being over a previous period of two weeks. The scale contains a mixture of hedonic and eudaimonic statements to capture a broader range of experiences (Eurofund, 2013). Scoring consists of a 6-point frequency of occurrence scale (0 = at no time, 1 = some of the time, 2 = less than half of the time, 3 = more than half of the time, 4 = most of the time 5 = all of the time). The raw scores are between 0 and 25, where 0 represents the worst possible and 25 represents the best possible well-being. The overall score is calculated by
multiplying the raw score by 4. Standardised score ranges from 0 to 100, where 100 represents the best possible well-being and scores below 50 indicate poor well-being and suggest depression (WHO, 1998).

The first 28-item WHO well-being questionnaire was developed in 1982 by the WHO Regional Office. The examination of the questions resulted in developing the WHO-10 well-being, which then was shortened to only five positively phrased questions related to positive well-being, positive mood (good spirit, relaxation), vitality (being active and waking up fresh and rested) and general interests (being interested in things).

The WHO-5 was validated for the general population and the elderly (50+) population (WHO, 1998; Bonsignore et al., 2001). The scale has good internal consistency and homogeneity. The external validity of the WHO-5 well-being index is high, which suggests that the scale may be preferred in the future as an instrument for screening for depression among the elderly population (Bonsignore, et al., 2001). The study conducted on European populations in 2012 revealed that the average standardised WHO-5 well-being index score was 62. In the United Kingdom the average standardised WHO-5 well-being index score was 59 (Department of Health, 2014).

6.1.2. PROCEDURES OF DATA COLLECTION

The rationale for including a second group of leisure walking practitioners – ramblers in the study was due to the insufficient number of Nordic walking practitioners who participated in the quantitative research study. Therefore, I decided to conduct a comparative study in order to compare the results between these two groups with regards to the influences on mental well-being. This also increases the validity of the overall research study. Similar to the Nordic walking quantitative study, the data were generated from a close-ended online survey. The Internet-based distribution of the
questionnaire is a popular method for conducting surveys, as it allows a large population of volunteers to be surveyed and the respondents to remain anonymous. In addition, the online surveying is of low cost and reduces response bias, increasing the reliability of the responses. Furthermore, many studies have supported the validity and reliability of an online survey by contrasting and correlating the results to traditional pen-paper approaches (Merolli et al., 2014).

For the purpose of this study, I contacted chairmen of local rambling groups using the Ramblers’ Association list of all local rambling groups in the United Kingdom. The chairmen were asked to forward the email with all the information about my research study, and the link to the online survey to all members. The online questionnaire was available for ramblers from November 2013 to August 2014.

6.1.3. DATA ANALYSIS

I employed the descriptive analysis of the data to describe the characteristics of the rambling population and establish relationships with the categorical data. The next step of the process was inferential analysis, which aimed to investigate any significant relationships within the study sample. In this study, testing significance was achieved by using the Chi-square test, independent samples t-test and Kruskal-Wallis H test for three or more unrelated samples. The Chi-square test ($\chi^2$) is appropriate for establishing the levels of significant associations between nominal and ordinal-level variables. The t-test involves testing the distribution of differences between the means of two groups. The Kruskal-Wallis test is a non-parametric alternative to a one-way between-groups analysis of variance. I performed all statistical analyses using SPSS v.20 (IBM, 2011).
6.1.4. Results

Two hundred eighty eight ramblers participated in the survey. The sample consisted of 136 (47%) male and 152 (53%) female respondents (table 42).

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>152</td>
<td>53%</td>
</tr>
<tr>
<td>Men</td>
<td>136</td>
<td>47%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>288</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 42. Gender of ramblers

The age group distribution, presented in table 43 and figure 31, revealed that 88 (31%) participants were less than 60 years old and 200 (69%) were more than 60 years old.

<table>
<thead>
<tr>
<th>Age</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 50</td>
<td>28</td>
<td>10%</td>
</tr>
<tr>
<td>50-59</td>
<td>60</td>
<td>21%</td>
</tr>
<tr>
<td>60-69</td>
<td>147</td>
<td>51%</td>
</tr>
<tr>
<td>70-79</td>
<td>48</td>
<td>16%</td>
</tr>
<tr>
<td>More than 80</td>
<td>5</td>
<td>2%</td>
</tr>
</tbody>
</table>

Table 43. Age group of ramblers

<table>
<thead>
<tr>
<th>Marital status</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>48</td>
<td>17%</td>
</tr>
<tr>
<td>Married</td>
<td>144</td>
<td>50%</td>
</tr>
<tr>
<td>Divorced</td>
<td>51</td>
<td>18%</td>
</tr>
<tr>
<td>Widow(er)</td>
<td>30</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>5%</td>
</tr>
</tbody>
</table>

Table 44. Marital status of ramblers

Half of the population sample consisted of married respondents. The detailed description of marital status is presented in table 44 and figure 32.
The employment distribution of the ramblers mostly consisted of retired (66%) and employed (21%) participants. The detailed description is presented in table 45 and figure 33.

<table>
<thead>
<tr>
<th>Employment</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployed</td>
<td>7</td>
<td>2%</td>
</tr>
<tr>
<td>Employed</td>
<td>61</td>
<td>21%</td>
</tr>
<tr>
<td>Own business</td>
<td>18</td>
<td>6%</td>
</tr>
<tr>
<td>Retired</td>
<td>189</td>
<td>66%</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>5%</td>
</tr>
</tbody>
</table>

Table 45. Employment status of ramblers

With regards to the length of engagement in rambling, 153 (60%) respondents had practiced rambling for less than 20 years and 102 (40%) respondents practiced rambling for more than 20 years (table 46 and figure 34).

<table>
<thead>
<tr>
<th>Engagement</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10 years</td>
<td>103</td>
<td>40%</td>
</tr>
<tr>
<td>11-20 years</td>
<td>50</td>
<td>20%</td>
</tr>
<tr>
<td>21-30 years</td>
<td>39</td>
<td>15%</td>
</tr>
<tr>
<td>More than 30 years</td>
<td>63</td>
<td>25%</td>
</tr>
</tbody>
</table>

Table 46. Length of rambling engagement
With regards to using walking poles when rambling, the respondents were almost equally divided between those who used and did not use walking poles (table 47).

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use walking poles</td>
<td>142</td>
<td>49%</td>
</tr>
<tr>
<td>Do not use walking poles</td>
<td>145</td>
<td>51%</td>
</tr>
</tbody>
</table>

Table 47. Use of walking poles when rambling

In terms of Nordic walking familiarity, 90% of the ramblers were familiar with Nordic walking, however only 5% practiced it regularly (table 48).

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know about Nordic walking</td>
<td>258</td>
<td>90%</td>
</tr>
<tr>
<td>Practice Nordic walking</td>
<td>13</td>
<td>5%</td>
</tr>
</tbody>
</table>

Table 48. Nordic walking familiarity

In terms of perceived health status of ramblers, table 49 and figure 35 show that 83% of participants regarded themselves as in good or very good health. Only 1% considered their health as poor.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>4</td>
<td>1%</td>
</tr>
<tr>
<td>Average</td>
<td>45</td>
<td>16%</td>
</tr>
<tr>
<td>Good</td>
<td>157</td>
<td>56%</td>
</tr>
<tr>
<td>Very Good</td>
<td>77</td>
<td>27%</td>
</tr>
</tbody>
</table>

Table 49. Perceived health status of ramblers

Figure 35. Perceived health status of ramblers
OBJECTIVE 3: TO EVALUATE THE EFFECTS OF RAMBLING ON MENTAL WELL-BEING, USING THE WARWICK-EDINBURGH MENTAL WELL-BEING SCALE (WEMWBS) AND WHO-5 WELL-BEING INDEX.

The WEMWBS was completed by 288 ramblers. The results indicated that on average, the WEMWBS mean scores for the rambling group were higher (m=52.16) than a general population sample (m=49.9) in 2012 (table 50 and figure 36).

<table>
<thead>
<tr>
<th></th>
<th>Rambling group</th>
<th>General population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=288</td>
<td>N=4319</td>
</tr>
<tr>
<td>Mean</td>
<td>52.16</td>
<td>49.9</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>7.94</td>
<td>8.5</td>
</tr>
</tbody>
</table>

Table 50. Comparison of WEMWBS mean scores between the ramblers and a general population

![Histogram](image)

Figure 36. WEMWBS scores for ramblers
With regards to gender, the female ramblers (n=152) had higher mental well-being scores than males (table 51).

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=136)</td>
<td>(n=152)</td>
</tr>
<tr>
<td>Mean</td>
<td>51.66</td>
<td>52.61</td>
</tr>
</tbody>
</table>

Table 51. WEMWBS scores and gender of ramblers

In terms of age, the ramblers who were 70 - 79 years old (n=48) had higher WEMWBS scores than the other age groups (table 52).

<table>
<thead>
<tr>
<th>Age</th>
<th>less than 50</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>more than 80</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=28)</td>
<td>(n=60)</td>
<td>(n=147)</td>
<td>(n=48)</td>
<td>(n=5)</td>
<td>(N=288)</td>
</tr>
<tr>
<td>Mean</td>
<td>52.07</td>
<td>51.52</td>
<td>52.00</td>
<td>53.87</td>
<td>48.80</td>
<td>52.16</td>
</tr>
</tbody>
</table>

Table 52. WEMWBS scores and age group of ramblers

The respondents who were married (n=144) had higher well-being scores than the rest of the sample (table 53). Surprisingly, the widowed respondents had higher WEMWBS scores than single and divorced participants.

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Single</th>
<th>Married</th>
<th>Divorced</th>
<th>Widow(er)</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=48)</td>
<td>(n=144)</td>
<td>(n=51)</td>
<td>(n=30)</td>
<td>(n=15)</td>
<td>(N=288)</td>
</tr>
<tr>
<td>Mean</td>
<td>50.98</td>
<td>53.08</td>
<td>50.90</td>
<td>52.33</td>
<td>51.07</td>
<td>52.16</td>
</tr>
</tbody>
</table>

Table 53. WEMWBS scores and marital status of ramblers
Additional comparison of the biggest marital group – the married ramblers (n=144) with other marital statuses (n=144) showed that the married participants had higher mental well-being (table 54).

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Married (n=144)</th>
<th>Other (n=144)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>53.08</td>
<td>51.24</td>
</tr>
</tbody>
</table>

Table 54. WEMWBS scores of ramblers: married versus others

In terms of employment, the unemployed (n=7) and employed (n=61) group reported similar mental well-being scores. Yet, due to the small numbers of unemployed respondents, the results are not reliable. The respondents who had their own businesses (n=18) scored the highest mental well-being and the participants of other employment (n=13) status reported the lowest well-being scores (table 55).

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Unemployed (n=7)</th>
<th>Employed (n=61)</th>
<th>Own business (n=18)</th>
<th>Retired (n=189)</th>
<th>Other (n=13)</th>
<th>Total (N=288)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>51.71</td>
<td>51.57</td>
<td>55.56</td>
<td>52.28</td>
<td>48.85</td>
<td>52.16</td>
</tr>
</tbody>
</table>

Table 55. WEMWBS scores and employment status of ramblers

Additional comparison of the biggest group, the retired ramblers (n=189) with the other employment statuses (n=99) showed that the retired participants had higher mental well-being than the rest (table 56).

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Retired (n=189)</th>
<th>Other (n=99)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>52.28</td>
<td>51.95</td>
</tr>
</tbody>
</table>

Table 56. WEMWBS scores of ramblers: retired versus others
Marta Anna Zurawik

With regards to length of engagement in rambling, the participants who practiced rambling for more than 10 years (n=103) had higher WEMWBS scores (table 57).

<table>
<thead>
<tr>
<th>Length of practice</th>
<th>Less than 10 years</th>
<th>More than 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=103)</td>
<td>(n=185)</td>
</tr>
<tr>
<td>Mean</td>
<td>51.47</td>
<td>52.55</td>
</tr>
</tbody>
</table>

Table 57. WEMWBS scores according to a length of rambling engagement

With regards to use of walking poles in rambling, the respondents who used walking poles (n=142) had higher WEMWBS scores (table 58).

<table>
<thead>
<tr>
<th>Use of walking poles</th>
<th>yes</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=142)</td>
<td>(n=145)</td>
</tr>
<tr>
<td>Mean</td>
<td>53.34</td>
<td>51.07</td>
</tr>
</tbody>
</table>

Table 58. WEMWBS scores and the use of walking poles

In terms of self-perceived health status, there was a rising trend in mental well-being scores in three of four categories, which suggests that better perception of health may predict better mental well-being (table 59). However, the small number of the respondents with poor health (n=4) suggested the biased responses in the mental well-being scores.

<table>
<thead>
<tr>
<th>Health status</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Very good</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=4)</td>
<td>(n=45)</td>
<td>(n=157)</td>
<td>(n=77)</td>
<td>(N=283)</td>
</tr>
<tr>
<td>Mean</td>
<td>54.25</td>
<td>48.00</td>
<td>52.47</td>
<td>56.04</td>
<td>52.30</td>
</tr>
</tbody>
</table>

Table 59. WEMWBS scores and self-perceived health status of ramblers
The WHO-5 well-being index was completed by 286 ramblers. A standardised score ranges from 0 to 100, where scores below 50 indicate poor well-being and suggest depression (WHO, 1998). The results indicated that average mental well-being of the participants had mean results of 72.97 (figure 37).

Figure 37. WHO-5 well-being index scores for ramblers
With regards to gender, the female ramblers (n=150) had higher well-being scores (table 60), which contradicts the findings from a general population study (Eurofund, 2013).

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=136)</td>
<td>(n=150)</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>72.35</td>
<td>73.52</td>
</tr>
</tbody>
</table>

Table 60. WHO-5 scores and gender of ramblers

In terms of age, the ramblers in 70 - 79 age group (n=48) had higher WHO-5 scores (table 61).

<table>
<thead>
<tr>
<th>Age</th>
<th>less than 50</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>more than 80</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=28)</td>
<td>(n=59)</td>
<td>(n=146)</td>
<td>(n=48)</td>
<td>(n=5)</td>
<td>(N=286)</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>69.43</td>
<td>70.10</td>
<td>73.53</td>
<td>77.08</td>
<td>70.40</td>
<td>72.97</td>
</tr>
</tbody>
</table>

Table 61. WHO-5 scores and age group of ramblers

The married ramblers (n=143) had higher WHO-5 scores than other groups (table 62). The widowed respondents (n=30) had higher WHO-5 scores than single (n=48) and divorced (n=50) participants. The results from a general population study (Eurofund, 2013) produced contrasting results reporting that single participants had higher WHO-5 scores compared to separated, divorced or widowed participants.

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Single</th>
<th>Married</th>
<th>Divorced</th>
<th>Widow(er)</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=48)</td>
<td>(n=143)</td>
<td>(n=50)</td>
<td>(n=30)</td>
<td>(n=15)</td>
<td>(N=286)</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>68.00</td>
<td>74.83</td>
<td>73.12</td>
<td>74.80</td>
<td>66.93</td>
<td>72.97</td>
</tr>
</tbody>
</table>

Table 62. WHO-5 scores and marital status of ramblers
Additional comparison of a married group (n=143) with the rest of the sample (n=143) showed that the married participants had higher mental well-being than the other respondents (table 63).

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Married (n=143)</th>
<th>Other (n=143)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>74.83</td>
<td>71.10</td>
</tr>
</tbody>
</table>

Table 63. WHO-5 scores of ramblers: married versus others

In terms of employment, the unemployed group reported the lowest WHO-5 scores (table 64). However, the small sample of unemployed participants (n=7) means this is not a reliable finding. The ramblers who had own businesses (n=18) reported the highest mental well-being.

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Unemployed (n=7)</th>
<th>Employed (n=60)</th>
<th>Own business (n=18)</th>
<th>Retired (n=188)</th>
<th>Other (n=13)</th>
<th>Total (N=286)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>65.71</td>
<td>67.87</td>
<td>78.67</td>
<td>74.51</td>
<td>70.15</td>
<td>72.97</td>
</tr>
</tbody>
</table>

Table 64. WHO-5 scores and employment status of ramblers

Additional comparison of the biggest group: the retired (n=188) with the other employment statuses (n=98) showed that the retired participants had higher mental well-being (table 65).

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Retired (n=188)</th>
<th>Other (n=98)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>74.51</td>
<td>70.00</td>
</tr>
</tbody>
</table>

Table 65. WHO-5 scores for the ramblers: retired versus others
With regards to length of engagement in rambling, the respondents who practiced rambling for more than 10 years (n=183) had higher WHO-5 scores (table 66).

<table>
<thead>
<tr>
<th>Length of practice</th>
<th>Less than 10 years (n=103)</th>
<th>More than 10 years (n=183)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>71.03</td>
<td>74.05</td>
</tr>
</tbody>
</table>

Table 66. WHO-5 scores according to length of rambling engagement

In terms of using walking poles in rambling, the respondents who used walking poles (n=141) had higher WHO-5 scores (table 67).

<table>
<thead>
<tr>
<th>Use of walking poles</th>
<th>yes (n=141)</th>
<th>no (n=144)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>73.73</td>
<td>72.36</td>
</tr>
</tbody>
</table>

Table 67. WHO-5 scores and the use of walking poles

With regards to a self-perceived health status, there was a rising trend in mental well-being scores in three of four categories (table 68). Although, the small sample of the respondents with poor health (n=4) means this is unreliable.

<table>
<thead>
<tr>
<th>Health status</th>
<th>Poor (n=4)</th>
<th>Average (n=45)</th>
<th>Good (n=155)</th>
<th>Very good (n=77)</th>
<th>Total (N=281)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>66.00</td>
<td>64.53</td>
<td>72.85</td>
<td>79.48</td>
<td>73.24</td>
</tr>
</tbody>
</table>

Table 68. WHO-5 scores and self-perceived health status
OBJECTIVE 4: TO INVESTIGATE SOCIO-ENVIRONMENTAL INFLUENCES ON RAMBLING, USING A SPECIALLY DESIGNED QUESTIONNAIRE.

With regards to the motives for rambling, the majority of respondents practiced it to improve health (83%) and socialise (82%). Other important motives were to feel good about oneself (36%) and improve longevity through exercise (36%). One third of the participants practiced rambling to control their weight (table 69 and figure 38).

<table>
<thead>
<tr>
<th>Motives</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving heath</td>
<td>240</td>
<td>83%</td>
</tr>
<tr>
<td>Feeling good about oneself</td>
<td>104</td>
<td>36%</td>
</tr>
<tr>
<td>Weight control</td>
<td>89</td>
<td>31%</td>
</tr>
<tr>
<td>Socialising with people</td>
<td>235</td>
<td>82%</td>
</tr>
<tr>
<td>Improving longevity</td>
<td>104</td>
<td>36%</td>
</tr>
</tbody>
</table>

Table 69. Motives for rambling

Figure 38. Motives for rambling
In terms of social and environmental influences on rambling, the majority of the respondents reported that friends’ support was the most important social influence. The next levels of social support came from walking leaders and then families. The environmental factors were of secondary importance. Over half of the respondents reported that the aesthetics of environment were important aspects of rambling (53%) (table 70, figure 39).

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends support</td>
<td>193</td>
<td>83%</td>
</tr>
<tr>
<td>Leader support</td>
<td>187</td>
<td>79%</td>
</tr>
<tr>
<td>Family support</td>
<td>173</td>
<td>69%</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>120</td>
<td>53%</td>
</tr>
<tr>
<td>Location</td>
<td>104</td>
<td>44%</td>
</tr>
<tr>
<td>Access</td>
<td>100</td>
<td>41%</td>
</tr>
<tr>
<td>Weather</td>
<td>89</td>
<td>38%</td>
</tr>
</tbody>
</table>

Table 70. Social and environmental influences in rambling

Figure 39. Social and environmental influences in rambling
From the descriptive analyses of a group of British ramblers, the exploratory analyses examine hypotheses in terms of gender, age groups, employment status, length of rambling practice, use of walking poles and perceived health status in order to ensure whether there are any significant differences in:

1. The role of gender in rambling as a significant factor that relates to mental well-being.
2. The role of an age in rambling as a significant factor that relates to mental well-being.
3. The role of a marital status in rambling as a significant factor that relates to mental well-being.
4. The role of an employment in rambling as a significant factor that relates to mental well-being.
5. The length of practicing rambling as a significant factor that relates to mental well-being.
6. The role of walking poles in rambling as a significant factor that relates to mental well-being.
7. Perceived health status of ramblers as a significant factor that relates to mental well-being.
8. Socio-environmental influences as significant factors that relate to mental well-being

This section summarises only the significant findings:
1. How does gender in rambling relate to mental well-being?

The Chi-square indicated that for the female participants, the significant motive for rambling participation was to feel good about oneself ($x^2=6.921; \text{df}=1; \ p<0.01$) (table 71).

<table>
<thead>
<tr>
<th>Motives</th>
<th>Male (n=136)</th>
<th>Female (n=152)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeling good about oneself</td>
<td>64 47%</td>
<td>95 62%</td>
</tr>
</tbody>
</table>

Table 71. Significant relationship between gender and motives for rambling

In terms of using walking poles, there was a significant difference in gender (table 72) with more female respondents using walking poles ($x^2=7.125; \text{df}=1; \ p<0.01$).

<table>
<thead>
<tr>
<th>Walking poles</th>
<th>Male (n=136)</th>
<th>Female (n=152)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of walking poles</td>
<td>56 41%</td>
<td>86 57%</td>
</tr>
</tbody>
</table>

Table 72. Significant relationship between gender and use of walking poles in rambling

In terms of a social support, the walking leader support was significantly important for the female ramblers ($x^2=4.039; \text{df}=1; \ p<0.05$) (table 73).

<table>
<thead>
<tr>
<th>Social support</th>
<th>Male (n=136)</th>
<th>Female (n=152)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking leader</td>
<td>84 73%</td>
<td>103 84%</td>
</tr>
</tbody>
</table>

Table 73. Significant relationship between gender and social factors in rambling
In terms of perceived mental and physical health, significantly more female respondents noticed improvements in their moods ($x^2=7.863; df=1; p<0.01$) and physical activity ($x^2=4.627; df=1; p<0.05$) (table 74).

<table>
<thead>
<tr>
<th>Perception</th>
<th>Male (n=136)</th>
<th>Female (n=152)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood improvement</td>
<td>94</td>
<td>127</td>
</tr>
<tr>
<td></td>
<td>84%</td>
<td>95%</td>
</tr>
<tr>
<td>More active</td>
<td>105</td>
<td>129</td>
</tr>
<tr>
<td></td>
<td>88%</td>
<td>95%</td>
</tr>
</tbody>
</table>

Table 74. Significant relationship between gender and perception of mental and physical health of ramblers

2. How does age in rambling relate to mental well-being?

The Chi-square indicated that for the respondents who were less than 60 years old, improving health ($x^2=5.236; df=1; p<0.05$) and weight control ($x^2=5.813; df=1; p<0.05$) were significant motives for rambling (table 75).

<table>
<thead>
<tr>
<th>Motives</th>
<th>Less than 60 (n=88)</th>
<th>More than 60 (n=200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving health</td>
<td>80</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>91%</td>
<td>80%</td>
</tr>
<tr>
<td>Weight control</td>
<td>36</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>41%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Table 75. Significant relationships between age and motives for rambling

Significantly more participants who were more than 60 years old used walking poles when rambling ($x^2=6.658; df=1; p<0.05$) (table 76).

<table>
<thead>
<tr>
<th>Walking poles</th>
<th>Less than 60 (n=88)</th>
<th>More than 60 (n=200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of walking poles</td>
<td>33</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td>38%</td>
<td>54%</td>
</tr>
</tbody>
</table>

Table 76. Significant relationships between age and use of walking poles in rambling
Significantly more respondents who were more than 60 years old were familiar with Nordic walking ($x^2=5.967; \text{df}=1; p<0.05$) (table 77).

<table>
<thead>
<tr>
<th>Familiarity</th>
<th>Less than 60 (n=88)</th>
<th>More than 60 (n=200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiar with Nordic walking</td>
<td>73 83%</td>
<td>185 93%</td>
</tr>
</tbody>
</table>

Table 77. Significant relationships between age and Nordic walking familiarity

In terms of perception of mental health (table 78), the participants who were less than 60 years old noticed significant improvements in their moods ($x^2=5.899; \text{df}=1; p<0.05$)

<table>
<thead>
<tr>
<th>Perception</th>
<th>Less than 60 (n=88)</th>
<th>More than 60 (n=200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood improvement</td>
<td>69 97%</td>
<td>152 87%</td>
</tr>
</tbody>
</table>

Table 78. Significant relationships between age and perception of mental health of ramblers

An independent samples t-test revealed a significant difference between age groups and mental well-being. The respondents who were more than 60 years old reported higher mental well-being scores on WHO-5 well-being index (table 79).

<table>
<thead>
<tr>
<th>Mental well-being</th>
<th>Less than 60 (n=88)</th>
<th>More than 60 (n=200)</th>
<th>T-test significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO-5 mean</td>
<td>69.89</td>
<td>74.31</td>
<td>$t =-2.489, \text{df}=284, p&lt;0.05$</td>
</tr>
</tbody>
</table>

Table 79. Significant relationships between age and WHO-5 well-being index scores of ramblers
3. How does marital status in rambling relate to mental well-being?

In terms of a marital status, the Chi-square showed that the married respondents found the family support in rambling significantly important ($x^2=7.577; \text{df}=1; \ p<0.01$) (table 80).

<table>
<thead>
<tr>
<th>Social support</th>
<th>Married (n=144)</th>
<th>Other (n=144)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family support</td>
<td>99 (77%)</td>
<td>74 (60%)</td>
</tr>
</tbody>
</table>

Table 80. Significant relationships between marital status and social factors of ramblers

An independent samples t-test revealed a significant difference between marital groups in relation to their mental well-being. The married participants reported higher mental well-being scores on WEMWBS and WHO-5 well-being index (table 81).

<table>
<thead>
<tr>
<th>Mental well-being</th>
<th>Married (n=144)</th>
<th>Other (n=144)</th>
<th>T-test significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEMWBS mean</td>
<td>53.08</td>
<td>51.24</td>
<td>$t=1.978, \text{df}=286, p&lt;0.05$</td>
</tr>
<tr>
<td>WHO-5 mean</td>
<td>74.83</td>
<td>71.10</td>
<td>$t=2.269, \text{df}=284, p&lt;0.05$</td>
</tr>
</tbody>
</table>

Table 81. Significant relationships between marital status and WEMWBS scores of ramblers

4. How does employment relate to mental well-being in rambling?

The Chi-square revealed that for the employed respondents the significant motives for the activity were weight control ($x^2=14.208; \text{df}=1; \ p=0.000$), socialising ($x^2=5.369; \text{df}=1; \ p<0.05$) and feeling good about oneself ($x^2=4.510; \text{df}=1; \ p<0.05$) (table 82)

<table>
<thead>
<tr>
<th>Motives</th>
<th>Employed (n=61)</th>
<th>Other (n=227)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight control</td>
<td>31 (51%)</td>
<td>58 (26%)</td>
</tr>
<tr>
<td>Socializing</td>
<td>56 (92%)</td>
<td>179 (79%)</td>
</tr>
<tr>
<td>Feel good about oneself</td>
<td>41 (68%)</td>
<td>118 (52%)</td>
</tr>
</tbody>
</table>

Table 82. Significant relationships between the employed and motives for rambling
Marta Anna Zurawik

For the not retired participants the significantly important motives for rambling were improving health \( (x^2=8.007; \ df=1; \ p<0.01) \) and weight control \( (x^2=4.965; \ df=1; \ p<0.05) \) (table 83).

<table>
<thead>
<tr>
<th>Motives</th>
<th>Retired ((n=189))</th>
<th>Other ((n=99))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving health</td>
<td>149</td>
<td>91</td>
</tr>
<tr>
<td>Weight control</td>
<td>50</td>
<td>39</td>
</tr>
</tbody>
</table>

Table 83. Significant relationships between employment status and motives for rambling

With regards to social influences, the Chi-square indicated that the walking leader support was significantly important for the employed participants \( (x^2=6.449; \ df=1; \ p<0.05) \) (table 84).

<table>
<thead>
<tr>
<th>Social support</th>
<th>Employed ((n=61))</th>
<th>Other ((n=227))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking leader support</td>
<td>45</td>
<td>142</td>
</tr>
</tbody>
</table>

Table 84. Significant relationships between employment status and social factors in rambling

In terms of the perception of mental health, the participants who were not retired noticed significant improvements in mood \( (x^2=6.070; \ df=1; \ p<0.05) \) (table 85).

<table>
<thead>
<tr>
<th>Perception</th>
<th>Retired ((n=189))</th>
<th>Other ((n=99))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood improvement</td>
<td>140</td>
<td>81</td>
</tr>
</tbody>
</table>

Table 85. Significant relationships between employment status and perception of mental health of ramblers

231
For the employed participants improvements in health ($x^2=4.074; \text{df}=1; p<0.05$) and mood ($x^2=7.278; \text{df}=1; p<0.01$) were significant (table 86).

<table>
<thead>
<tr>
<th>Perception</th>
<th>Employed (n=61)</th>
<th>Other (n=227)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health improvement</td>
<td>55 90%</td>
<td>186 93%</td>
</tr>
<tr>
<td>Mood improvement</td>
<td>51 84%</td>
<td>170 87%</td>
</tr>
</tbody>
</table>

Table 86. Significant relationships between employment status and perception of mental and physical health of ramblers

The Chi-square indicated that the employed respondents recorded significantly lower mental well-being scores on WHO-5 well-being index than the rest ($x^2=6.000; \text{df}=1; p<0.05$) (table 87).

<table>
<thead>
<tr>
<th>Mental well-being</th>
<th>Employed (n=61)</th>
<th>Other (n=227)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO-5 High scores (72-100)</td>
<td>31 70%</td>
<td>148 86%</td>
</tr>
</tbody>
</table>

Table 87. Significant relationships between employment status and mental well-being of ramblers

An independent samples t-test examined the significant differences between the employment status and mental well-being. The test revealed that the retired participants reported higher mental well-being scores on the WHO-5 (table 88).

<table>
<thead>
<tr>
<th>Employment status</th>
<th>T-test significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retired (n=189)</td>
<td>Other (n=99)</td>
</tr>
<tr>
<td>Mean 74.51</td>
<td>70.00</td>
</tr>
<tr>
<td>$t = 2.619, \text{df} = 284, p&lt;0.01$</td>
<td></td>
</tr>
</tbody>
</table>

Table 88. Significant relationships between employment status and WHO-5 scores for ramblers
A one-way ANOVA examined whether there were significant differences between the employment status and WHO-5 scores for the respondents (table 89). The results revealed statistically significant differences among the groups, F(4,281)=4.101; p<0.005.

<table>
<thead>
<tr>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>3064.617</td>
<td>4</td>
<td>766.154</td>
<td>4.101</td>
</tr>
<tr>
<td>Within groups</td>
<td>52493.033</td>
<td>281</td>
<td>186.808</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>555557.650</td>
<td>285</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 89. Significant differences between employment status and WHO-5 scores for ramblers

Post-hoc Scheffe tests revealed statistically significant differences in WHO-5 scores between the employed (M=67.87, SD=14.618) and the retired (M=74.51, SD=13.372) participants. The retired participants had significantly higher WHO-5 scores compared with those who were employed (table 90).

<table>
<thead>
<tr>
<th>Retired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean difference</td>
</tr>
<tr>
<td>Employed</td>
</tr>
</tbody>
</table>

Table 90. Significant differences in WHO-5 scores between employment status: employed versus retired ramblers
5. How important is the length of practicing rambling and how does it relate to mental well-being?

For participants who practiced rambling for less than 10 years, the walking leaders support was a significant influence in the activity participation ($x^2=4.748; \text{df}=1; \ p<0.05$) (table 91).

<table>
<thead>
<tr>
<th>Social support</th>
<th>Less than 10 years (n=103)</th>
<th>More than 10 years (n=185)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rambling leader</td>
<td>75</td>
<td>86%</td>
</tr>
<tr>
<td></td>
<td>112</td>
<td>74%</td>
</tr>
</tbody>
</table>

Table 91. Significant relationships between length of practicing rambling and social influences in rambling

Significantly more participants who practiced rambling for less than 10 years felt more active since they started rambling ($x^2=4.232; \text{df}=1; \ p<0.05$) (table 92).

<table>
<thead>
<tr>
<th>Perception</th>
<th>Less than 10 years (n=103)</th>
<th>More than 10 years (n=185)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feel more active</td>
<td>89</td>
<td>97%</td>
</tr>
<tr>
<td></td>
<td>145</td>
<td>90%</td>
</tr>
</tbody>
</table>

Table 92. Significant relationships between length of practicing rambling and perception of fitness

6. How important are walking poles in rambling and how do use of walking poles relate to mental well-being?

The Chi-square revealed that significantly more female respondents used walking poles ($x^2=7.125; \text{df}=1; \ p<0.01$) (table 93).

<table>
<thead>
<tr>
<th>Walking poles</th>
<th>Male (n=136)</th>
<th>Female (n=152)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of walking poles</td>
<td>56</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td>86</td>
<td>57%</td>
</tr>
</tbody>
</table>

Table 93. Significant relationships between gender and the use of walking poles in rambling
Significantly more participants who were more than 60 years old walked with walking poles ($x^2=6.658; \text{df}=1; p<0.05$) (table 94).

<table>
<thead>
<tr>
<th>Walking poles</th>
<th>Less than 60 (n=88)</th>
<th>More than 60 (n=200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use walking poles</td>
<td>33 38%</td>
<td>109 55%</td>
</tr>
</tbody>
</table>

Table 94. Significant relationships between age and the use of walking poles in rambling

For respondents who practiced rambling with walking poles, the walking leader support was a significant source of social support ($x^2=6.003; \text{df}=1; p<0.05$) (table 95).

<table>
<thead>
<tr>
<th>Use of walking poles</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader support</td>
<td>98 85%</td>
<td>88 72%</td>
</tr>
</tbody>
</table>

Table 95. Significant relationships between social influences and the use of walking poles in rambling

The Chi-square indicted that significantly more respondents who used walking poles felt healthier ($x^2=4.080; \text{df}=1; p<0.05$) and more active ($x^2=5.175; \text{df}=1; p<0.05$) (table 96).

<table>
<thead>
<tr>
<th>Perception</th>
<th>Use of walking poles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>yes (n=142)</td>
</tr>
<tr>
<td>Feel healthier</td>
<td>118 98%</td>
</tr>
<tr>
<td>Feel more active</td>
<td>120 96%</td>
</tr>
</tbody>
</table>

Table 96. Significant relationships between the use of walking poles and perception of health and fitness of ramblers

235
An independent samples t-test was conducted to examine whether there was a significant difference between rambling with and without walking poles in relation to mental well-being. The test revealed that the participants who used walking poles had reported higher mental well-being than those who did not use walking poles (table 97).

<table>
<thead>
<tr>
<th>Use of walking poles</th>
<th>T-test significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes (n=142)</td>
<td>no (n=145)</td>
</tr>
<tr>
<td>WEMWBS mean</td>
<td>t = 2.441, df = 285, p&lt;0.05</td>
</tr>
<tr>
<td>53.34</td>
<td>51.07</td>
</tr>
</tbody>
</table>

Table 97. Significant relationships between the use of walking poles and WEMWBS scores of ramblers

7. How does perceived health status relate to mental well-being?

The chi-square test indicated a significant relationship between perceived health status of participants and their WEMWBS ($\chi^2=20.978$; df=3; p<0.001) and WHO-5 well-being index scores ($\chi^2=19.744$; df=3; p<0.001) (table 98).

<table>
<thead>
<tr>
<th>Health status</th>
<th>Low WEMWBS (14-42)</th>
<th>High WEMWBS (61-70)</th>
<th>Low WHO-5 (0-56)</th>
<th>High WHO-5 (72-100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>0 0%</td>
<td>1 3%</td>
<td>1 3%</td>
<td>2 1%</td>
</tr>
<tr>
<td>Average</td>
<td>10 38%</td>
<td>1 3%</td>
<td>12 34%</td>
<td>18 10%</td>
</tr>
<tr>
<td>Good</td>
<td>14 54%</td>
<td>16 43%</td>
<td>19 54%</td>
<td>94 53%</td>
</tr>
<tr>
<td>Very good</td>
<td>2 8%</td>
<td>19 51%</td>
<td>3 9%</td>
<td>64 36%</td>
</tr>
</tbody>
</table>

Table 98. Significant relationships between perceived health status and WEMWBS and WHO-5 well-being index scores for ramblers
A one-way ANOVA examined whether there were significant differences between self-reported health status and WEMWBS scores (table 99). The results revealed statistically significant differences among the groups, $F(3, 279)=12.100; p<0.00$

<table>
<thead>
<tr>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2034.473</td>
<td>3</td>
<td>681.158</td>
<td>12.100</td>
</tr>
<tr>
<td>Within groups</td>
<td>15705.997</td>
<td>279</td>
<td>56.294</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17749.470</td>
<td>282</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 99. Significant differences between self-reported health status and WEMWBS scores of ramblers

Post-hoc Scheffe tests revealed statistically significant differences between the average (M=48.00, SD=6.094), good (M=51.61, SD=8.002) and very good (M=56.12, SD=7.41) categories of self-reported health. The participants who perceived their health as very good had significantly higher WEMWBS scores compared with those of good and average health statuses (table 100).

<table>
<thead>
<tr>
<th>Health status</th>
<th>Very good</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean difference</td>
<td>Standard error</td>
<td>significance</td>
</tr>
<tr>
<td>Average</td>
<td>8.117</td>
<td>1.408</td>
<td>p&lt; 0.001</td>
</tr>
<tr>
<td>Good</td>
<td>4.505</td>
<td>1.044</td>
<td>p&lt; 0.001</td>
</tr>
</tbody>
</table>

Table 100. Significant differences between categories of self-reported health of ramblers
A one-way ANOVA examined whether there were significant differences between self-reported health status and WHO-5 well-being index scores (table 101). The results revealed statistically significant differences among the groups, $F(3,277)=13.027$; $p<0.001$.

<table>
<thead>
<tr>
<th></th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>6643.017</td>
<td>3</td>
<td>2214.339</td>
<td>13.027</td>
<td>$p&lt;0.001$</td>
</tr>
<tr>
<td>Within groups</td>
<td>47086.008</td>
<td>277</td>
<td>169.986</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>53729.025</td>
<td>280</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 101. Significant differences between self-reported health status and WHO-5 scores of ramblers

Post-hoc Games-Howell tests revealed statistically significant differences between average (M=64.53; SD=13.977), good (M=72.85, SD=12.788) and very good (M=79.48, SD=11.847) categories of self-reported health. The respondents who perceived their health as good had significantly higher WHO-5 well-being index scores compared to those who rated their health as average, and subsequently participants who rated their health as very good had significantly higher WHO-5 well-being index scores compared with those of good and average health statuses (table 102).

<table>
<thead>
<tr>
<th>Health status</th>
<th>Very good</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean difference</td>
<td>Standard error</td>
</tr>
<tr>
<td>Average</td>
<td>14.947</td>
<td>2.483</td>
</tr>
<tr>
<td>Good</td>
<td>6.629</td>
<td>1.696</td>
</tr>
<tr>
<td>Very good</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 102. Significant differences between categories of self-reported health of ramblers
Kruskal-Wallis Analysis of Variance showed the significant relationship between participants’ self-reported health status and all items from WEMWBS (table 103).

<table>
<thead>
<tr>
<th>WEMWBS ITEMS</th>
<th>Poor (n=4)</th>
<th>Average (n=45)</th>
<th>Good (n=157)</th>
<th>Very good (n=77)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’ve been feeling optimistic about the future</td>
<td>4.50</td>
<td>3.36</td>
<td>3.68</td>
<td>4.10</td>
<td>$X^2=33.292; df=3; p&lt;0.001$</td>
</tr>
<tr>
<td>I’ve been feeling useful</td>
<td>4.25</td>
<td>3.42</td>
<td>3.57</td>
<td>4.06</td>
<td>$X^2=28.238; df=3; p&lt;0.001$</td>
</tr>
<tr>
<td>I’ve been feeling relaxed</td>
<td>4.00</td>
<td>3.44</td>
<td>3.82</td>
<td>4.05</td>
<td>$X^2=22.507; df=3; p&lt;0.001$</td>
</tr>
<tr>
<td>I’ve been feeling interested in other people</td>
<td>3.50</td>
<td>3.64</td>
<td>3.86</td>
<td>4.04</td>
<td>$X^2=11.462; df=3; p&lt;0.01$</td>
</tr>
<tr>
<td>I’ve had energy to spare</td>
<td>3.00</td>
<td>3.13</td>
<td>3.45</td>
<td>4.01</td>
<td>$X^2=46.345; df=3; p&lt;0.001$</td>
</tr>
<tr>
<td>I’ve been dealing with problems well</td>
<td>3.75</td>
<td>3.31</td>
<td>3.58</td>
<td>3.97</td>
<td>$X^2=26.896 df=3; p&lt;0.001$</td>
</tr>
<tr>
<td>I’ve been thinking clearly</td>
<td>3.75</td>
<td>3.47</td>
<td>3.81</td>
<td>4.10</td>
<td>$X^2=22.950; df=3; p&lt;0.001$</td>
</tr>
<tr>
<td>I’ve been feeling good about myself</td>
<td>3.75</td>
<td>3.47</td>
<td>3.81</td>
<td>4.10</td>
<td>$X^2=25.234; df=3; p&lt;0.001$</td>
</tr>
<tr>
<td>I’ve been feeling close to other people</td>
<td>3.50</td>
<td>3.22</td>
<td>3.44</td>
<td>3.60</td>
<td>$X^2=8.439; df=3; p&lt;0.05$</td>
</tr>
<tr>
<td>I’ve been feeling confident</td>
<td>4.50</td>
<td>3.40</td>
<td>3.70</td>
<td>4.01</td>
<td>$X^2=23.677; df=3; p&lt;0.001$</td>
</tr>
<tr>
<td>I’ve been able to make up my own mind about things</td>
<td>4.75</td>
<td>3.78</td>
<td>3.98</td>
<td>4.26</td>
<td>$X^2=19.790; df=3; p&lt;0.001$</td>
</tr>
<tr>
<td>I’ve been feeling loved</td>
<td>3.75</td>
<td>3.20</td>
<td>3.44</td>
<td>3.70</td>
<td>$X^2=11.079; df=3; p&lt;0.05$</td>
</tr>
<tr>
<td>I’ve been interested in new things</td>
<td>3.50</td>
<td>3.58</td>
<td>3.77</td>
<td>4.01</td>
<td>$X^2=9.983; df=3; p&lt;0.05$</td>
</tr>
<tr>
<td>I’ve been feeling cheerful</td>
<td>3.75</td>
<td>3.64</td>
<td>3.83</td>
<td>4.17</td>
<td>$X^2=22.020; df=3; p&lt;0.001$</td>
</tr>
<tr>
<td>TOTAL SCORE</td>
<td>54.25</td>
<td>48.00</td>
<td>51.61</td>
<td>56.12</td>
<td>$X^2=38.027; df=3; p&lt;0.001$</td>
</tr>
</tbody>
</table>

Table 103. Significant relationships between WEMWBS items and perceived health status of ramblers
8. How social and environmental factors relate to mental well-being

An independent samples t-test examined whether there were significant differences between the perception of social and environmental influences on mental well-being. The test revealed that the participants who did not perceive weather and location as a barrier to rambling and the participants who perceived the walking leader support as an important social influence had higher WEMWBS scores (table 104).

<table>
<thead>
<tr>
<th>Social and environmental influences</th>
<th>Yes</th>
<th>No</th>
<th>T-test significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weather</td>
<td>51.01</td>
<td>53.01</td>
<td>t = -2.556, df = 230, p&lt;0.05</td>
</tr>
<tr>
<td>Location</td>
<td>51.03</td>
<td>53.31</td>
<td>t = -2.157; df=232; p&lt;0.05</td>
</tr>
<tr>
<td>Leader support</td>
<td>53.26</td>
<td>49.73</td>
<td>t = 3.003; df=236; p&lt;0.005</td>
</tr>
</tbody>
</table>

Table 104. Significant relationships between social and environmental influences and WEMWBS scores of ramblers

The participants who did not perceive location as a barrier to rambling had higher scores on WHO-5 well-being index (table 105).

<table>
<thead>
<tr>
<th>Social and environmental influences</th>
<th>Yes</th>
<th>No</th>
<th>T-test significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>70.38</td>
<td>75.78</td>
<td>t = -3.067, df = 230, p&lt;0.005</td>
</tr>
</tbody>
</table>

Table 105. Significant relationships between social and environmental influences and WHO-5 scores of ramblers
6.1.5 Discussion

The study revealed various motives for engaging in rambling. The majority of the respondents walked with the purpose of improving or maintaining health and fitness, which supported the findings from previous studies (e.g. Romo-Perez et al., 2012). For instance, Segar and Richardson (2014) suggested that health as a purpose for walking is an optimal motivator, if people value being healthy. However, health as a primary motive for walking may not provide any immediate rewards that reinforce motivation for the activity, because individuals tend to disengage from the activity when the feedback is delayed and insufficient. The results of this study suggest that the health motive for rambling was often combined with the search for positive feelings in the activity, which corresponds with the body of research suggesting that an important source of positive emotions are visual elements of walking (e.g. Kaplan, 1995; Den Breejen, 2007; Crust et al., 2011; Davies et al., 2012). Furthermore, when considering the importance of the environmental influences on the participation in rambling, the aesthetics of the physical environment were essential for over a half of the study participants. This adds to the existing literature focusing on the positive influences of aesthetically pleasing natural and built environments is widely supported in the literature on leisure walking (e.g. Giles-Corti et al., 2005; Darker et al., 2007b; Saelens and Handy, 2008). With regards to the importance of the social environment in rambling, the opportunity for socialising was important for participation in rambling. The research suggests that the social benefits of walking are the strongest predictors for participation in various population samples (e.g. Stahl et al., 2001; Kwak et al., 2006; Burton et al., 2005; Granner et al., 2007; Moudon et al., 2007; Forsyth et al., 2008; Mudrak et al., 2014). Furthermore, the results highlighted the support of walking leaders as significant for females, the employed, and those who practiced rambling for
less than 10 years. Similarly a study conducted by Fletcher and colleagues (2008), suggested that the ready available social support is an enabling factor of being physically active for the occupational categories. In terms of the impact of the walking leader on physical activity in women. The similar findings are observed in Caperchione and colleagues’ (2011) study suggesting a strong relationship between female group cohesion and leaders’ behaviour. In terms of mental well-being, ramblers recorded higher scores on both mental well-being scales than the British population, which supports the claim that walking is often used as a strategy for enhancing well-being (Conner et al., 2011; Gellert et al., 2012). Furthermore, the results of this study correspond with the findings of Black and colleagues (2015), who used WEMWBS to assess mental well-being of older adults (aged 60-64) and reported that participation in walking for pleasure was associated with higher levels of mental well-being. Well-being is a multi-faced phenomenon that includes physical, social and affective aspects. The emotional benefits of rambling were recorded among females and the participants who were less than 60 years old. In addition, the participants perceived rambling as a beneficial experience on physical well-being, as the majority of the respondents regarded themselves as in good or very good health. Furthermore, female and older ramblers who used the walking poles in rambling, (which have a different design from Nordic walking poles), reported higher mental well-being than ramblers who walked without walking poles. In conclusion, the study results suggest that rambling, as an example of leisure walking, benefited physical health and mental well-being by offering positive experiences that can be found in the presence of the natural environment and a sense of companionship in a group.
6.2. QUALITATIVE STUDY INTO RAMBLING

This section of the investigation into rambling explores individual meanings of participants and the role of personal, social and environmental influences on their mental well-being using the qualitative approach to research. Creswell (1994, p. 145) describes qualitative research as being concerned with personal meanings and processes where the researcher collects descriptive data through the fieldwork to then inductively build concepts and theories. Interviewing as a common approach of conducting the qualitative research, allows for gaining insight into peoples’ opinions, feelings and experiences (Denscombe, 2008). In this study, the interviews were complimentary to the survey questions, and guided by the list of questions, which emerged from the conceptual framework and covered topics of the research interests (Appendix 6).

1) Socio-demographic characteristic of participants.

2) Information about an individual engagement in rambling.

3) What are your motives for rambling?

4) How important are other people in your rambling experiences?

5) How important is natural environment in your rambling experiences?

6) How important are walking poles in enhancing your rambling experiences?

7) What are your positive experiences in rambling (related to well-being)?

8) Familiarity with Nordic walking.
6.2.1. The role of the researcher

The researcher, as an instrument of data collection has a responsibility to gain a holistic view of the context and reduce any personal biases to promote the objectivity of the study. As a researcher, I was aware of my personal biases regarding the walking activities. First of all, I was not familiar with rambling, which brought benefits and drawbacks in the stages of data collection and analysis. It meant that I had no preconceptions and prior experience regarding the activity that could have potentially influenced the interpretation of the data. However, it also meant that I had to enter the social world of rambling and establish a level of credibility with the participants. Therefore, prior to conducting the qualitative study into rambling, I had joined the Rambling Association and participated in several rambling trips with a Garswood Rambling group before and during the data collection. In addition, during data analysis I ensured consistency in developing themes, which then were discussed with my research supervisors. I believe that my involvement with a rambling group, systematic coding and data analysis would reduce biases and ensure the integrity of this study.

6.2.2. Procedures of data collection

The process of recruiting participants was challenging as many ramblers refused to take part in the study due to the lack of time or interest in the topic. Therefore, I employed a convenience sampling method, which was based on the availability of the participants. I conducted 13 interviews during several rambling trips in the Yorkshire Dales, in Skipton on 25th May 2014, Ingleton on 29th June 2014, Prestatyn walking festival on 17th May 2014, and during the Garswood Ramblers’ meeting on 9th July 2014. The ramblers who participated in the study were informed about the research purposes and their rights as participants. They were given relevant contact details and were informed
about their right to withdraw from the study at any time. I ensured that the topic of conversations was clear to the respondents from the beginning and with their permission I audio-recorded all interviews. The one-on-one interviews allowed participants to share their experiences. Initially, I asked the main questions, which yielded spontaneous answers. I led the conversations based on individual answers, which involved omitting certain questions or asking follow-up questions depending on a nature of the responses. Depending on the respondent, the interviews lasted from eight to twenty minutes. The interviewing process ceased when saturation of the key themes was reached.

6.2.3. **DATA ANALYSIS**

The interviews were transcribed and thematically analysed using MAXQDA 11 (VERBI, 2014) software. Thematic analysis is a multistage process that focuses on identifying and describing both implicit and explicit ideas within the data set. It does not require the detailed theoretical and technological knowledge of other approaches, yet it offers a more accessible form of analysis for the inexperienced in qualitative research (Braun and Clark, 2006). Thematic analysis involves becoming familiar with data by multiple reading of the interview transcripts and keeping the research objectives at the forefront. I began data analysis with data reduction. I reviewed the audio recordings for content and manually transcribed the interviews in order to become familiar with the data. Next, I developed initial deductive codes for each theme and clustered them in order to represent the deductive themes:

1) Socio-demographic characteristics of the respondents.

2) Familiarity with Nordic walking.

3) Motives for rambling.

4) Importance of social influences in rambling.
5) Importance of environmental factors rambling.
6) The experiences in rambling related to well-being.
7) Importance of walking poles in enhancing rambling experiences.

Each theme referred to the research questions and the theoretical framework of the study.

The second step of the data analysis involved identifying the subthemes inductively, grouping together the codes featuring similar content, and counting the frequencies of each code in the data set.

Socio-demographic characteristics were divided into categories 1) gender, 2) marital status, 3) employment status, 4) levels of engagement in rambling. Familiarity with Nordic walking was divided into two sub-themes 1) no knowledge, 2) knowledge. The theme exploring motives for rambling was divided into two subthemes: 1) socialising and nature, 2) health and nature. The importance of social influences in rambling theme was divided into three main sub-themes: 1) companionship, 2) friendship in a club, 3) walking leaders. The importance of environmental factors in rambling was split into two sub-themes: 1) aesthetics, 2) weather. The theme of the experiences in rambling related to well-being implied four subthemes: 1) enjoyment, 2) satisfaction, 3) relaxation, 4) achievement. The theme exploring an importance of the walking poles in enhancing Nordic walking experiences was split into three categories 1) balance, 2) security, 3) relieve knee pains. All themes and subthemes are illustrated in figure 40.
Figure 40. Summary of coding frame for rambling
The analysis concluded with refining the themes that captured the essence of the topics. I used quotes and tables that aided the synthesis of the data and supported description of the meanings that emerged from the interviews.

6.2.4. **FINDINGS**

The results of the qualitative study into rambling presented the participants’ experiences that I categorised according to aforementioned themes.

**Socio-demographic characteristics of the rambling participants**

In this study, I interviewed a total of 13 ramblers: eight males and five females. Three participants were employed and ten were retired. In terms of a rambling engagement, six participants were walking leaders and seven were regular ramblers. The age of participants varied from 56 to 81 (mean=68.61) years old. In terms of marital status, seven participants were married, four were widowed, and two were divorced. The socio-demographic characteristics and place of interviewing are listed in table 106.

<table>
<thead>
<tr>
<th>NO.</th>
<th>GENDER</th>
<th>AGE</th>
<th>MARITAL STATUS</th>
<th>EMPLOYMENT STATUS</th>
<th>PLACE OF INTERVIEW</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>R 1</td>
<td>Female</td>
<td>56</td>
<td>Widow</td>
<td>Employed</td>
<td>Prestatyn</td>
<td>Leader</td>
</tr>
<tr>
<td>R 2</td>
<td>Male</td>
<td>57</td>
<td>Married</td>
<td>Retired</td>
<td>Prestatyn</td>
<td>Leader</td>
</tr>
<tr>
<td>R 3</td>
<td>Female</td>
<td>68</td>
<td>Married</td>
<td>Retired</td>
<td>Prestatyn</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>R 4</td>
<td>Female</td>
<td>73</td>
<td>Married</td>
<td>Retired</td>
<td>Skipton</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>R 5</td>
<td>Male</td>
<td>81</td>
<td>Widower</td>
<td>Retired</td>
<td>Skipton</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>R 6</td>
<td>Female</td>
<td>63</td>
<td>Married</td>
<td>Employed</td>
<td>Skipton</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>R 7</td>
<td>Male</td>
<td>66</td>
<td>Married</td>
<td>Retired</td>
<td>Ingleton</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>R 8</td>
<td>Male</td>
<td>57</td>
<td>Divorced</td>
<td>Employed</td>
<td>Ingleton</td>
<td>Leader</td>
</tr>
<tr>
<td>R 9</td>
<td>Male</td>
<td>77</td>
<td>Widower</td>
<td>Retired</td>
<td>Ingleton</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>R 10</td>
<td>Male</td>
<td>72</td>
<td>Married</td>
<td>Retired</td>
<td>Garswood</td>
<td>Leader</td>
</tr>
<tr>
<td>R 11</td>
<td>Female</td>
<td>78</td>
<td>Divorced</td>
<td>Retired</td>
<td>Garswood</td>
<td>Leader</td>
</tr>
<tr>
<td>R 12</td>
<td>Male</td>
<td>68</td>
<td>Widower</td>
<td>Retired</td>
<td>Garswood</td>
<td>Regular Walker</td>
</tr>
<tr>
<td>R 13</td>
<td>Male</td>
<td>76</td>
<td>Married</td>
<td>Retired</td>
<td>Garswood</td>
<td>Leader</td>
</tr>
</tbody>
</table>

Table 106. Socio-demographic characteristics of ramblers
The majority of respondents were familiar with Nordic walking as a form of exercise. A few respondents knew the name “Nordic walking” but were not familiar with the activity itself: “I heard the expression but I didn’t know what it meant” (R7). The respondents who were familiar with Nordic walking and tried practicing it were not keen on the further practice, as the activity was perceived to have strong connections to exercise and fitness.

**R12:** “Nordic walking seems a little bit weird and I would not like to be walk around and exercise. I mean when I walk I like to look around or I listen to music and I don’t want to concentrate on poles and rest of it”

Another respondent said that focusing on correct Nordic walking technique prevented her from noticing the beneficial aspects of walking in the countryside – being in the presence of nature.

In terms of using walking poles when rambling, the majority of the respondents used them to enhance their walking experiences. Those who used one “walking stick” often referred to it as a “third leg”. The common reasons for using a walking aid were to “keep steady”, “keep balance when going through muddy and slippery areas” or “support when going up the hill”. Those who use two walking poles indicated that they helped them “relieve the knee pains especially when I go uphill and downhill” (R8). The pair of sticks also gave some people more security and balance on rocky surfaces “they do help and you can anchor yourself especially on rocky surfaces” (R10). In particular, older interviewees benefited from using walking poles, as they allowed them to maintain regular participation in rambling. As a 66 year old rambler explained: “I
Marta Anna Zurawik

don’t think I could walk without it now so I use it as an aid to go uphill. I think it’s very important so I use it as an aid to walk” (R7).

**OBJECTIVE 9: TO EXPLORE WHAT SOCIO-ENVIRONMENTAL FACTORS CONTRIBUTE TO LEISURE EXPERIENCES IN RAMBLING, USING SEMI-STRUCTURED INTERVIEWS**

The exploration of the participants’ leisure experiences revealed that for many respondents rambling was a “social activity” that provided an opportunity to meet people, socialise, develop and strengthen friendships. When discussing the importance of the social environment in rambling, all participants declared that they enjoyed the company of others more than solitary walking. Several respondents expressed their feelings of enjoyment and happiness towards walking companions in a similar way: “I feel happy when I am out with friends”. As a 72 year old walking leader explained:

**R10:** “I’ve always walked with people and I know some people like solitude when they are walking but to me, I prefer walking with a group […] you have got different people to talk to, you can strike a conversation. It’s very stimulating”

The companionship of rambling mates was an important source of positive experiences. One male rambler said “for me company is very important, I am not a loner at all. I like company I enjoy meeting people I enjoy talking to people” (R7).

Members of rambling clubs have built close social connections and friendships over many years, which provided new contacts outside of families. A 78 year old female rambler stated that she joined the rambling club after her divorce to make some new friends and fill her free time. Another 76 year old rambler explained that when his
wife’s health did not allow her to take part in walks, the rambling club and its members became a centre of his social life: “I mean I have friends here since I was eighteen” (R13). The benefits of a rambling club lay in meeting the same group of people regularly, which offered a sense of a group identity and belonging. Many participants said that sharing the same interest and passions with other “like-minded people” helped develop companionship and friendship in a club. Moreover, all respondents acknowledged the importance of the walking leaders in enhancing the rambling experience. When discussing the role of the walking leader, several participants explained that the key role of leaders was to organise walking trips and guide the walks so the walking experience was enjoyable for the whole group. Some of them added that the leaders also arranged the place of rest, such as a pub or tea room after the walks. As one person explained: “Walking leaders plan the walk before and they chose the best route for us so we can enjoy the countryside and enjoy each other’s company without feeling exhausted at the end of the day” (R4). One of the walking leaders described how she enhanced the rambling experience:

R1: “I have organised leaders for our gentle pace walks, four miles at a slower pace, and encourage them to stop and lean on a gate to watch the piglets, to stop halfway up a hill to look at the view, stop and point out something of historical interest. All these things mean that slower walkers can catch up and rest without feeling they are the reason for the group to stop”

When discussing the role of physical environment in rambling, all participants considered it as a significant influence in their rambling experiences. For many, the opportunity for socialising while being outdoors, in natural environments was the main reason to take up rambling. “I am not doing it for fitness, I started doing it because I like
the countryside and company, friendship in the club” (R13), or to devote the large part of their life: “It’s getting out in the countryside and enjoying the countryside and being in different places and meeting other people. In the last 25 years rambling is my life” (R9). Participants often commented on scenic beauty and an opportunity for being outdoors in “pleasant looking countryside” or “being out in the fresh air, away from traffic and urban areas”. Many participants stated, “I really appreciate nature” or “I love nature” and they often referred to themselves as “a nature lover”. Others appreciated the time spent in the British “beautiful country, away from the city”. In particular, aesthetically pleasant natural environments, such as forests, hills and lakes, were a source of positive feelings and fascination. A female walking leader claimed that “the prettier or more dramatic the views, the better. If there are interesting birds or nice wild flowers, that gives me a lift (R1). Some respondents also valued rambling as an opportunity for improving their own fitness while discovering the British countryside. “It’s trying to keep fit, but also to get out in the countryside and see different parts of the country” (R10).

In many cases, participants also considered the importance of weather conditions in rambling, which yielded varied opinions. For a few ramblers, weather had no importance in their walking experience: “It is nicer when sunny and breezy, but I still go walking when it’s raining” (R1). Some respondents perceived bad weather as a natural occurrence, which had no effect on their walking experiences. As one person stated: “Only perhaps when it’s bad weather, when it’s muddy and boggy to walk on, but you know, that’s just nature anyway” (R4). However, many participants viewed bad weather as the main barrier to enjoying rambling and when I asked them what they did not like the most in rambling, they often answered “I’m not keen when weather is really wet”, or “the worst thing - wet weather”.

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OBJECTIVE 10: TO DESCRIBE HOW LEISURE PURSUITS IN RAMBLING BENEFIT MENTAL WELL-BEING USING SEMI-STRUCTURED INTERVIEWS.

Interviewees emphasised the importance of friendship and companionship as a part of the rambling leisure experience as they perceived rambling as a “social activity” or “camaraderie”. The group rambles provided opportunities to converse and reflect on life with “like-minded people” in peaceful settings. Many people explained that sharing and talking about similar interests during the walks was a source of relaxation and inspiration.

R10: “It’s a relaxing way to spend a day. Especially in a group, you have got different people to talk to, you can strike a conversation - it’s very stimulating, also I think you need to be more in the countryside than we are normally.”

Exploring positive experiences among walking leaders I found that the majority expressed their satisfaction when using skills, such as map reading, and knowledge in planning rambling routes. In addition, for many leaders the experience of leading walks was a source of a personal satisfaction. One male walking leader noted that satisfaction comes “when leading you get satisfaction at the end of it, people come and thank you” (R8).

Another positive feeling in rambling was a sense of achievement associated with challenges en route. Older participants felt accomplished when completing a personally challenging walk, such as finishing long-distance walks. As one rambler explained: “As you get older to be able to do it it’s kind of like scoring a goal” (R12). Many respondents felt a sense of achievement when reaching top of the hills or mountains “with a good view”.
R10: “The most exciting thing probably is when you get to the top of the mountain and you feel the sense of achievement, and you do feel at the top of the world when you do it.”

When discussing the leisure experiences in rambling, a few participants also described numerous challenges while rambling that decreased their overall happiness, such as poor weather conditions: “sometimes it’s depressing when you walk in bad weather but everyone carries on”, and sore feet and aching muscles. However, bodily pain was regarded as an integral part of the rambling experience “I do feel pleasure and pain, as well but the pleasure outweighs the pain. I think we are designed to be in the countryside and that’s why it’s enjoyable” (R10). Moreover, all the experiences whether positive or negative contributed to an overall sense of personal achievement and satisfaction with the activity.

6.2.5. DISCUSSION
The findings suggest that rambling participants were intrinsically motivated by an opportunity for discovering the countryside, socialising and improving health. Rambling is a group activity that provides social settings in developing and strengthening friendships and expressing and sharing ideas with people with similar interests. The findings from this study support the notion of group walking as a form of togetherness, which promotes a sense of belonging, especially for older adults to maintain an intimacy and familiarity with the community. This study also adds to the literature proposing that the company of other people, higher levels of closeness and social support were found to positively influence participation in walking (e.g. Addy et al., 2004; Granner et al., 2007; Caperchione et al., 2011; Darker et al., 2007a). Furthermore,
the social aspect of rambling was closely associated with the natural environment, which created bonds between people and spaces. Pleasurable experiences with friends, sharing stories and creating social bonds were linked to exploring and observing nature. In particular, the aesthetic beauty of places, the lack of built environment and the abundance of natural diversity were perceived as sources of mental relaxation. Also, fascination with nature (wildlife or natural beauty), awe, and appreciation, played an important role in rambling as it provided the opportunity for reflection for many, since walking takes place in some of dramatic and wildest places in the United Kingdom (Crust et al., 2011; Den Breejen, 2007). However certain aspects of the natural environment, in particular the weather, were the most noticeable barrier to enjoying rambling. In this aspect this study contributes to the literature into leisure walking that claimed that people were less likely to participate in outdoor activities when it was raining (e.g. McGinn et al., 2007).

The interactions with nature provided opportunities for skills development, which contributed to a feeling of personal control and satisfaction. For instance, walking leaders found satisfaction in the process of planning and leading walks, and for the ramblers, the experiences of moving outdoors, overcoming challenges during strenuous walks and completing the difficult walks provided feelings of mastery and achievement. In rambling, an important role in reaching personal goals en route is played by walking poles, often called a “third leg”. The poles provided stability and allowed for continuing participation in challenging walks, enhancing feelings of achievement over personal goals and a sense of satisfaction. The current study confirms that rambling, as an example of leisure walking, benefits social and mental well-being by offering collectively shared experiences of the fascination with the natural environment.
6.3. **INTEGRATION OF FINDINGS**

The purpose of integrating qualitative and quantitative studies is the elaborate analysis, which allows for confirmation and corroboration of the findings and initiation of a new way of thinking through attention to surprises and paradoxes (Miles and Huberman, 1994). In this section, I aim to compare results from quantitative and qualitative studies into rambling to corroborate the quantitative data with qualitative data in order to address the following research objective:

**OBJECTIVE 13: TO EXAMINE TO WHAT EXTENT QUALITATIVE RESULTS CONFIRM AND CLARIFY QUANTITATIVE RESULTS IN THE RAMBLING STUDY**

<table>
<thead>
<tr>
<th>MOTIVES</th>
<th>QUANTITATIVE STUDY</th>
<th>QUALITATIVE STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Improving health and weight control were significant motives for not retired participants and those who were less than 60 years old. Feeling good about oneself was a significant motive for the female and the employed participants. Weight control and socialising were significant motives for the employed participants.</td>
<td>The most common motives for rambling were the opportunity for socialising in the aesthetically pleasant natural environments and improving health.</td>
</tr>
<tr>
<td>WALKING POLES</td>
<td>More females and participants over 60 years old used walking poles. Respondents who used walking poles felt healthier and more active.</td>
<td>Respondents who used walking poles often referred to them as a “third leg”. The reason for using walking poles was to keep balance and provide security on slippery paths. The sticks contributed to feelings of confidence when walking through challenging areas and going up and downhill, especially for the older ramblers.</td>
</tr>
<tr>
<td>QUANTITATIVE STUDY</td>
<td>QUALITATIVE STUDY</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Social Influences</strong></td>
<td>Companship was a source of positive experiences. Membership in a rambling club offered social connections and a sense of belonging, especially for the older adults.</td>
<td></td>
</tr>
<tr>
<td>The walking leader’s support was a significant influence for the female respondents, and the employed, participants who practiced rambling for less than 10 years and those using walking poles. Participants who perceived leaders’ support as important for rambling had higher mental well-being scores. Married participants found the family support significantly important in rambling.</td>
<td>Walking leaders were responsible for organising and guiding the walks. They were key figures in maintaining and strengthening group enjoyment and cohesion.</td>
<td></td>
</tr>
<tr>
<td><strong>Environmental Influences</strong></td>
<td>The natural environment was a source of relaxation and fascination. Weather was perceived as a principal barrier that prevented enjoyment in rambling.</td>
<td></td>
</tr>
<tr>
<td>Participants who did not perceive weather and location as a barrier to rambling had higher mental well-being scores.</td>
<td>The most common positive feeling in rambling was enjoyment linked to the natural environment and companionship. Sharing similar interests with like-minded people was a source of relaxation and inspiration. Walking leaders found satisfaction in using skills and knowledge in planning and guiding the walks. A sense of achievement was associated with completing a personally challenging walk.</td>
<td></td>
</tr>
<tr>
<td><strong>Well-being</strong></td>
<td>The participants recorded higher scores on both mental well-being scales than the British general public. Married participants reported higher scores on WEMWBS and WHO-5 than others. Participants who were more than 60 years old and those who were not employed reported higher scores on WHO-5. The most noticeable self-reported improvements in mood were among participants who were less than 60 years and not retired. There was a significant relationship between perceived health status and WEMWBS and WHO-5 scores.</td>
<td></td>
</tr>
<tr>
<td>The most noticeable self-reported improvements in mood were among participants who were less than 60 years and not retired. There was a significant relationship between perceived health status and WEMWBS and WHO-5 scores.</td>
<td>The majority of participants were familiar with Nordic walking. However, ramblers were not keen on practicing Nordic walking due to its strong connections to exercise and fitness.</td>
<td></td>
</tr>
<tr>
<td><strong>Familiarity</strong></td>
<td>Significantly more respondents over 60 years old heard about Nordic walking.</td>
<td></td>
</tr>
</tbody>
</table>
6.4. GENERAL DISCUSSION

The merged findings suggest that the complex interactions between personal, social and environmental influences in rambling offer the opportunity to improve health, connect people with each other and the countryside. The findings from the quantitative study indicated that the common motives for rambling were health and well-being related, and the qualitative study suggested that rambling offered an opportunity to get away from urban environments and socialise in natural settings. This study contributes to the literature that supports leisure walking as a therapeutic activity for promoting well-being by connecting people with natural places (e.g. Gesler, 1993, 2005; Milligan et al., 2004; Gatrell, 2011). Furthermore, it suggests that walking in the countryside provided positive experiences, such as fascination with nature, reflection and mental relaxation, together with opportunities for overcoming challenges associated with demanding landscapes and weather conditions, which contributed to a sense of personal control. The individual perception and appreciation of the natural landscape was linked to the social aspects of walking. Companionship and friendship experienced in peaceful and aesthetically pleasant natural environments was a source of enjoyment. The awareness of the aesthetically pleasant environment and sharing these experiences with like-minded people was a source of relaxation. Furthermore, finding companionship and friendship in a rambling group offered a sense of belonging and combated feelings of loneliness and isolation, which can have a significant benefit for well-being (Doughty, 2013). Rambling clubs developed a sense of togetherness and closeness offering the social support to all members. Walking leaders were important for strengthening group cohesion, especially for females and less experienced ramblers. The natural environment also offered opportunities for exploring personal capabilities when planning and leading walks, and overcoming rambling challenges that provided feelings
of mastery and achievement. In particular, feelings of confidence and satisfaction were noticed among those who used walking poles. The poles allowed for a gratifying participation in challenging walks enhancing feelings of achievement, especially for female and older participants. In conclusion, the relationships between rambling and well-being explored in the quantitative and qualitative studies suggest that rambling in the aesthetically pleasant natural settings provide the collectively shared restorative experiences that contribute to individual mental and social well-being.
CHAPTER 7
COMPARATIVE ANALYSIS OF NORDIC WALKING AND RAMBLING STUDIES

This chapter provides a comparative analysis of the quantitative and qualitative studies into Nordic walking and rambling. A comparison is a common research method that provides a basis for making statements about empirical consistencies, and for evaluating and interpreting cases related to applicable and theoretical criteria. The underlying goal of this comparative analysis is to produce explanations of social phenomena that are general but also present an appreciation of their complexity (Ragin, 1989). The comparative analysis is a demanding technique that can generate reliable knowledge (Azarian, 2011) after careful consideration of several methodological problems including:

1) Case selection, unit, level and scale of analysis.

Sampling is an important issue in the comparative research. Purposive sampling is often deliberate and theory-driven which may favour a particular theory or findings. On the contrary, random sampling is useful for descriptive purposes, although it may contain many irrelevant cases that significantly influence the results (Mills et al., 2006). In addition, the choice of a scale of analysis poses specific problems. A large number of units with inadequate comparative variables may produce superficial, though potentially statistically sound results. In contrast, the small number of units with numerous variables may result in ineffective analysis. The selection of the level of analysis may cause problems with standardisation of the findings, as the population under study is not always self-evident (Mills et al., 2006).
The design of this study used purposive sampling in the quantitative studies and convenience sampling in the qualitative studies. Ragin (1997, 2006) stated that purposive sampling is more effective in comparison research. Constructing and refining the boundaries of a population reduces the probability that spurious relationships achieve statistical significance. In the current research study, I defined the sampling criteria according to the study objectives and expanded population boundaries in a systematic manner. In terms of a scale of analysis, in the study I compare two units, Nordic walking and rambling participants, for producing statistically sound results.

2) Construct equivalence.
Construct equivalence focuses on an instrument, which measures the same latent traits across all groups (Mills et al., 2006). The search for equivalent values should be an independent process of comparative research, which is achieved by seeking different indices for the same phenomenon in different settings (Smelser, 2002). For the purpose of this study, I designed the quantitative and qualitative data collection instruments to measure the same characteristics in the Nordic walking and rambling groups.

3) Variable or case orientation.
A case-orientated approach is evidence-orientated, and it aims to fully understand only one or a few cases using many variables. On the contrary, the variable-orientated approach is theory-centred. It aims for statistical explanation of variance in many cases using only a few variables (Ragin, 1989; Mills et al., 2006). The quantitative comparison study is variable-orientated, in which I investigated the relationships between selected features using statistical analyses to determine significant differences.
between the variables. In contrast, in the qualitative study I focus on understanding similarities and differences between Nordic walking and rambling.

4) Issues of causality.

Causality is a condition that must be present to witness a particular outcome. Ragin (2006) stated that in comparison research, causality may be tested by examining cases with the same outcome and then identifying shared causal conditions or examining cases with similar causal conditions and assessing similarities in the outcome. However, Azarian (2011, p. 123) suggested that the comparison method does not seek general causal explanations but it demonstrates the effectiveness and boundaries of theories and models, preventing researchers from going astray and stimulating theoretical imagination. Similarly, in this cross-sectional research study I do not seek causal explanations of the relationships between walking activities and socio-environmental influences or mental well-being. I aim to gain a deeper understanding of leisure experiences in Nordic walking and rambling and discover how personal, social and environmental determinants of participation in those activities are different in their contributions to mental well-being.
7.1. COMPARISON OF THE QUANTITATIVE STUDIES INTO NORDIC WALKING AND RAMBLING

In a quantitative comparison analysis, the generality is given precedence over complexity (Ragin, 1989). This comparative part of the research involves employing several statistical tests to determine significant differences between Nordic walking and rambling groups.

7.1.1. DATA ANALYSIS

Testing the significance was achieved by using the Chi-square test of significance and independent samples t-test. The Chi-square test ($x^2$) is appropriate for comparing the frequency of cases found in one variable in two or more unrelated samples or categories of another variable (Bryman and Cramer 2005, p. 154). T-tests involve testing the distribution of differences between the means of two groups by employing Levene’s test for equality of variances. If Levene’s test is significant ($p<0.05$) t value is estimated with separate variances. If Levene’s test is not significant ($p>0.05$) t value is estimated by using of pooled variances (Bryman and Cramer, 2005).
7.1.2. **RESULTS**

The total number of participants from the two quantitative studies was 508, of which 220 (43%) were Nordic walking practitioners and 288 (57%) were ramblers. The gender distribution for Nordic walking and rambling groups was significantly different (table 108, figure 41). The Chi-square test indicated that the Nordic walking group had a significantly higher proportion of female participants ($x^2 = 38.965; df=1; p<0.001$).

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordic walking</td>
<td>45</td>
<td>175</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>Rambling</td>
<td>136</td>
<td>152</td>
<td>288</td>
</tr>
<tr>
<td></td>
<td>47%</td>
<td>53%</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>181</td>
<td>327</td>
<td>508</td>
</tr>
<tr>
<td></td>
<td>36%</td>
<td>64%</td>
<td></td>
</tr>
</tbody>
</table>

Table 108. Comparison of gender of Nordic walking and rambling participants

![Figure 41](image_url)
With regards to the age distribution for Nordic walking and rambling, the Chi-square test results indicated that there were significant differences in the age of participants ($\chi^2=31.745; \text{df}=4; \ p<0.001$). The rambling group had a higher proportion of respondents aged 60-69 (51%) and 70-79 (17%). The Nordic walking group had a higher proportion of respondents who were less than 50 (25%) and in 50-59 (28%) age group (table 109 and figure 42).

<table>
<thead>
<tr>
<th>Age</th>
<th>Less than 50</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>More than 80</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordic walking</td>
<td>55 (25%)</td>
<td>62 (28%)</td>
<td>75 (34%)</td>
<td>24 (11%)</td>
<td>4 (2%)</td>
<td>220</td>
</tr>
<tr>
<td>Rambling</td>
<td>28 (10%)</td>
<td>60 (21%)</td>
<td>147 (51%)</td>
<td>48 (17%)</td>
<td>5 (2%)</td>
<td>288</td>
</tr>
<tr>
<td>TOTAL</td>
<td>83 (16%)</td>
<td>122 (24%)</td>
<td>222 (44%)</td>
<td>72 (14%)</td>
<td>9 (2%)</td>
<td>508</td>
</tr>
</tbody>
</table>

Table 109. Comparison of age of Nordic walking and rambling participants

Figure 42. Comparison of age groups of Nordic walking and rambling participants
In terms of marital status, the differences between the groups were significant ($x^2 = 23.937; \text{df}=4; p<0.001$). The Nordic walking group had a higher proportion of the married respondents (71%). On the contrary, the rambling group had a higher proportion of single (17%), divorced (18%) and widowed (10%) respondents (table 110 and figure 43).

Table 110. Comparison of marital status of Nordic walking and rambling participants

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Single</th>
<th>Married</th>
<th>Divorced</th>
<th>Widow(er)</th>
<th>Other</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordic walking</td>
<td>21</td>
<td>157</td>
<td>20</td>
<td>14</td>
<td>8</td>
<td>220</td>
</tr>
<tr>
<td>Rambling</td>
<td>48</td>
<td>144</td>
<td>51</td>
<td>30</td>
<td>15</td>
<td>288</td>
</tr>
<tr>
<td>TOTAL</td>
<td>69</td>
<td>301</td>
<td>71</td>
<td>44</td>
<td>23</td>
<td>508</td>
</tr>
</tbody>
</table>

Figure 43. Comparison of marital status of Nordic walking and rambling participants
The Chi-square test results showed that there were significant differences in employment status between the groups ($x^2 = 34.670; \text{df}=4; \ p<0.001$). The Nordic walking group had a higher proportion of the respondents who were employed (30%) or had their own business (20%). Whereas, the rambling group had a higher proportion of respondents who were retired (66%) (table 11 and figure 44).

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Unemployed</th>
<th>Employed</th>
<th>Own business</th>
<th>Retired</th>
<th>Other</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordic walking</td>
<td>4</td>
<td>2%</td>
<td>66 30%</td>
<td>43 20%</td>
<td>94 43%</td>
<td>13 6%</td>
</tr>
<tr>
<td>Rambling</td>
<td>7</td>
<td>2%</td>
<td>61 21%</td>
<td>18 6%</td>
<td>189 66%</td>
<td>13 5%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11</td>
<td>2%</td>
<td>127 25%</td>
<td>61 12%</td>
<td>283 56%</td>
<td>26 5%</td>
</tr>
</tbody>
</table>

Table 11. Comparison of employment status of Nordic walking and rambling participants

Figure 44. Comparison of employment status of Nordic walking and rambling participants
There was a significant difference between the groups in participation in walking activities ($x^2 = 86.160; \text{df}=3; p<0.001$). A quarter (55) of Nordic walking respondents also practiced rambling. Whereas, 4% (12) ramblers Nordic walked (figure 45).

Figure 45. Comparison of participation in walking activities

In terms of perceived mental and physical health, significantly more respondents who practiced Nordic walking noticed improvements in their health ($x^2=8.652^a; \text{df}=1; \ p<0.005$) and moods ($x^2 = 5.158^a; \text{df}=1; \ p<0.05$) since taking up the activity (table 112).

<table>
<thead>
<tr>
<th>Perception</th>
<th>Health improvement</th>
<th>Mood improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordic walking</td>
<td>197</td>
<td>178</td>
</tr>
<tr>
<td>Rambling</td>
<td>241</td>
<td>221</td>
</tr>
</tbody>
</table>

Table 112. Significant relationships between gender and perception of mental and physical health of Nordic walking and rambling participants
OBJECTIVE 5: TO COMPARE SOCIO-ENVIRONMENTAL INFLUENCES ON NORDIC WALKING AND RAMBLING, USING A SPECIALLY DESIGNED QUESTIONNAIRE

In terms of motives for Nordic walking and rambling, the Chi-square test results indicated significant differences between groups. The Nordic walking group had a significantly higher proportion of respondents who were motivated by weight control ($x^2=24.386; \text{df}=1; \text{p}<0.001$). In contrast, the significant motive for the rambling group was socialising ($x^2=49.231; \text{df}=1; \text{p}<0.001$) (table 113, figure 46).

<table>
<thead>
<tr>
<th>Motives for the walking</th>
<th>Weight control</th>
<th>Socialising with people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordic walking</td>
<td>116</td>
<td>115</td>
</tr>
<tr>
<td>Rambling</td>
<td>89</td>
<td>235</td>
</tr>
</tbody>
</table>

Table 113. Comparison of motives for participation in Nordic walking and rambling

Figure 46. Comparison of motives for participation in Nordic walking and rambling
The Chi-square test results indicated that there were differences in social and environmental influences on participation in Nordic walking and rambling. Instructor support was a significantly important influence in Nordic walking participation ($\chi^2=7.521; \text{df}=1; p<0.01$). On the contrary, the rambling group perceived friends’ support as the most important social factor ($\chi^2=4.460; \text{df}=1; p<0.05$). In terms of environmental influences, weather ($\chi^2=4.252; \text{df}=1; p<0.05$) and aesthetics ($\chi^2=3.993; \text{df}=1; p<0.05$) were significantly important factors for the rambling group (table 114 and figure 47).

<table>
<thead>
<tr>
<th>Social influences</th>
<th>Environmental influences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends</td>
<td>Instructor</td>
</tr>
<tr>
<td>Nordic walking</td>
<td>130</td>
</tr>
<tr>
<td>Rambling</td>
<td>193</td>
</tr>
</tbody>
</table>

Table 114. Comparison of social and environmental influences of Nordic walking and rambling participants

Figure 47. Comparison of social and environmental influences of Nordic walking and rambling participants
OBJECTIVE 6: TO COMPARE THE EFFECTS OF NORDIC WALKING AND RAMBLING ON MENTAL WELL-BEING, USING THE WARWICK-EDINBURGH MENTAL WELL-BEING SCALE (WEMWBS)

In terms of well-being, there were no significant differences in the WEMWBS mean scores between Nordic walking and rambling. However, when investigating each item on the WEMWBS, the significant differences were recorded (table 115). The t-test results showed that Nordic walking respondents scored higher on the items: feeling optimistic about the future (t=0.961; df=506; p<0.001), feeling interested in other people (t=2.255; df=506; p<0.05) and feeling loved (t=4.578; df=506; p<0.001). Whereas, the rambling group scored higher on items: feeling relaxed (t=-2.905; df=506; p<0.005), having energy to spare (t=-2.685; df=506; p<0.01) and feeling good about themselves (t=-2.754; df=506; p<0.01).
<table>
<thead>
<tr>
<th>ITEMS</th>
<th>Nordic walking</th>
<th>Rambling</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’ve been feeling optimistic about the future</td>
<td>3.81</td>
<td>3.75</td>
<td>t=0.961; df=506; p&lt;0.001</td>
</tr>
<tr>
<td>I’ve been feeling useful</td>
<td>3.85</td>
<td>3.68</td>
<td>t=2.428; df=506; n.s.</td>
</tr>
<tr>
<td>I’ve been feeling relaxed</td>
<td>3.62</td>
<td>3.81</td>
<td>t=-2.905; df=506; p&lt;0.005</td>
</tr>
<tr>
<td>I’ve been feeling interested in other people</td>
<td>4.01</td>
<td>3.86</td>
<td>t=2.255; df=506; p&lt;0.05</td>
</tr>
<tr>
<td>I’ve had energy to spare</td>
<td>3.35</td>
<td>3.54</td>
<td>t=-2.685; df=506; p&lt;0.01</td>
</tr>
<tr>
<td>I’ve been dealing with problems well</td>
<td>3.68</td>
<td>3.64</td>
<td>t=0.537; df=506; n.s.</td>
</tr>
<tr>
<td>I’ve been thinking clearly</td>
<td>3.67</td>
<td>3.74</td>
<td>t=-0.970; df=506; n.s.</td>
</tr>
<tr>
<td>I’ve been feeling good about myself</td>
<td>3.65</td>
<td>3.83</td>
<td>t=-2.754; df=506; p&lt;0.01</td>
</tr>
<tr>
<td>I’ve been feeling close to other people</td>
<td>3.54</td>
<td>3.44</td>
<td>t=1.446 df=506; n.s.</td>
</tr>
<tr>
<td>I’ve been feeling confident</td>
<td>3.60</td>
<td>3.74</td>
<td>t=-1.884; df=506; n.s.</td>
</tr>
<tr>
<td>I’ve been able to make up my own mind about things</td>
<td>3.98</td>
<td>4.00</td>
<td>t=-.0266; df=506; n.s.</td>
</tr>
<tr>
<td>I’ve been feeling loved</td>
<td>3.85</td>
<td>3.47</td>
<td>t=4.578; df=506; p&lt;0.001</td>
</tr>
<tr>
<td>I’ve been interested in new things</td>
<td>3.92</td>
<td>3.79</td>
<td>t=1.724; df=506; n.s.</td>
</tr>
<tr>
<td>I’ve been feeling cheerful</td>
<td>3.82</td>
<td>3.89</td>
<td>t=-1.068; df=506; n.s.</td>
</tr>
<tr>
<td><strong>TOTAL SCORE</strong></td>
<td><strong>52.35</strong></td>
<td><strong>52.16</strong></td>
<td>t=0.261; df=506; n.s.</td>
</tr>
</tbody>
</table>

Table 115. Group differences between scores for WEMWBS items of Nordic walking and rambling participants
7.1.3. **DISCUSSION**

The comparison of quantitative studies into Nordic walking and rambling revealed the significant socio-demographic differences between the groups. Nordic walking was mostly practiced by women and the middle-aged people. In contrast, rambling was a leisure choice for older and retired people. The analysis of the differences in socio-demographic characteristics between the walking groups may suggest that participation in rambling and Nordic walking is associated with age, as according to previous studies walking is more likely to be maintained later in life than other physical activities (e.g. Tully et al., 2005; Berger et al., 2005). In addition, the literature on Nordic walking has suggested that the activity is popular among middle-aged women (e.g. Kukkonen-Harjula et al., 2007; Figard-Fabre et al., 2010; Saulicz et al., 2015; Soboleva et al., 2016). The comparison of the familiarity with both activities revealed that only 4 per cent of rambling respondents practiced Nordic walking. The low levels of engagement in Nordic walking by ramblers was explained by Shove and Pantzar (2005, p. 55) who suggested that Nordic walking was not popular among British people due to cultural history. Rambling, as the most popular activity in the United Kingdom, has a network of local organisations, clubs and schemes dedicated to walking, and infrastructure of public footpaths, guidebooks, maps and routs. On the contrary, the name Nordic walking may be perceived as a liability in the British context due to the lack of skiing traditions in Britain.

In terms of motivation, the respondents considered mixed motives for engaging in walking activities and both groups were strongly motivated by the health related benefits of walking. Moreover, Nordic walking participants were intrinsically motivated by the satisfaction with the whole body workout that the activity offered. However, for the Nordic walking group extrinsic motivation was more apparent as weight control and
improved fitness were the key motives of the activity participation. Many studies in Nordic walking advocated that regular participation improved overall functional fitness and capacity (e.g. Morgulec-Adamowicz, 2011; Parkatti et al., 2012; Takeshima et al., 2013; Knapik et al., 2014). Another important motive for participation in both activities were the social benefits of walking. Individuals used walking activities as opportunities to meet new people, develop new friendships, maintain close friendships, and engage in social interactions. Hence in this study, the companionship and social support of friends was reported as significantly important for participation in rambling and Nordic walking. In addition, the Nordic walking practitioners found the instructors’ support important for their engagement. The role of instructors in the group is explained by Shove and Pantzar (2005), who suggested that Nordic walking instructors provide guidance on integrating the activity into an exercise regime, which may also explain the perception of improved health and mood by the Nordic walking group in this research study. Thus, this study adds to the extant research in walking suggesting that regular participation in walking contributes to good health (e.g. Siegel et al., 1995; Blacklock et al., 2007; Darker et al., 2007b; Choi et al., 2007; Morency et al., 2011; Caperchione et al., 2011).

Furthermore, the comparison of walking activities adds to the growing body of evidence, which shows the importance of the physical environment in an individual decision to be physically active. In the case of rambling, the aesthetics of the natural environment was found to be important. Ramblers valued the attractiveness of the natural settings and perceived being in the countryside as the main purpose for walking. The literature supports this claim stating that walking in pleasant green spaces enhances well-being by offering an escape from urban life and interactions with nature (Ryan et al., 2010; Keniger et al., 2013). In contrast, the physical environment was of minor
importance for the Nordic walking practitioners, which corresponds with previous research into vigorous-type physical activity (Kavanagh and Bentley, 2008; Burton et al., 2005).

With regards to mental well-being, the findings suggested that both walking groups scored higher on the mental well-being scales than the general British population; however, there were no significant differences in the WEMWBS mean scores between Nordic walking and rambling practitioners. This provides further evidence that in general recreational walking improves mental well-being (e.g. Edensor, 2000; Darker et al., 2007b). Furthermore, the collection of motives suggests that the additional benefits of Nordic walking may be related to physical well-being linked to exercising, and the additional benefits of rambling may be related to social well-being linked to companionship. Thus, in order to evaluate the importance of social and environmental influences on participation and leisure experiences in Nordic walking and rambling, and in what way these influences differ in their contribution to mental well-being, the qualitative comparison analysis was undertaken.
7.2. COMPARISON OF THE QUALITATIVE STUDIES INTO NORDIC WALKING AND RAMBLING

In this section I aim to explore and compare the leisure experiences in Nordic walking and rambling together with the importance of personal, social and environmental influences on mental well-being.

A comparison of qualitative research studies is based on understanding rather than measuring the difference. The comparative qualitative analysis seeks to capture the complexity of meanings to produce some levels of generalisation. This type of analysis can contribute by identifying absence or presence of particular phenomena in the accounts of different groups, exploring how the reasons, or explanations and manifestations of phenomena vary between groups, exploring the interactions of phenomena in different settings, exploring more broadly differences in the contexts in which phenomena arise (Ritchie and Lewis 2009, pp. 50-51).

7.2.1. DATA ANALYSIS

This qualitative study focuses on using several tactics for testing and confirming meanings. Miles and Huberman (1994, pp. 246-262) discussed several tactics for testing and confirming meanings, such as noticing patterns, seeing plausibility, clustering, making metaphors, counting, making comparisons, partitioning variables, subsuming particulars in general, factoring, noting relations between variables, finding intervening variables, building logical a chain of evidence and making conceptual coherence.

The first step of the data analysis focused on clustering, i.e., grouping and then conceptualising similar patterns or characteristics to understand a phenomenon and linking them to theories. I created deductive categories for leisure – well-being
relationships, according to the theoretical concepts presented in section 2.5 in Chapter Two, and inductive categories for serious leisure, which was explained in section 2.4.2 in Chapter Two. The next step involved partitioning variables, which allowed for noticing differences in themes that might have otherwise been blurred. I explored relations between the categories, themes and nodes to match them with participants’ classification regarding engagement in the walking activities. Next, as a part of the co-occurrence analytical process, two or more codes to a discrete segment of text from each respondent were applied. The last step of the data analysis required latent thematic analysis, which focused on examining the underlying ideas and assumptions of the qualitative data. In this process, I moved back and forth between the first-level data and more general categories that evolved through the theme repetition in the data. The analysis concluded with the development of themes, which were not only descriptive, but they were already theorised.

7.2.2. FINDINGS

The total number of respondents from both qualitative studies was 25, of which 12 were Nordic walking practitioners and 13 were ramblers. In terms of gender, the majority of Nordic walking respondents were female (n=10), whereas in the rambling group there were more male respondents (n=8) (figure 48).

Figure 48. Comparison of gender: Nordic walking versus rambling participants
In terms of a marital status, in both groups the majority of respondents were married (figure 49).

![Comparison of marital status: Nordic walking versus rambling participants](image)

Figure 49. Comparison of marital status: Nordic walking versus rambling participants

With regards to employment, 5 of Nordic walking respondents had their own businesses and 4 were employed. In contrast, over three quarters of rambling participants (n=10) were retired (figure 50).

![Comparison of employment status: Nordic walking versus rambling participants](image)

Figure 50. Comparison of employment status: Nordic walking versus rambling participants
In terms of the levels of engagement in the walking activities, the distribution of the roles (walking leaders/instructors and regular walkers) was rather equally allocated between the Nordic walking and rambling groups. The Nordic walking group consisted on 5 instructors, 6 respondents who walked regularly and one person who participated in Nordic walking occasionally. The rambling group consisted of 6 walking leaders and 7 ramblers who walked regularly (figure 51).

![Bar chart showing the distribution of roles in Nordic walking and rambling groups]

Figure 51. Comparison of activity engagement: Nordic walking versus rambling participants

The age range of the Nordic walking and rambling participants varied (figure 52). In general, Nordic walking respondents were younger in age from 30 to 70 years old (mean=51). The age range of rambling participants varied between 56 to 81 years old (mean=69).

![Bar chart showing the age range of Nordic walking and rambling participants]

Figure 52. Comparison of age range: Nordic walking versus rambling participants
OBJECTIVE 11: TO COMPARE BENEFICIAL ASPECTS OF NORDIC WALKING AND RAMBLING ON MENTAL WELL-BEING, USING LEISURE THEORIES

The thorough analysis of transcripts revealed that the leisure experiences in Nordic walking and rambling were associated with the premises of several leisure theories, such as pleasure – relaxation – fun theory, buffer coping theory, identity formation, affirmation theory and personal growth theory (see Chapter 2, section 5), and therapeutic recreation concepts outlined by Carruthers and Hood (2007), such as savouring leisure, authentic leisure, leisure gratifications, mindful leisure and virtuous leisure. The content analysis revealed that leisure experiences in Nordic walking were mostly related to the theory of personal growth and the concept of leisure gratification. Whereas, leisure experiences in rambling were associated with the premises of pleasure – relaxation – fun theory and the concept of savouring leisure (table 116).

<table>
<thead>
<tr>
<th>Leisure theories</th>
<th>Number of comments</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nordic walking</td>
<td>Rambling</td>
</tr>
<tr>
<td>Pleasure- relaxation- fun theory</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Savouring leisure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buffer coping theory</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Identity formation and affirmation theory</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Authentic leisure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keeping hands and mind busy theory</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Mindful leisure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal growth theory</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Leisure gratifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need compensation theory</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Virtuous leisure</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 116. Comparison of experiences in Nordic walking and rambling reflected in leisure theories
Pleasure – relaxation – fun theory states that leisure provides many moments of pleasure, enjoyment, relaxation and other positive emotions that reduce depression and anxiety and enhance subjective well-being. According to this theory happiness is a desired outcome of the leisure engagement (e.g. Brajsa-Ganec et al., 2011). This theory is related to Hood and Carruthers’s (2007) concept of savouring leisure, which supports the connection between leisure and positive emotions that contribute to hedonic well-being. Positive emotions derive from many sources, such as sensory pleasure, appreciation of beauty, rewarding relationships, and intrinsically motivated activities (Carruthers and Hood, 2004). In the case of both walking activities, the participants found pleasure in being outdoors and engaged with nature. Several participants stated that Nordic walking benefited well-being being by connecting people with a pleasant natural environment, and providing opportunities for meaningful physical activity. “Happiness, you know the pleasure of being outside. It’s outdoors so you can enjoy the time and it feels good” (NW7).

The links to Pleasure – relaxation – fun theory and concept of savouring leisure were strongly emphasised in rambling community. The rambling group considered aesthetically pleasant natural environments as a source of positive leisure experiences that were a source of fascination and aesthetical awareness and also reduced anxiety and stress. A female walking leader explained: “it’s nice to be out in the fresh air. You can switch off from things going around in your head” (R1). In addition, many participants stated: “I am enjoying myself” and “I enjoy looking at scenery and wildlife”. Walking in the natural environments offered an experience of being away from negative thoughts and being engaged and interested in natural settings, which provided opportunities for reflection and effortless attention. According to keeping idle hands and mind busy theory, mindful leisure walking facilitated an escape from everyday life problems and
non-judgmental full engagement and conscious awareness of present walking experiences. Many ramblers discussed the restorative role of nature. As one person summarised “I enjoy looking at various plants and flowers, trees scenery, sometimes wildlife” (R13). In Nordic walking, a sense of mindfulness in leisure was found in solitary walking in the natural environment, and it was enhanced by using the walking poles, which gave a “meditative and relaxing” rhythm to the walk. Solitary Nordic walking offered mindful experience - a disengagement from concerns about daily life, escape from urban life, mental freedom and contemplation during interactions with nature. The respondents who practice solitary walks often referred to this experience as “freeing the mind”. A female Nordic walking practitioner said: “I also like walking on my own in park, I feel relaxed then. I have time for myself” (NW12).

On the contrary, rambling benefited well-being by developing social relationships and sharing positive experiences in the natural environment. In particular, the company of walking mates enhanced feelings of relaxation. As Crust and colleagues (2011) and Den Breejen (2007) suggested, mental relaxation was one of the most important aspects of walking. As one rambler explained to me: “I think it relaxes you, especially afterwards, you feel relaxed when you walked in a group and you were with like-minded people” (R8). Rambling as an example of a group walking is a form of togetherness, which benefited well-being by offering emotional closeness and diminishing feelings of loneliness and isolation. Buffer coping theory suggests that in leisure activities people seek companionship, friendship, social and emotional support (e.g. Coleman, 1993; Coleman and Iso-Ahola, 1993). Leisure activities provide opportunities for interactions with friends, developing and maintaining social networks, which increase social happiness.
In rambling, a sense of companionship in a group was important. Many ramblers stated that they “like company”, “enjoy meeting people”, “enjoy talking to people” and “people play an important role for me”. Spending time walking with a group of “like-minded people” provided suitable settings for social interactions, expressing and sharing interests and building long lasting friendships, which offered a sense of belonging. “They are my friends and most of the people I go walking with I don’t meet any other time apart from when we are walking and we are talking about family and all that” (R12). Similarly in Nordic walking, being part of a group enhanced a sense of companionship and togetherness, which often developed beyond exercising together. As one person told me “I met some good friends through Nordic walking. We are all friends here and we always go out for a drink after” (NW9). For many, Nordic walking offered opportunities to develop and strengthen friendships among participants. “We encourage each other, we support each other through good and bad times, we joke, we tease each other, so you actually forget you are exercising” (NW3).

Leisure activities bring a sense of belonging to a social group by attracting members with similar interests, values and attitudes. The expression of true self in leisure is a premise of authentic leisure, which suggests that leisure activities have great impact on identity development and authenticity when it provides the context for exploration of interests and personal capacities (Hood and Carruthers 2007). Similarly, identity formation and affirmation theory states that through regular participation in leisure activities people declare and develop self-images, aspirations about who they choose to associate with. Repeated participation in leisure activities enhance these self-identities, increases motivation for the shared goals, and makes leisure become a way of life with its own rules, rituals and social world, which improves well-being (e.g. Haggard and Williams, 1992). The links to the identity formation and affirmation theory and
authentic leisure were found in statements from the rambling community. Rambling groups were viewed as a form of a supportive sociality, which provided values of companionship and shared experience of nature.

**R4:** “Meeting up regularly every month with the same people and the atmosphere within the club and the group is very friendly and if people are not there that you usually walk with you can walk with anyone, they make you very welcome”

In addition, leisure identity of ramblers is often expressed by a sense of belonging to rambling clubs, which become a centre of social life for many respondents. As a 77 year-old man explained to me “I have been rambling since 1955 and these are all my family now, and a great part of my life really” (R9). For Nordic walking respondents, a sense of belonging to a leisure group was also an important aspect of participation. Nordic walking groups, in which everyone was “a part of a group” or “equal there” often developed and maintained close bonds between members and grew a sense of leisure identity by being involved in practicing a unique walking technique with specially designed walking poles. The important part in Nordic walking groups were the instructors who promoted the activity, supervised their progress, developed and strengthened social bonds within group and helped to overcome barriers in Nordic walking. “We can help people with various difficulties to improve their coordination, people with Parkinson’s are able to walk, people lost weight, they said they feel less stressed” (NW3). The instructors also motivated participants to challenge their skills by entering and participating in competitive Nordic walks: “I am trying to encourage people to achieve their best, so encouraging them to enter the events like this, to do something they haven’t done before” (NW 5).
Furthermore, the important aspect of Nordic walking that benefited participants’ well-being was engagement in challenging, personally meaningful activities, which provided optimal leisure experiences. Nordic walking enables participants to develop fitness skills, and discover abilities that would otherwise be unused or remain hidden. According to need compensation theory, leisure activities, associated with freedom from obligations and importance of paid employment, enable people to express their desires so that people can recover from fatigue, and return to other roles in their workplaces and families (e.g. Haworth, 1997; Haworth and Veal, 2004; Roberts, 2006). The compensation of work related activities was accentuated in Nordic walking groups. Several respondents said that the activity compensated for negative work-related experiences. “I spend lots of time in front of a computer, so it helps my neck and shoulders and improves my posture” (NW3). It also helped them improve health and fitness “I enjoy it because I get out of the office, I am fitter, and I feel like I am able to achieve more” (NW8). In particular, many respondents referred to “feelings of achievement” when talking about developing individual skills in Nordic walking, such as walking faster and longer distances and taking part in competitive events. “After walking long distances like today, and competing with other people. I didn’t win, but still I feel like I achieved something” (NW11). A sense of achievement is associated with personal growth theory that posits that facing challenges in leisure activities in order to accomplish something difficult and worthwhile produces the feelings of self-worth and pride (e.g. Csikszentmihalyi and LeFevre, 1989; Gould et al., 2008). The theory is consistent with Hood and Carruthers (2007) leisure gratification concept, which states that leisure fulfilment is based on optimally challenging and fully engaging activities that lead to personal development in meaningful ways. The associations between Nordic walking and personal growth theory are best described by the
respondents who were deeply involved in the activity, “watching own progress” and reaching their own fitness and health related goals. A male instructor explained to me: “We always set ourselves targets to walk a certain distance in a certain time. I take part and organise events, and try to beat records from the previous year so that’s the challenge for me” (NW1). A sense of accomplishment was also enhanced by the active use of the walking poles, which improved the Nordic walking experience enabling a more intense workout.

**NW12:** “I walk to lose some weight and I already lost a stone so I do feel a sense of achievement. It’s good exercise because you don’t feel you actually did an hour is workout but you are getting fitter.”

On the contrary, rambling provided a sense of achievement by the perception of accomplishing something difficult, such as overcoming natural challenges on the route like slippery and rocky paths, climbing hills and mountains to admire the view, walking through bodily pains in order to complete the walks. “I feel a sense of achievement especially when I complete the walk. It’s a bit of a challenge and you think ‘oh that was good’- it’s also a great feeling of satisfaction” (R4). In addition, respondents acknowledged the role of walking poles in enhancing positive experiences in rambling, as they provided stability and allowed for continuing participation in challenging walks especially for the older participants.
**Nordic walking and rambling as a continuum of involvement**

In the last stage of the latent thematic analysis, I categorised inductively the participation in Nordic walking and rambling according to Stebbin’s (2008) concept of serious leisure, (see section 2.4.2. in Chapter Two). Based on respondents’ statements about their professional training, and comments regarding their motives and leisure experiences I created preliminary inductive categories of the leisure involvement in Nordic walking and rambling, which are presented in table 117.

<table>
<thead>
<tr>
<th></th>
<th><strong>Serious leisure</strong></th>
<th><strong>Casual leisure</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Members</strong></td>
<td>Nordic walking practitioners,</td>
<td>All ramblers are members of the Rambling Association</td>
</tr>
<tr>
<td></td>
<td>Nordic walking instructors are members of national or international Nordic walking organisations</td>
<td></td>
</tr>
<tr>
<td><strong>Participation</strong></td>
<td>Participation in organised group walks led by instructors</td>
<td>Participation in organised group walks led by walking leaders</td>
</tr>
<tr>
<td></td>
<td>Participation in competitive events</td>
<td></td>
</tr>
<tr>
<td><strong>Training</strong></td>
<td>Ranks of instructor accreditation</td>
<td>Map reading, first aid</td>
</tr>
<tr>
<td></td>
<td>All participants trained by certified instructors</td>
<td>Not necessary for all participants</td>
</tr>
<tr>
<td><strong>Motives</strong></td>
<td>Whole body workout</td>
<td>Companionship</td>
</tr>
<tr>
<td></td>
<td>Developing skills</td>
<td>Health</td>
</tr>
<tr>
<td></td>
<td>Achievement</td>
<td>Enjoyment</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td>Specialist training and education</td>
<td>Various levels of knowledge about nature, culture, history of region among the participants</td>
</tr>
<tr>
<td></td>
<td>Extensive knowledge about the activity and equipment,</td>
<td></td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
<td>Required own set of poles</td>
<td>No requirements</td>
</tr>
</tbody>
</table>

Table 117. Continuum of involvement in Nordic walking and rambling
The categorisation of walking activities according to the concept of serious leisure revealed that Nordic walking was an example of a serious leisure activity, in which participants progress from casual to serious leisure involvement depending on commitment and skills (Stebbins, 2001, 2008).

An important part of Nordic walking was developing skills. Participants involved in Nordic walking developed their skills by taking part in the walking sessions led by the instructors who taught them the correct use of Nordic walking poles and walking technique. A female Nordic walking instructor stated that “the key importance is improving technique, because when you walk right you feel the benefits of Nordic Walking faster, you know, you can walk further without feeling tired” (NW4).

The improvements in the Nordic walking technique were perceived by the lengthening walking distances and adding more speed to walking. Many participants commented in a similar way “I can walk longer”, “I walked x miles and I don’t feel tired” or “It surprises me how fast I can go”. Furthermore, the individual perception of fitness was often tested and confirmed during the competitive Nordic walking events, which provided a sense of satisfaction and achievement for many practitioners. One Nordic walking practitioner commented: “I like competing with other people. I didn’t win, but I still I feel like I achieved something” (NW11).

The serious commitment to Nordic walking can be observed among the Nordic walking instructors, who found a leisure career in creating opportunities for people to participate in the sociable outdoor whole body workout. One instructor stated “I always try to get the best out of people who are walking, I want us to enjoy the experience” (NW4).

All instructors must be trained and accredited by the British Nordic Walking Organisation in order to teach the walking technique. They also possess specialist knowledge about the equipment and are fully informed about the health and fitness
benefits of the activity. Many instructors use “expert language” to communicate the benefits of Nordic walking to the practitioners. When discussing benefits of Nordic walking, several instructors referred to the activity “spreads the effort across the whole body”, “activates core muscles” or “engages up to 95% of body muscles”.

Another role of the Nordic walking instructors is to promote the activity by continuous communication of the health benefits of Nordic walking and the distinctiveness of the equipment. Sharing the knowledge, and common language, and expressions associated with the activity with the practitioners helps to develop the leisure community and identity, which is an important part of the engagement in a serious leisure activity. Thus, I noticed that the instructors and many Nordic walking practitioners used the similar expressions to describe the benefits of Nordic walking, such as “exercise for upper body”, or “full body workout”.

In contrast, I classified rambling as an example of casual leisure, which is a purely hedonic experience identified with positive emotions and immediate self-gratification (Stebbins, 2001, 2004, 2008). An important aspect of rambling was positive emotions associated with social interactions and the natural environment. Rambling provided opportunities for enjoyment, relaxation, fascination with nature and pleasurable social experiences. A male walking leader stated: “Enjoyment - I am not doing it for fitness I am doing it because I like the countryside and company, friendship in the club” (R13).

When describing positive experiences in rambling, many participants focused on the fascination with aesthetical and seasonal aspects of nature. They were “interested in sights and sounds” and “noticing the changes”. Moving through the British countryside and focusing on the beauty of countryside was an escape from the daily problems of urban life. Many ramblers described it as “a break from normal routine” or “being away
from everyday problems”. For several people rambling was an opportunity to discover and re-discover the nature. As a male rambler explained to me:

**R5:** “When I see the countryside, I try to think back when I was a child and what was growing back then and what is growing now, and I see different things and changes in the countryside, some are pleasant some are not.”

Interactions with nature also supported social connections, developing a sense of companionship and friendship within the rambling groups. One person said “It’s a social activity, to meet other people, have a nice chat, camaraderie and fresh air” (R4). For many group walks in the pleasing settings were an opportunity for relaxing interactions with “like-minded people”. In groups, several friendships developed over many years and for older ramblers companionship of the rambling mates was very important and often diminished feelings of loneliness. As the 77 year old rambler mentioned earlier explained to me “these are all my family now”. Furthermore, many walking leaders also feel personally responsible for providing a sense of togetherness and enjoyment in a group.

**R8:** “When you prepare and lead a walk you get satisfaction at the end of it when people come to say how much they enjoyed it. Over the years I have been leading dozens and dozens of people and it makes me happy that I introduced them to walking”

Rambling as a form of casual leisure requires little or no special training to enjoy it. Although all ramblers are members of the Ramblers Association, the membership does
not involve acquiring training and additional skills in order to progress in the leisure engagement. All ramblers possess skills and knowledge that are shared in a group.

**R10:** “It’s good when you are in the group and it may be somebody in a group who is a bit of an expert on birds and somebody else may know something about flowers and trees so you do pick up a lot of information when you are on the walk.”

Moreover, walking leaders’ responsibilities before the ramble is to “recce the walk”. One walking leader told me “when you plan a walk you have to know the right of way where you have permission to walk” (R13). The responsibilities of walking leaders require additional time to plan the walk with appropriate levels of difficulty, “recce the walking route” before the group, and supervise a group during the walk. Thus, the roles in rambling groups often shift between playing a role of walking leader and regular walker, week in and week out so that all the members of the group can enjoy and relax the rambles.

**7.2.3. DISCUSSION**

The qualitative comparison of Nordic walking and rambling revealed that both activities produced optimal leisure experiences as respondents reported they were completely involved, the activities were meaningful and offered various positive emotions to the practitioners. Having linked positive leisure experiences and feelings in Nordic walking and rambling to the leisure theories, this study discovered that these walking activities tend to contribute to mental well-being in different ways, depending on the personal levels of leisure involvement. For instance, participation in rambling, as a form of casual leisure, supports the connection between leisure activities and positive emotions.
(e.g. Pavot and Diener, 1993; Fredrickson, 2001; Fredrickson and Joiner, 2002). Furthermore, rambling’s contribution to mental well-being can be explained by pleasure-relaxation-fun theory and/or the concept of savouring leisure. The findings suggest that rambling benefited well-being by enhancing positive aspects and emotions associated with the activity involvement and purposefully searching leisure experiences that give positive emotions and contribute to happiness. In addition, rambling provided the opportunity for maintaining and improving hedonic well-being through active engagement with natural environments, which offered fascination and effortless attention when walking in countryside. The connection between rambling and the countryside contributes to the literature on beneficial effects of the natural environment on emotions, self-development, health and mental well-being (e.g. Kaplan, 2001; Hartig and Staats, 2006; Gatrell, 2011; Roe and Aspinall, 2011). Moreover, rambling as a group activity positively influenced well-being by enabling social relationships and sharing positive experiences.

One of the important features of the rambling community was the closeness of relationships as the activity offered a sense of belonging, companionship, friendship, social and emotional support. In contrast, Nordic walking’s contribution to mental well-being is associated with personal growth theory and/or the concept of leisure gratification suggesting that participation in the optimally challenging activity provides opportunities for the development of personal abilities, which promote a sense of achievement. Furthermore, Nordic walking can be categorised as an example of a serious leisure pursuit, which can offer a leisure career. Serious participation in the activity involves acquisition and expression of special skills, knowledge and experience (e.g. Stebbins, 2008; Oksanen-Sarel and Timonen, 2005; Gould et al., 2008). Similarly, results of this study suggest that serious involvement in Nordic walking offered to its
practitioners skills development, and self-actualisation, which resulted in personal development and enhanced the feelings of accomplishment. Through improving the walking technique and developing self-realisation of the benefits from the participation in the activity, many Nordic walking practitioners became instructors committed to the personally meaningful activity, and communicating the health benefits of Nordic walking. Similarly, regular Nordic walking practitioners tended to be more involved in self-development through the activity, as they felt accomplished when progressing and reaching personal fitness and health goals.

In conclusion, leisure experiences in rambling related to well-being are intensified by a strong emotional bond between the members and the natural environments (psychological and emotional domain), developing and maintaining friendships (social domain), and facilitating mobility and vitality (physical domain). Whereas, the process of enhancing leisure experiences in Nordic walking involves developing physical activity skills and fitness (physical domain), encouraging leadership (social domain), learning and executing the correct Nordic walking technique (cognitive domain), and promoting positive emotions through the participation in the activity (psychological and emotional domain).
CHAPTER 8
DISCUSSION AND CONCLUSIONS

Solvitur ambulando (It is solved by walking) - Diogenes

This chapter draws together findings from the Nordic walking (presented in Chapters Four, Five, and Seven), and rambling studies (presented in Chapters Six and Seven). All findings are referred to the literature in leisure, well-being, and recreational physical activity in order to address the key focus of this research study by triangulating and complementing all the resources and information collected. Next, the contributions made by this study to the knowledge base are identified. Then, the merits and limitations of this research study are considered. The chapter concludes by proposing future directions for research. As a final point of the research dissertation, the author’s self-reflection is presented.

8.1. REVIEW OF THE RESEARCH OBJECTIVES AND DESIGN

The overall purpose of the research study was for me to explore and compare the benefits of Nordic walking and rambling, as leisure pursuits, and to investigate socio-environmental influences on mental well-being. The overall aim comprised two broad aims of this study:

- To examine to what degree social and physical environments influence participation in Nordic walking and rambling and in what way these influences are experienced as beneficial for mental well-being.
To explore the kinds of leisure pursuits in Nordic walking and rambling, in order to understand the dynamics of engaging in leisure walking activities and the distinctiveness of their contribution to mental well-being.

In order to achieve these objectives, I drew upon the academic literature to provide a synopsis of research evidence on the relationships between leisure walking and well-being, and socio-ecological perspectives on physical activity including walking. The literature, which evolved through Chapters One and Two, provided the foundations for the theoretical framework of my study. In the next step of the research, I developed the principal research question and the research objectives to be met not only by singular quantitative and qualitative methods but an integration of these two approaches. Throughout Chapters Four, Five, Six and Seven I investigated the relationships between walking activities and mental well-being, providing a practical example of how a mixed-methods approach can offer a more comprehensive perspective. The semi-structured interviews assisted online surveys by clarifying the quantitative results with narratives from the qualitative study, while the survey variables were useful for formulating the interview questions. The main purpose of implementing a mixed-methods approach was to overcome the limitation of using singular methods and take advantage of the integration of the study findings. By combining quantitative and qualitative methods I was able to build a multi-layered understanding of participants’ social worlds and explore in depth how different walking activities influence their well-being. A further reason for the combination of quantitative and qualitative studies was to corroborate the evidence with each other in order to enhance internal validity and to achieve the consistency in findings by reducing bias of one measure, and thus enhance the external validity of the overall research study.
8.2. DISCUSSION OF KEY FINDINGS

The key findings from this research study are best examined by returning to the principal research question:

How do the leisure experiences of Nordic walking and rambling contribute to mental well-being?

Firstly, my study answers this question by measuring mental well-being in Nordic walking and rambling populations with the use of validated instruments, and revealing that the state of mental well-being was higher in both walking groups in comparison to the British general population. However, no significant difference in scores between the Nordic walking and rambling groups was found. Thus, this study suggests that in general participation in leisure walking improves mental well-being, and it may be assumed that both types of walking are equally beneficial. However, the principal aim of my study was to demonstrate that Nordic walking and rambling tend to enhance well-being in different ways. As I outlined in Chapter Two, well-being is a complex construct associated with positive mental health and the potential to lead a meaningful life. The literature has hypothesised a number of different factors that may influence overall well-being. Ryan and Deci (2001) claim that well-being is concerned with pleasant feelings and experiences, as well as the ways, in which people make choices and live their lives. Ryff (1989) argues that well-being comes from achieving a sense of mastery over the environment, creating meaningful lasting relationships, achieving personal growth, acting autonomously, finding purpose and living a life in accordance to one’s true nature. Haworth and Hart (2007) describe well-being as a complex state and process, which may take different forms over the life-course as personal,
interpersonal, collective needs and motives change over time. Hood and Carruthers (2007), and Anderson and Heyne (2012) defined several types of resources, such as psychological, social, cognitive, physical, environmental and spiritual that enhance quality of leisure experiences and have differential effects on well-being.

The current chapter concludes my research and answers the question of differences between Nordic walking and rambling in their contributions to well-being by presenting the key results of the quantitative and qualitative investigations in the form of theoretical models of Nordic walking (figure 53) and rambling (figure 54). The models identify principal contributions to mental well-being based on the importance of motivational, social and environmental influences in the activity participation. I developed these models in order to aid an understanding of the differences between Nordic walking and rambling in terms of motivation, social and environmental factors in relation to the pursuits of mental well-being. Each model is examined by exploring its principal elements as the themes in order to develop an understanding of participants’ experiences that contribute to a sense of well-being.
8.2.1. **NORDIC WALKING CONTRIBUTIONS TO MENTAL WELL-BEING**

The quantitative and qualitative findings portrayed participants’ viewpoints and experiences with respect to how participation in Nordic walking benefits mental well-being. Based on these findings, my study suggests several conclusions, which are organised in five themes: motives, social world, the importance of natural environment, leisure experiences and contributions to mental well-being.

![NORDIC WALKING AND WELL-BEING MODEL](image)

Figure 53. Model of the benefits of Nordic walking benefits for mental well-being.
Motives for Nordic walking.

The key findings suggested that in general, participation in Nordic walking was driven by autonomous forms of extrinsic motivation, in which participants recognised the core values of the activity. Many participants shared similar motives, such as opportunity to exercise, lose weight and stay healthy. The importance of health and fitness motivation in Nordic walking was acknowledged by all participants, as one person summarised: “great overall fitness and full body workout, you use your core, your upper body, it’s great fun” (NW9). The aim of Nordic walking is to engage upper and lower body in the workout, which allows for feelings of the instant fitness benefit of exercising (e.g. Kukkonen-Harjula et al., 2007; Breyer et al., 2010). Hence, participants viewed Nordic walking as a low impact, whole body workout, enriched by the active use of walking poles, emphasising physical fitness and providing a motivation for more intense physical effort. The results correspond with previous research that suggested that health benefits of Nordic Walking were associated with walking poles, which enhanced the exercise intensity without increasing perceived exertion (e.g. Figard-Fabre et al., 2010; Breyer et al., 2010; Takeshima et al., 2013).

Social world of Nordic walking.

Like nearly all leisure activities Nordic walking is widely undertaken as a social activity, in which the core values are transmitted socially as participants interact with each other. The previous research that examined social aspects of physical activity revealed that social support is an important enabler for participation in vigorous-intensity activities, including walking (e.g. Burton et al., 2005; Fletcher et al., 2008). In Nordic walking, the principal values, such as health and fitness were communicated and shared between the instructors and practitioners, who together created a Nordic walking
community with a specific leisure identity. The practitioners developed the leisure identity by group practices of a unique walking technique with specially designed walking poles during structured courses and sessions with the qualified instructors. A body of research suggests that interactions with people who considered themselves as a part of a group generated a sense of belonging and identity with a particular group, which led to perceiving and understanding the world from a group collective perspectives (e.g. Stets and Tsushima, 2001; Liu et al., 2016). Creating a Nordic walking identity, in which everyone was “a part of a group” or “equal there” developed close social bonds between the practitioners, which were a source of positive emotions and offered a sense of belonging to a group, in which everyone “had fun and exercised at the same time”. An important part in the Nordic walking community and developing a leisure identity were the instructors who positively influenced participation in the activity, especially among women. These findings add to the research investigating the importance of instructors; several studies suggested that instructors’ enthusiasm, ability to motivate and availability outside the group positively influenced social support and group cohesion (e.g. McAuley et al., 2005; Capercione et al., 2011).

One of the roles of the instructors was to motivate participants for continuous health and fitness improvements, and to help overcome the initial “negative image” barrier of walking with poles. Shove and Pantzar (2005) suggested that the important role of Nordic walking instructors’ in a group was teaching and supervising walking with poles. Similarly, the current study reported that instructors played a key role in the upholding of the walking technique during the workout. Many participants shared similar opinions: “he helps me with my technique”, or “she gives some advice how I can improve walking technique”. However, this study revealed that instructors also acted as group conductors who helped to develop and strengthen social bonds within the
groups resulting in the satisfaction with the activity. Several participants explained the supportive and recreative roles of instructors: “He makes the walk less stressful and more enjoyable; the walk wouldn’t be the same without him” (NW2). Moreover, the positive role of the instructors in developing social bonds within the group often grew beyond participation in Nordic walking “We are all friends there, and we always go out for a drink after Nordic walking”(NW9).

The importance of the natural environment in Nordic walking.

In general, the physical environment was of secondary importance for participation in Nordic walking as a few participants explained: “[...] it’s not the main reason I walk” (NW12) and another said: “I like being outdoors, breathing fresh air but I’m more focused on my technique than scenery to be honest” (NW11). Similar conclusions were drawn by Kavanagh and Bentley (2008), who reported that environmental factors contributed the least to vigorous-type activities, including walking. However, within the group of environmental influences, location, access and weather were important for the participants who practiced Nordic walking for less than 4 years. These findings may suggest that for novice Nordic walking practitioners aesthetical attributes of locations and access to open recreational spaces are associated with their regular participation. A body of research supports the importance of physical environment in walking (e.g. Humpel et al., 2004; Owen et al., 2004; Saelens and Handy, 2008). Moreover, many Nordic walking participants viewed the natural environment as a source of various positive feelings that improved the whole Nordic walking experience: “nature makes Nordic walking even better” (NW10). For some respondents, the perceived degree of naturalness or level of biodiversity of the physical environment had an impact on participation in the physical activity and mental well-being. In particular, aesthetically
pleasant nature was a source of relaxation and freedom. The beneficial effects of attractive natural landscapes lie in physical and mental engagement with the environment and aesthetical awareness and divert focus from negative emotions and thoughts (e.g. Kaplan, 1995; Gesler, 2005). Moreover that natural environment was a preferred setting for restorative experiences when compared to urban settings (e.g. Hartig et al., 2007; Gidlow et al., 2016). One participant described his experience of nature: “When you are out you notice it more. When I go Nordic walking around the Lake District or a seafront, it’s not that stressful to get somewhere [...] it’s more relaxing way of walking” (NW2).

Leisure experiences in Nordic walking.

Nordic walking was a source of various positive feelings, such as happiness and enjoyment in social interactions with friends in a group, which is linked to the social world of Nordic walking. However, the most common experience in Nordic walking was a sense of achievement, which was associated with the individual perceptions of improvement in personal fitness and health goals. Many participants felt accomplished when progressing in speed and distance in walking over time: “when I go Nordic walking for a long time” or “the distance I cover, that makes me accomplished”. Others strived to improve their competence and sought out challenges and competitions in order to win and feel proud: “especially when you have done an event, something out of your comfort zone”. Furthermore, the respondents acknowledged that major personal achievements were grounded in the use of specific Nordic walking poles, which offered a perception of more intense walking experience. The walking poles played a role in achieving a sense of accomplishment by giving walking a purpose - a whole body workout.
**Nordic walking contributions to well-being.**

The findings from the quantitative study suggested that participation in Nordic walking over longer periods of time (4 years) had a positive influence on mental well-being. The results of the qualitative studies revealed that participants’ well-being was enhanced by positive feelings related to companionship, instructors’ support, and a sense of achievement associated with exploring personal capacities, developing skills and serious commitment to the activity. The benefits of participation in Nordic walking on mental well-being can be explained by the theory of personal growth and/or the concept of leisure gratification. According to these concepts, participation in leisure activities benefits well-being by engagement in challenging, personally meaningful tasks that provide opportunities for personal growth and a sense of achievement (e.g. Hood and Carruthers, 2007; Gould et al., 2008). For most respondents participation in Nordic walking focused on displaying competence, acquiring skills, establishing and reaching own fitness and health goals. The perception of walking challenges and the development of individual skills in Nordic walking enhanced feelings of commitment and accomplishment. In addition, serious leisure engagement in Nordic walking – a career as Nordic walking instructors offered the opportunity for skills development and self-actualisation. Furthermore, the respondents who were seriously committed to Nordic walking often found the activity as an opportunity for personal growth and extending awareness beyond personal needs.
8.2.2. Rambling Contributions to Mental Well-being

Similarly to the previous section, the rambling model of benefits for mental well-being is discussed in five themes: motives, social world, importance of the natural environment, leisure experiences and rambling contributions to well-being.

Figure 54. Model of the benefits of rambling for well-being.
Motives for rambling.

The common motives for rambling were health related. Many participants indicated that maintaining health through rambling was important. “Keeping healthy; I had a heart attack and heart by-pass surgery fourteen years ago and need to exercise to stay fit” (R2). This adds to the literature suggesting that health is a recognised motivation for rambling (e.g. Dawson et al., 2006; De Moor and the Ramblers, 2013). Moreover, the social element of rambling was also an important motive, especially when it took place in the natural environment. The majority of the respondents sought companionship and sharing experiences in natural environments: “be out, in the fresh air and meet people”. Previous research has linked the social aspect of walking to the natural environment, since the countryside was proven to create emotional bonds between people and spaces (e.g. Roe and Aspinall, 2011; Marselle et al., 2012, 2013; Gatrell, 2013; Gidlow et al., 2016). Similarly, the motivation for rambling was strongly linked to its social world, as the majority of ramblers were older adults (more than 60 years old) who searched for social interactions, a sense of belonging that allowed them to maintain important relationships with friends and family.

Social world of rambling.

Leisure activities are characterised by unique social worlds, and likewise rambling is a social leisure activity that fosters companionship or “camaraderie” and offers social support, especially for the older adults. Many older ramblers often have developed interpersonal bonds and built their friendships over their adult life, as a 76 year old man stated: “I have friends here since I was eighteen”. For all participants companionship and friends’ support in a group was important and many referred to friends in a group as “important for me”, or “someone to share the experience with”. Rambling was seen as a
form of togetherness which created a unique leisure identity. Moving through the countryside, sharing fascination with nature with “like-minded people” offered a sense of intimacy in a group. In particular, for older adults, rambling was a source to maintain close social connections, and a sense of belonging and inclusion in the community, which diminished feelings of loneliness. As a 77 year old rambler explained to me “these are all my family now”. This corroborates previous studies that suggested that group walking combated feelings of loneliness and isolation (Kyle and Chick 2002; Bean et al., 2008; Doughty, 2013; Beggs et al., 2014).

**Importance of the natural environmental in rambling.**

One of the primary aims of rambling is exploring nature. During the walk, ramblers search for landscapes with natural features or historic and interesting sites. Therefore, for the majority of respondents the aesthetics of the natural environment were important aspects for their participation as it offered various positive emotions and experiences. Many participants discussed the beauty of natural landscapes and their fascination with nature: “The prettier or more dramatic the views, the better. If there are interesting birds or nice wild flowers that gives me a lift” (R1). Others were captivated by seasonal changes of nature and wildlife: “I just like to see changing of the seasons and the animals and of course at this time of the year the flowers in the fields” (R11). A sense of engagement in the natural environment offered a relief from mental fatigue and everyday problems. Natural environments also offered an escape from routines and urban daily lives, as one participant summarised: “hearing the birds and seeing animals is a break from normal routine” (R2). The importance of natural settings on restorative experiences and mental relief is widely supported in the literature (e.g. Milligan et al.,
Furthermore, the natural environment provided opportunities for exploring personal capabilities when overcoming natural challenges, such as muddy and slippery paths, or mental challenges, such as fatigue, which provided feelings of satisfaction and achievement. In particular, walking poles, which were perceived as a “third leg”, contributed to feelings of confidence and satisfaction as they allowed for a continuing participation in rambling especially for older participants. A 77 year old man explained to me: “If I didn’t use the poles I would have to give it up because once you get to climbing hills, poles are great, and if I didn’t use them it would be difficult for me to walk”. However, the natural environment was not just perceived as an enabler of positive experiences in walking. Many participants complained about the poor weather as a barrier to enjoy the walking experience. Ramblers often replied “the only thing I don’t like is rain” or “I hate getting wet”. The poor weather as an environmental barrier to leisure activities, including walking has been recognised by previous research studies (e.g. Rutt and Coleman, 2005; McGinn et al., 2007).

**Leisure experiences in rambling.**

The most common positive experiences in rambling were associated with finding enjoyment and relaxation in nature and in the company of friends. For many participants the countryside was a pleasant setting for enjoyable and relaxing social experiences, developing a sense of “camaraderie” and friendship with “like-minded people” within the walking group. “I feel relaxed and when you walk in group you are with like-minded people and it feels good” (R8). Ramblers also savoured the experience of being surrounded by peaceful and appealing nature, away from the urban
environments. Many participants referred to the natural settings when describing enjoyable experiences in walking: “the enjoyment of being out in the fresh air away from traffic and urban areas” (R2). Many research studies have suggested that walking in the countryside provides restorative experiences and opportunities for meaningful leisure time physical activity (e.g. Pretty et al., 2005; Stigsdotter et al., 2010; Gatrell, 2013; Duvall and Kaplan, 2014). In particular, rambling in peaceful natural environments diverted attention from negative emotions and thoughts, and offered tranquillity and pleasantness. One participant summarised the positive experience of nature: “I feel relaxed and comfortable with myself” (R4).

**Rambling contributions to well-being.**

Participation in rambling supports the connection between leisure walking and positive emotions that work together to enhance well-being (e.g. Conner et al., 2011; Gellert et al., 2012). The contribution of rambling towards well-being can be explained by Pleasure – Relaxation – Fun theory and/or the concept of savouring leisure, which posit that happiness and other positive emotions are desired outcomes of leisure engagement (e.g. Hood and Carruthers, 2007; Brajsa-Ganec et al., 2011). Searching for opportunities for hedonic experiences in walking, i.e. enjoyment, happiness and relaxation is associated with the escape from negative feelings and stressful life, which decrease stress and depression (e.g. Kaplan, 2001; Morris, 2003; Roe and Aspinall, 2011; Henderson et al., 2013; Ku et al., 2016). In rambling, savouring leisure focused on paying attention to positive aspects and emotions associated with natural landscapes, which have a quality to provide fascination and enjoyment. In addition, opportunities for spending time in natural environments in the company of “like-minded people” provided feelings of belonging, familiarity and a sense of relaxation. The person-place
relationships are widely supported in the literature and many studies have suggested that walking connects people with places, and offers a positive experience of being part of natural landscapes (e.g. Herzog and Strevey, 2008; Roe and Aspinall, 2011; Adevi and Martensson, 2013; MacKerron and Mourato, 2013). In particular, rambling offers context for freeing the mind, focusing on appreciations of natural world, and building connections with people and places.

8.2.3. COMPARISON OF RAMBLING AND NORDIC WALKING CONTRIBUTIONS TO WELL-BEING.

The aim of this study, outlined in section 8.1., was to investigate and compare the dynamics of engaging in Nordic walking and rambling, and the distinctiveness of their contribution to mental well-being in terms of the social and environmental influences. In order to facilitate a better understanding of differences in leisure experiences between these two walking activities, I created word clouds of the collective values in Nordic walking (figure 55) and rambling (figure 56) based on the responses from the qualitative studies.
Figure 55. Word cloud of collective values in Nordic walking.

Figure 56. Word cloud of collective values in rambling.
The next section presents the essence of the study research objectives by focusing on the key values in Nordic walking and rambling in the context of Seligman’s (2011) five pathways to overall well-being: positive emotions (P), engagement (E), positive relationships (R), meaning (M) and accomplishments (A). This approach is a promising framework for investigating and comparing walking practices, their collective values that contribute to well-being (see pp.72-73).

**Positive emotions in Nordic walking and rambling.**

My study clarifies how practicing rambling and Nordic walking promote positive emotions. Firstly, the comparative quantitative study revealed the significant differences between the walking activities on the several items on the WEMWBS. In the Nordic walking group, “feeling loved”, “feeling optimistic about the future” and “feeling interested in other people” were significantly important aspects of mental well-being. The importance of affective and social aspects of well-being in Nordic walking suggested that the activity contributed to well-being by offering an opportunity for social interactions and social support. On the contrary, for the rambling group “feeling relaxed”, “having energy to spare” and “feeling good about oneself” were the significant and important aspects of mental well-being. These findings corresponded with the results from the previous studies that have considered the importance of the restorative experiences of leisure walking (e.g. Marselle et al., 2012, 2013; Gatrell, 2013; Davies et al., 2012). Secondly, the comparison of the qualitative studies revealed that finding pleasure in rambling was linked to the enjoyable experiences through the sensory stimulation of the aesthetically pleasing natural settings, which provided fascination and relief from daily stresses. As one respondent explained “to be out in the elements gives a feeling of being away from my everyday life”. For the ramblers, the
countryside was also a suitable setting for pleasurable social experiences, such as developing a sense of companionship and maintaining friendships within a walking group. In particular, sharing a fascination with nature with “like-minded people” was a source of mental relaxation. Similarly, the pursuit of positive emotions in Nordic walking was also associated with social aspects of the activity. As one Nordic walking practitioner stressed “meeting people, talking to people, so that is what makes me feel good”. These findings added to the literature that strongly supported the connections between positive emotions and social relationships (e.g. Ryff and Keyes, 1995; Keyes, 1998; Ryff and Singer, 2000; Lambert et al., 2015). In addition, the Nordic walking group experienced various positive emotions while interacting with people and exercising at the same time. Many people referred to the “social aspect as well as the physical aspect of Nordic walking” and found pleasure in the physical activity itself, which was perceived as a means to improve and maintain fitness and mobility.

**Engagement in Nordic walking and rambling.**

I chose to describe the engagement in Nordic walking and rambling by employing the concept of serious leisure, which arranges leisure participation along a continuum of involvement from casual to serious depending on behaviour, skills, commitment, motivations and preferences (Stebbins, 2005; Xiangyou and Yarnal, 2010). Stebbins (2005, 2008) distinguished three categories of leisure commitment: project leisure, casual leisure and serious leisure. Conceptualising the results, I suggested that the engagement in rambling can be described as casual leisure, which is a purely hedonic experience or activity that does not require special training to enjoy it (Stebbins, 2004). Participation in rambling benefited mental well-being by providing positive emotions, regeneration and interpersonal relationships. For instance, walking in natural
environments offered enjoyment and encouraged contemplation. Fascination with nature provided experiences of being away from daily routines and problems, and offered opportunities for reflection and effortless attention triggered by the natural spaces. In contrast, the engagement in Nordic walking can be viewed as a pursuit of serious leisure, which requires significant effort and commitment from the participants (e.g. Gallant et al., 2013). Engagement in a serious leisure activity is associated with perseverance, which is the most significant quality of serious leisure that separates itself from casual leisure (Mannell and Kleiber, 1997; Stebbins, 2005). In serious leisure, participants have a tendency to actively negotiate and overcome difficulties and maintain their engagement with leisure activities (Brown et al., 2008). In Nordic walking, perseverance involves negotiation of constraints, such as the initial, distinctive and embarrassing image of walking with poles. In contrast, in rambling, as an example of casual leisure, perseverance hardly exists. Moreover, the leisure persistence facilitates the development of skills and offers self-actualisation (Lyu and Oh, 2015).

Nordic walking practitioners tended to feel a greater sense of satisfaction and achievement through engagement in the activity. Serious leisure also involves a career progression and different stages of involvement that includes accomplishment and rewards. Contrasted with casual leisure, such as rambling, the members of the Nordic walking community tended to be professionally committed to the activity, and have a long-term leisure career as Nordic walking instructors: “it’s my profession”, “it’s a part-time job” or “it’s one of the source of income, but initially it was a hobby”. However, it was unlikely that ramblers went through similar career stages. Leisure walking may demonstrate changing patterns in participation, but there is no difference and progression through stages of achievement like in Nordic walking.
Kim and colleagues (2015) reported that career development in serious leisure influences durable benefits as an outcome of participation, such as identification with the activity. Serious leisure participants experience a sense of belonging to a unique leisure culture with its own norms, values and behaviours. Nordic walking practitioners felt that participation in the activity provided them with the leisure identity through the equipment - Nordic walking poles, specific walking technique, and a place in a hierarchical organisation of the activity (Nordic walking practitioners and instructors). Identification with Nordic walking also influenced personal growth by recognising the health and fitness benefits of Nordic walking, and offered greater leisure satisfaction through increased self-esteem, skills development and self-confidence, which in turn benefited well-being.

**Positive relationships in Nordic walking and rambling.**

Walking takes place in settings that maximise the opportunities for socialising and social interactions, and for both walking activities the important aspects of the engagement were social relationships. However, this current study explores the differences in the social aspects of leisure walking and Nordic walking. In rambling, social relationships and social support of friends were significantly important for participation, as many participants admitted “meeting my friends regularly is important for me”. Strong social bonds between the participants and the closeness of the social relationships produced higher levels of happiness that were an important source for maintaining participation in rambling. This corresponds with previous research stating that most people seek companionship and social support in group leisure walking (e.g. Rhodes et al., 2007; Kassavou, et al., 2015). Similarly in Nordic walking, supportive relationships between the group members were an important part of the engagement.
Nordic walking as a social activity allowed people to move at a pace that facilitated social interactions and an aerobic workout. The sense of companionship and friendship in a group was important for many respondents as it provided a sense of belonging to a group. One person described the close relationships in a group as “we encourage each other, we support each other through good and bad times, we joke, we tease each other, so you actually forget you exercise”. In particular, Nordic walking instructors’ support was significant. The instructors played a key role in teaching Nordic walking technique, organising group activities and encouraging regular practice. Many participants described the role of the instructors in the similar way “she always supports me” or “he encourages our group”. The instructors also strengthened groups’ cohesion by maximising the perception of improved health, and diminishing the psychological barrier of walking with poles. Shove and Pantzar (2005) indicated that Nordic walking instructors provide guidance on integrating the activity into an exercise regime in order to enhance fitness, which may also explain the perception of improved health and mood by the Nordic walking practitioners.

Meaning in Nordic walking and rambling.

Both walking activities offered a context for many types of positive experiences that contributed to participants’ experiences of meaningful leisure. In the case of Nordic walking, the positive emotions and a sense of well-being were found in the efforts to improve and maintain individual health and fitness through active participation: “it doesn’t matter how you feel when you get up, when you go Nordic walking, you always feel better” (NW5). Rambling, as an example of leisure walking is a hedonic experience associated with decreased negative emotions and increased satisfaction with life (Henderson et al., 2013). The literature suggests that walking in natural settings is
associated with decreased feelings of tensions, anger, confusion and depression, and increased feelings of restoration, positive engagement, calmness and vitality (e.g. Thompson et al., 2011; White et al., 2013). Similarly in this study, the rambling participants constructed their leisure meanings around nature, which offered escape, freedom and relaxation: “It’s a relaxing way to spend a day” (R7). The countryside was also a source of enjoyment, excitement and self-worth where interaction with landscapes was the opportunity to overcome challenges and achieve fulfilment. “I feel a sense of achievement especially when I complete the walk. It’s a bit of a challenge and you think that was good” (R4). Likewise, the leisure meaning in Nordic walking was based on a sense of self-development and accomplishment. However, the Nordic walking respondents were more concerned with the physical benefits of the activity, rather than the beneficial aspects of nature: “I feel a sense of achievement as it surprises me how fast I can go” (NW2). The participants found a sense of purpose and satisfaction in challenging themselves and reaching their personal health goals through Nordic walking, which developed their confidence. Another meaningful leisure experience for the Nordic walking and rambling participants was associated with social connectedness. The literature proposes that being part of the leisure group and interacting with members with similar interests and mutual values contributes to meaningful leisure experiences (Argyle 1996; Lyu and Oh, 2015). For ramblers, the opportunities for companionship, developing and strengthening friendships, expressing and sharing ideas among people with mutual leisure interests was a meaningful experience. On the contrary, the Nordic walking group found the instructors’ support as a meaningful experience, which diminished the feelings of embarrassment or incompetence and created a sense of togetherness.
**Accomplishments in Nordic walking and rambling.**

This study suggests that a sense of accomplishment was stronger in Nordic walking and had various sources depending on the level of engagement. For instance, seriously engaged Nordic walking instructors referred to a sense of personal achievement when discussing their role in the fitness and health progress of Nordic walking participants. Nordic walking practitioners found a sense of accomplishment by focusing on setting their own fitness and health related goals and observing their own progress in developing higher speed and walking longer distances. In addition, Nordic walking competitions were perceived as an opportunity for personal challenges that provided a sense of confidence and promoted feelings of self-worth. In contrast, in rambling, a sense of accomplishment was linked to overcoming various challenges en route, often associated with hardship in interacting with natural landscapes and weather conditions. A sense of accomplishment was often felt after completing strenuous walks. The bodily pain of sore feet and aching muscles was regarded as an integral part of the rambling experience; thus, it often contributed to a sense of personal achievement. Crust and colleagues (2011), confirm that hardship encountered during the walk, such as poor weather and soreness help to make a sense of achievement more powerful and intense at the end of the walk. Furthermore, in both walking activities a sense of accomplishment was often enhanced by the use of walking poles, which allow for an intense workout without additional bodily strain in Nordic walking, and in rambling provided stability and allowed for continuous participation in challenging walks especially for older ramblers.
8.3. UNIQUE CONTRIBUTION TO KNOWLEDGE

This research study has contributed in broadening understanding of several academic topics, benefits for mental well-being, role of the social and environmental influences in Nordic walking engagement and leisure experiences, and comparison of Nordic walking and rambling contributions towards mental well-being.

My thesis addressed the significant gaps in knowledge in the following ways:

1) It is the first and the largest research study that has provided a multi-perspective into Nordic walking by assessing mental well-being with the use of a validated scale (WEMWBS) and by exploring and conceptualising the leisure experiences in Nordic walking.

2) The scientific evidence of the role of the social and environmental influences on participation in Nordic walking that contribute to well-being is limited. The strength of my research study lies in addressing this significant gap in knowledge by identifying the potential social and environmental enablers and barriers that influence the engagement in Nordic walking and contribute to mental well-being. By using a socio-ecological framework I added a further dimension to the theoretical knowledge of Nordic walking.

3) This dissertation contributes to the literature on leisure by diversifying the concept of leisure walking. It is the first study to compare Nordic walking and rambling in terms of personal, social and environmental influences, perception of unique leisure experiences and benefits for mental well-being. This study
revealed that rambling and Nordic walking as examples of leisure walking activities have different leisure meanings and functions in their benefits for well-being.

4) Based on this premise, the final contribution to the theory is the development of preliminary models of the Nordic walking and rambling contributions to well-being in terms of socio-environmental influences. The rambling and well-being model outlined that interactions of personal motives (socialising, being outdoors), social (companionship) and environmental (aesthetics) factors influence participation in leisure walking. In the model, mental well-being is enhanced by feelings of enjoyment and relaxation, as characterised in the pleasure-relaxation-fun leisure theory. The Nordic walking and well-being model outlined that interactions of personal motives (health, fitness) and social (instructor support) factors influence participation in the activity. In the model, mental well-being is promoted by the opportunities for developing and mastering skills, reaching personal goals, which enhance a sense of achievement as characterised in the leisure theory of personal development.

The development of the models aimed to broaden an understanding of how Nordic walking and rambling were different in their contribution to mental well-being. By doing so, this thesis provides a useful framework for beginning the discussion about Nordic walking benefits on mental well-being.
8.4. LIMITATIONS OF THE STUDY

In the previous sections I discussed the potential contribution that this thesis makes to the theoretical knowledge. However, as with any study, this research has its limitations that must be acknowledged when interpreting and reporting the results. It is also important that the readers appreciate the boundaries of the study.

The limitations of this research study have been grouped into four categories: research design, research measures, research conduct and participants, research outcomes.

In terms of research design a number of limitations exist. Firstly, in qualitative and quantitative studies the process of data collection was based on self-report measures, perceptions of health and physical activity, which carry limitations of bias and socially desirable answers among the respondents when completing the questionnaires and conducting the interviews. There was a possibility that the participants may not have been truthful about their answers, and I might have misunderstood or misinterpreted the information obtained during the interviewing process, causing ambiguous conclusions from the interview statements. Moreover, outside experiences and situations may have had an impact on the participants’ responses, in particular with regards to their mental well-being, which might have affected the scores on mental well-being scales and therefore limited the reliability of the research findings. A second limitation in the study design is a lack of longitudinal findings from the pilot study. I was unable to collect longitudinal data from the same group of respondents in a pilot study in order to record changes in mental well-being, due to irregular patterns of participation in Nordic walking sessions and general unwillingness to complete the surveys after the sessions. Therefore, all quantitative data were based on a cross-sectional administration of questionnaires. In addition there were many socio-demographic, lifestyle and
geographic variables that I did not control for that could have influenced the findings of this study.

The choice of research design implies that the causal nature of the relationships between leisure walking activities and socio-environmental influences on mental well-being cannot be considered to be conclusive. Another limitation in the study design refers to restricted comparative research studies available to me for the development of this study. There was little academic research on Nordic walking in the United Kingdom, and a lack of research on Nordic walking from leisure and ecological perspectives. Consequently, I adapted specific questions and constructs from the research into leisure walking and walking for exercise, which had not been previously tested for their effectiveness in the context of Nordic walking.

The limitations in study design imposed restrictions in the choice of research measures. Firstly, the difficulty in conducting longitudinal research in the given fieldwork settings prevented me from evaluating the changes in mental well-being of the Nordic walking sample over time. In addition, the general lack of interest and low levels of responses from Nordic walking practitioners living in the North West prevented me from recruiting participants living locally to measure and monitor the physiological aspects of health, such as weight, Body Mass Index (BMI), hip-waist ratio, blood pressure or heart rate of the Nordic walking sample over time. The unreliability of longitudinal research into Nordic walking required choosing other options for measuring mental well-being of the study participants. Thus, I decided to employ an online survey as an instrument for data collection. The benefits of the online survey lay in the access to a larger and geographically diverse sample in a relatively short time. However, by doing this I also
recognised several limitations. First, the online survey could have introduced the issues of representativeness and generalisation of the findings. The internet-based survey may have limited a number of the study participants and prohibited participation of people who had no access to the Internet. Moreover, respondents’ answers could have been influenced by the degree of anonymity, perceived privacy and trust, which threatened the validity of the online survey (e.g. Reips, 2006; Dyer, 2006; Hooley et al., 2012).

The conduct of the research and participants themselves also represented a number of limitations. Firstly, selection of participants was limited to adults who were members of the Ramblers’ Association, and British Nordic walking organisations, either working as Nordic walking instructors or trained by Nordic walking instructors, and living in the United Kingdom. Consequently, the results of this study cannot be generalised beyond these boundaries. Findings might have been different when investigating and comparing Nordic walking and leisure walking participation in different countries and cultures. Secondly, quantitative data collection was conducted online between April 2013 and August 2014. As a result, participation was time-limited and the extent of data depended on participants’ willingness to help with the study. Qualitative data collection was carried out in summer 2014. Interviews were conducted on one day at each location and were determined by convenience. I acknowledge that designing the qualitative research around convenience sampling could introduce issues of representativeness, and therefore, generalizability of the findings cannot be claimed. However, once more readers must note that I found it challenging to identify a suitable number of participants willing to participate in interviews at one location. Therefore I made an effort to approach Nordic walking practitioners and rambles during several walking festivals at various locations around the country. In addition, while I made a significant
effort to cover topics of the interview in depth, there always seemed as if there could have been deeper insights revealed if interviews would have lasted longer. This is my personal observation and it is not necessarily shared by the study participants. Overall, all research participants were people who voluntary replied to the invitation, and shared their opinions during interviews in order to contribute to this research. The reader should interpret it that the study participants were passionate about Nordic walking and rambling, and had something important to say about it. Hence, it is possible that the volunteers differed in some way from others in reflecting their perspectives, and constructing a holistic picture of Nordic walking and rambling leisure experiences in this study.

In terms of research outcomes, there are several limitations. First, as with any research study, the researcher brings biases and prior experience that may impact upon the research outcomes. I recognised that my study is not free from subjectivity. In this case, I was familiar with Nordic walking, and as a Nordic walking instructor I had already been a part of the Nordic walking community. This brought benefits and drawbacks in the stages of data collection, analysis and reporting outcomes. It meant that I was able to establish a level of credibility with Nordic walking participants. However, it also meant that I had pre-existing knowledge and prior experience regarding the activity that could have potentially influenced the interpretation of the data. I recognised that my experiences, knowledge and background in Nordic walking might have influenced the research objectivity. Therefore, in order to ensure the integrity of this study, I became a member of the Rambling Association and participated in rambling trips before and during the data collection processes. Moreover, in order to reduce bias, I made a significant effort to be as thorough and consistent as possible at all stages of data
collection and analysis. I carefully transcribed the interviews, using deductive and inductive thematic analysis, and followed a consistent and systematic coding procedure. In addition, I discussed my interpretation of the data with my research supervisors. However, as a researcher, I was at the centre of data analysis, and a choice of thematic analysis as a method for analysing and presenting data might have affected interpretation of the results by expecting some themes to emerge or looking for certain themes in the data before the analysis. It could be that, using other method of analysing data, such as grounded theory or interpretive phenomenological analysis, there could be variations in the interpretation of raw data, consequently leading to different findings.

As a result of the listed limitations, the generalization of the study may be inhibited. Therefore, it may be assumed that if other age groups, different populations, and non-volunteer individuals were investigated by another researcher with different research background, experience and knowledge, using different sampling methods, data collection techniques and data analysis methods, different findings might emerge.
8.5. RECOMMENDATIONS FOR FUTURE RESEARCH

Nordic Walking is a relatively young form of recreation, although the scientific literature has already brought much attention to its health benefits (e.g. Kukkonen-Harjula et al., 2007; Kocur et al., 2009; Figard-Fabre et al., 2010; Morgulec-Adamowicz et al., 2011; Piech and Raczynska, 2010; Hagen et al., 2011; Parkatti et al., 2012; Song et al., 2013; Takeshima et al., 2013; Knapik et al., 2014; Ossowski et al., 2014; Pellegrini et al., 2015). My thesis can be seen as a beginning of a journey to explore Nordic walking from a leisure perspective and investigate the benefits of Nordic walking on mental well-being. Nevertheless, for a better understanding, I consider it necessary to use other theoretical approaches and methods of data collection and analysis. Firstly, this study is cross-sectional. Therefore, it lacks the ability to conclude the causal nature of the relationships between Nordic walking and mental well-being. There is a need for a longitudinal study to monitor these relationships for longer periods of time within the Nordic walking community. In particular, intervention studies and randomised controlled trials, in which participants are engaged in Nordic walking sessions, were used in previous research to assess physiological responses to Nordic walking and walking (e.g. Figard-Fabre et al., 2010; Schiffer et al., 2006; Church et al., 2002; Kikkonen-Harjula et al., 2007). Future longitudinal studies could generate more knowledge about potential mental benefits and changes in mental well-being relating to participation in Nordic walking. Also, during regular weekly sessions conducted by Nordic walking instructors for several weeks or months, various aspects of well-being, including mental, physical and social could be measured. Secondly, my study sheds light on how the combination of quantitative and qualitative approaches explores the relationships between leisure experiences and mental well-being in Nordic walking. I suggest that the following studies could focus on single methodological approaches to
extend and strengthen the findings of this research study and ascertain that the theoretical model applies to wider population samples.

For instance, in my quantitative studies I used a range of descriptive and exploratory data analysis techniques. However, there are a range of individual factors that may influence the study outcomes that were not subject to testing by this research. Hence, further research that will employ additional socio-demographic and medical data, such as race, education, income, health conditions, are required to evaluate the findings from this study and also provide further understanding of individual issues impacting upon mental well-being. Furthermore, future research should require a confirmatory analysis or further more complex analysis on larger and more diverse Nordic walking samples.

The next survey could utilise better-defined and specified identifications. For instance, the survey could include a validated motivation scale and other well-being scales to evaluate and strengthen the findings of my research.

Another possibility could be to further investigate motivation for Nordic walking. Motivation is a complex phenomenon and consists of external factors, such as rewards and internal factors, such as interests. I think that the sequential study could investigate how various motives are differently associated with Nordic walking participation, using the Sport Motivation Scale (SMS-II). The scale was designed to assess individuals’ levels of motivation using self-determination theory. Respondents report to what extent they agree with listed reasons for practicing sport, using a 7-point Likert scale. The scale consists of 30 items, which measure intrinsic motivation, extrinsic motivation and amotivation. The scale was tested with different populations to predict the persistence, practice frequency, and likelihood of participation in physical activity (Pelletier et al.,
2013). In terms of well-being, there are many instruments to assess various aspects of well-being, including subjective and psychological dimensions. In my quantitative study, I employed the 14 item WEMWBS to measure the mental well-being of participants. The scale covers most aspects of mental health and includes both hedonic (subjective) and eudaimonic (psychological) perspectives. The study findings showed that all participants had higher mental well-being than the general population. Furthermore, in the case of Nordic walking, the qualitative findings suggested that psychological well-being was enhanced. Therefore, in my opinion future studies could focus on measuring the psychological aspect of well-being, which is expressed in mental states of happiness by doing what is worthwhile and meaningful (Seligman, 2002). I believe it would be a good choice to implement, for example, the Psychological Well-being Scale (PWS) designed by Ryff (1989; Ryff and Keyes, 1995). The PWS scale measures six theoretically motivated constructs of psychological wellbeing: autonomy - independence and self-determination; environmental mastery - the ability to manage one’s life; personal growth - being open to new experiences; positive relations with others - having satisfying, high quality relationships; purpose in life - believing that one’s life is meaningful; self-acceptance - a positive attitude towards oneself and one’s past life.

In terms of a qualitative approach, I believe it would be interesting if future qualitative research may want to extend the present study and investigate Nordic walking from a serious leisure perspective (Stebbins, 2008). Future studies could focus on Nordic walking as a leisure career. Serious leisure provides a rich context for examining participation in Nordic walking in terms of training, skills development, and potential benefits and rewards from serious participation. Also, it is a useful framework for
describing commitment to the social world and leisure identities that can result from that participation. Another possibility would be to explore leisure experiences of Nordic walking groups using a phenomenological approach. Phenomenology promises an additional philosophical, theoretical and methodological approach to researching leisure experiences (e.g. Watkins and Bond, 2007; Elkington, 2011). I think that adopting Interpretive Phenomenological Analysis (IPA) would allow for an additional in-depth understanding of the experiences and meanings of Nordic walking, from which empirically tested theories may be formulated in future research studies.

Additional studies could also use the concept of leisure identity salience (LIS) guided by the psychological theory of leisure (Neulinger, 1974) and the concept of serious leisure (Stebbins, 2004) in order to measure salience of leisure identity in Nordic walking. Leisure experiences are characterised by perceived freedom and intrinsic motivation, one of the serious leisure qualities is perseverance, and a key determinant of identity salience is commitment. Thus, future research could explore Nordic walking motivation, investigate serious leisure experiences in Nordic walking, which are a major source of meaning and self-actualisation, and examine negotiating leisure constraints in Nordic walking, which reinforces leisure identification with Nordic walking in order to exemplify the salience of the Nordic walking leisure identity. Finally, I think that qualitative and quantitative methods could be used in future studies to continue the exploration of the social and environmental influences on Nordic walking engagement. The following studies could benefit from the previous research in the field (e.g. Rhodes 2006; Moudon et al., 2007; Darker et al., 2007a, 2011; Cerin et al, 2009, 2010; Lachowycz and Jones, 2014) in order to investigate further the enablers and barriers that encourage or prevent participation in Nordic walking.
8.6. CHAPTER SUMMARY

This thesis described an empirical research study into Nordic walking and rambling, as examples of leisure walking, to gain a deeper understanding into how these walking activities contribute to mental well-being. The socio-ecological perspective offered a conceptual background for the identification of the personal, social and environmental factors that influenced participation in Nordic walking and rambling. By employing a mixed-methods research approach, this study achieved its objectives: 1) to explore to what degree social and physical environments influence participation in Nordic walking and rambling and in what way these influences are experienced as beneficial for mental well-being; 2) to explore the kinds of leisure pursuits in Nordic walking and rambling, in order to understand the dynamics of engaging in leisure walking activities and the distinctness in their contribution to mental well-being.

In the quantitative studies, I investigated socio-environmental influences on participation in Nordic walking and rambling, and evaluated their effects on mental well-being using the validated scales. The comparison of the quantitative results from both studies revealed that in general leisure walking improves mental well-being. In terms of socio-environmental influences on participation, the findings suggest that friends’ support, weather conditions and aesthetics of environment were important factors for participation in rambling. On the contrary, instructor’s support influenced participation in Nordic walking.

In the qualitative studies, I explored the leisure experiences in Nordic walking and rambling, and described how these experiences contribute to mental well-being. The comparison of the qualitative findings from both studies revealed that both walking activities offered optimal leisure experiences; however each activity contributed to mental well-being in different ways. The leisure experiences in Nordic walking were
mostly related to development of skills in Nordic walking and feelings of commitment and accomplishment. In contrast, the leisure experiences in rambling were mostly associated with positive feelings offered by opportunities for socialising in aesthetically pleasing natural environments.

In the mixed-methods studies, I explored to what extent the qualitative results confirm and clarify the quantitative results in the Nordic walking and rambling studies to achieve methodological triangulation and complementarity of the final results. The comparison of the qualitative and quantitative findings from the Nordic walking study revealed that the important role in Nordic walking played by walking poles, which gave walking a purpose – health and fitness benefits of a workout. Both studies into Nordic walking concluded that engagement in the activity had a positive influence on mental well-being, by offering social benefits of participation – companionship and Nordic walking instructor support, and improving psychological well-being by promoting skills development and a sense of achievement associated with achieving personal health goals. In addition, for some participants, Nordic walking in natural environments was a source of relaxation and mental freedom. The comparison of the qualitative and quantitative findings from the rambling study revealed the complex interactions between social and environmental influences that contributed to mental well-being. Companionship and friendship in a group offered a sense of togetherness and belonging, which diminished feelings of loneliness and isolation in older participants. Moreover, walking in natural environments benefited subjective well-being by providing various positive feelings, such as enjoyment, satisfaction, and relaxation. It also improved psychological well-being by offering a sense of achievement when overcoming natural challenges and disregarding bodily pain on route.
This thesis confirms that, in general, walking as a leisure activity benefits mental well-being. Moreover, this study highlights the differences in motivation, social and environmental influences, and levels of participation in Nordic walking and rambling, which consequently contributed to enhancing various aspects of mental well-being. The findings suggest that rambling contributes to mental well-being through experiencing positive emotions, such as enjoyment, which are related to being among like-minded people and surrounded by aesthetically pleasing natural environments. In contrast, Nordic walking enhances mental well-being by the feelings of achievement, which are related to the opportunities for commitment, reaching personal health goals and developing of skills. The conclusions of this study resulted in a comprehensive understanding of benefits of Nordic walking in comparison to leisure walking towards mental well-being.

8.6.1. SELF-REFLECTION

When I began my PhD journey in August 2011, I did not fully understand I had undertaken a project that was going to challenge and dominate the next six years of my life. I committed to create an in-depth and multi-perspective framework into Nordic walking describing the experiences of the Nordic walking participants, instructors, and professionals involved in the activity worldwide and in the United Kingdom. Being strongly motivated, I was little aware of the complexity of the process, the time required, mental and emotional involvement. Throughout my journey, I faced moments of self-doubts that led to feelings of despair and fear of failing. There were moments of truth that gave me inspiration to keep going, and moments of enlightenment that boosted my confidence and hope. At the end of my journey, looking back on my work, these feelings cumulated and transformed into a sense of wonder that I have survived. I
overcame many obstacles thanks to people who have supported me along the way. Now, it is time for me to feel satisfied and accomplished. I have conducted the largest research study to date that gathered quantitative and qualitative information from the British Nordic walking community. My research into Nordic walking and leisure has opened new perspectives for my professional development. I believe that my study contributes to the knowledge base by evaluating the mental well-being of Nordic walking practitioners, exploring unique leisure experiences in Nordic walking and identifying socio-environmental influences on activity participation and that contributes to overall well-being.
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APPENDIX 1

PILOT SURVEY 1
(27th April 2012)

PARTICIPANT INFORMATION SHEET: NORDIC WALKING AND WELL-BEING
My name is Marta Zurawik. I am a research student from the University of Bolton working on a project which looks at the benefits Nordic Walking can have on well-being. This is a pilot survey developed to measure how regular Nordic walking practice affects your well-being.

TAKING PART:
Taking part is voluntary! If you agree to take part in my research, you need to fill in this survey which takes less than 5 minutes. There are not any right or wrong answers! I just want to hear about your opinions. If you do not want to take part, you do not have to give a reason and I will not pressure you to change your mind.

CONFIDENTIALITY AND ANONYMITY:
All the information you give will be confidential and used for the purposes of this study only. The collected data will be stored in accordance with the Data Protection Act 1998.

FURTHER INFORMATION:
If you wish to learn more about my research, you can contact me on mobile phone 07584064885 or via email maz1wss@bolton.ac.uk

<table>
<thead>
<tr>
<th>What is your age?</th>
<th>Less than 40</th>
<th>40-55</th>
<th>55-65</th>
<th>65-75</th>
<th>more than 75</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your marital status?</td>
<td>Single</td>
<td>Married</td>
<td>Divorced</td>
<td>Widow(er)</td>
<td>Other</td>
</tr>
<tr>
<td>What is your employment status?</td>
<td>Unemployed</td>
<td>Employed</td>
<td>Own Business</td>
<td>Retired</td>
<td>Other</td>
</tr>
<tr>
<td>What type of physical activity do you practice in free time?</td>
<td>Walking</td>
<td>Running</td>
<td>Cycling</td>
<td>Swimming</td>
<td>Other</td>
</tr>
<tr>
<td>How often?</td>
<td>Rarely</td>
<td>Once a month</td>
<td>Once a week</td>
<td>Few times a week</td>
<td>Daily</td>
</tr>
<tr>
<td>How would you describe your health status?</td>
<td>Very poor</td>
<td>Poor</td>
<td>Average</td>
<td>Good</td>
<td>Very good</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How did you hear about Nordic Walking?</th>
<th>Active Ageing Group</th>
<th>Friends</th>
<th>Internet</th>
<th>Article In Magazine</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>How long do you practise Nordic walking?</td>
<td>Just started</td>
<td>Up to 2 months</td>
<td>2-6 Months</td>
<td>6-12 Months</td>
<td>More than 1 year</td>
</tr>
<tr>
<td>What motivates you to practise Nordic Walking?</td>
<td>Improving health</td>
<td>Weight control</td>
<td>Socialising with people</td>
<td>Feeling good about yourself</td>
<td>Improving longevity</td>
</tr>
<tr>
<td>STATEMENTS*</td>
<td>None of the time</td>
<td>Rarely</td>
<td>Some of the time</td>
<td>Often</td>
<td>All of the time</td>
</tr>
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<td>-------------</td>
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<tr>
<td>I've been feeling optimistic about the future</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been feeling useful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been feeling relaxed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been dealing with problems well</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been thinking clearly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been feeling close to other people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been able to make up my own mind about things</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

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GENDER:  □ FEMALE   □ MALE

DATE OF BIRTH: ..............................................................

THANK YOU VERY MUCH FOR YOUR HELP!
PILOT SURVEY 2
(8th June 2012)

PARTICIPANT INFORMATION SHEET: NORDIC WALKING AND WELL-BEING
My name is Marta Zurawik. I am a research student from the University of Bolton working on a project which looks at the benefits Nordic Walking can have on well-being. This is a pilot survey developed to measure how regular Nordic walking practice affects your overall satisfaction with life.

TAKING PART:
Taking part is voluntary! If you agree to take part in my research, you need to fill in this survey which takes less than 5 minutes. There are not any right or wrong answers! I just want to hear about your opinions. If you do not want to take part, you do not have to give a reason and I will not pressure you to change your mind.

CONFIDENTIALITY AND ANONYMITY:
All the information you give will be confidential and used for the purposes of this study only. The collected data will be stored in accordance with the Data Protection Act 1998.

FURTHER INFORMATION:
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<table>
<thead>
<tr>
<th>STATEMENTS*</th>
<th>None of the time</th>
<th>Rarely</th>
<th>Some of the time</th>
<th>Often</th>
<th>All of the time</th>
</tr>
</thead>
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<td>I've been feeling optimistic about the future</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been feeling useful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been feeling relaxed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been dealing with problems well</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been thinking clearly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been feeling close to other people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I've been able to make up my own mind about things</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

* Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)
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<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you think that your mood has improved since you started practising Nordic walking?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you think that you are happier with your life since you started practising Nordic walking?</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree nor disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Do you think that your physical performance has improved since you started practising Nordic walking?</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree nor disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Do you think that you are feeling healthier since you started practising Nordic walking?</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree nor disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>Do you think that you are feeling more active since you started practising Nordic walking?</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neither agree nor disagree</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>What is your age?</td>
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<td>40-55</td>
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<td>more than 75</td>
</tr>
</tbody>
</table>

**GENDER:** □ FEMALE □ MALE

**DATE OF BIRTH:** .................................................................

THANK YOU VERY MUCH FOR YOUR HELP!
My name is Marta Zurawik. I am a research student from the University of Bolton working on a project which looks at the benefits Nordic Walking can have on well-being. This is a pilot survey developed to measure how regular Nordic walking practice affects your overall satisfaction with life.

TAKING PART:

Taking part is voluntary! If you agree to take part in my research, you need to fill in this survey which takes less than 5 minutes. There are not any right or wrong answers! I just want to hear about your opinions. If you do not want to take part, you do not have to give a reason and I will not pressure you to change your mind.

CONFIDENTIALITY AND ANONYMITY:

All the information you give will be confidential and used for the purposes of this study only. The collected data will be stored in accordance with the Data Protection Act 1998.

FURTHR INFORMATION:

If you wish to learn more about my research, you can contact me on mobile phone 07584064885 or via email maz1wss@bolton.ac.uk

<table>
<thead>
<tr>
<th><strong>STATEMENTS</strong></th>
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<th>Rarely</th>
<th>Some of the time</th>
<th>Often</th>
<th>All of the time</th>
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<td>I’ve been feeling useful</td>
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<td>I’ve been feeling close to other people</td>
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<tr>
<td>I’ve been able to make up my own mind about things</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</table>

* Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)
© NHS Health Scotland, University of Warwick and University of Edinburgh, 2006, all rights reserved.
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<th>Do you think that</th>
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<td>Strongly</td>
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<td>your regular</td>
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<td></td>
<td>agree</td>
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<tr>
<td>participation in</td>
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<td></td>
<td>disagree</td>
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<td></td>
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<td></td>
<td></td>
</tr>
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<td>location of venue</td>
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<td>Agree</td>
<td>Strongly</td>
</tr>
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<td>affects your</td>
<td>disagree</td>
<td></td>
<td>agree nor</td>
<td></td>
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<td>regular</td>
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<td>disagree</td>
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<td>Strongly</td>
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<td>agree nor</td>
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<td>regular</td>
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<td>Strongly</td>
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<td>support your</td>
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<td>agree nor</td>
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<tr>
<td>regular</td>
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<tr>
<td>participation in</td>
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<td></td>
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<td>Nordic walking?</td>
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<td>Neither</td>
<td>Agree</td>
<td>Strongly</td>
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<tr>
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<td>disagree</td>
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<tr>
<td>Nordic walking?</td>
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What is your age?

<table>
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<tr>
<th></th>
<th>less than 40</th>
<th>40-55</th>
<th>55-65</th>
<th>65- 75</th>
<th>more than 75</th>
</tr>
</thead>
</table>

GENDER: □ FEMALE □ MALE

DATE OF BIRTH: ..............................................................

THANK YOU VERY MUCH FOR YOUR HELP!
APPENDIX 2

OPEN-ENDED SURVEY

PARTICIPANT INFORMATION SHEET:
NORDIC WALKING AND WELL-BEING

My name is Marta Zurawik, I am a research student at the University of Bolton working on a project which aims to investigate the benefits of Nordic Walking on well-being and explore what socio-ecological factors contribute to Nordic walking participation.

For the purpose of my research I designed this pilot questionnaire to hear about your experiences and opinions as a Nordic walker and an Instructor.

For your reassurance: All the information you give will be anonymous and used for the purposes of this study only. The collected data will be stored in a secure manner, in accordance with the Data Protection Act 1998. The information will be used in a way that will not allow you to be identified individually.

If you wish to learn more about my research, please contact me via email maz1wss@bolton.ac.uk

1. What is your gender?

2. What is your age?

3. What is your marital status?

4. What is your employment status?

5. What is your nationality?

6. How did you hear about Nordic walking?

7. What are your motives for practising Nordic walking?

8. How long have you been a Nordic Walking instructor?

9. What were your motives for becoming Nordic walking instructor?
10. What is your career background?

11. Can you tell me about your Nordic walking group? (number of members, average age of members, level of advancement, regularity and duration of sessions, location of sessions, fees, equipment, other information you wish to share)

12. How do you promote Nordic walking to general public?

13. Is there any special group of people you aim your promotion at and/or design your sessions for? (e.g. elderly/young, health problems, other)

14. What do you think makes Nordic walking different from other types of walking?

15. In your opinion, how does Nordic walking benefit well-being/quality of life?

16. In your opinion, are there any potential environmental barriers that may affect regular participation in Nordic walking? (e.g. location, weather, access, time of sessions, equipment, fees, other)

17. Please add a comment or share your opinion on other aspects of Nordic walking, which were not mention.

THANK YOU VERY MUCH FOR YOUR HELP!
APPENDIX 3

COPY OF ONLINE SURVEY

PARTICIPANT INFORMATION SHEET:
NORDIC WALKING AND WELL-BEING

My name is Marta Zurawik, I am a research student at the University of Bolton working on a project which aims to investigate the benefits of Nordic Walking on well-being and explore what socio-ecological factors contribute to Nordic walking participation.

Taking part is voluntary! If you agree to take part in my research, you will need to complete this questionnaire. There are no right or wrong answers! I am only interested in your opinions. All the information you give will be anonymous and used for the purposes of this study only. The data will be collected and stored in a secure manner, in accordance with the Data Protection Act 1998. The information will be used in a way that will not allow you to be identified individually. If you wish to learn more about my research or know the results of the study, you can contact me via email maz1wss@bolton.ac.uk

GENDER:  □ FEMALE □ MALE

<table>
<thead>
<tr>
<th>What is your age?</th>
<th>less than 50</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>more than 80</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your marital status?</td>
<td>Single</td>
<td>Married</td>
<td>Divorced</td>
<td>Widow(er)</td>
<td>Other</td>
</tr>
<tr>
<td>What is your employment status?</td>
<td>Unemployed</td>
<td>Employed</td>
<td>Own business</td>
<td>Retired</td>
<td>Other</td>
</tr>
<tr>
<td>How long have you been practising Nordic Walking?</td>
<td>Up to 1 year</td>
<td>1-2 years</td>
<td>2-3 years</td>
<td>3-4 years</td>
<td>more than 4 years</td>
</tr>
<tr>
<td>What are your motives for practising Nordic Walking?</td>
<td>Improving health</td>
<td>Weight control</td>
<td>Socialising</td>
<td>Feeling good about oneself</td>
<td>Improving longevity</td>
</tr>
<tr>
<td>What other types of walking do you practise?</td>
<td>Leisure walking</td>
<td>Rambling</td>
<td>Other</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>How would you describe your health status?</td>
<td>Very poor</td>
<td>Poor</td>
<td>Average</td>
<td>Good</td>
<td>Very good</td>
</tr>
<tr>
<td>Do you think that <strong>weather</strong> affects your regular participation in Nordic walking?</td>
<td>Definitely not</td>
<td>Probably not</td>
<td>Maybe</td>
<td>Probably yes</td>
<td>Definitely yes</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Do you think that <strong>location of venue</strong> affects your regular participation in Nordic walking?</td>
<td>Definitely not</td>
<td>Probably not</td>
<td>Maybe</td>
<td>Probably yes</td>
<td>Definitely yes</td>
</tr>
<tr>
<td>Do you think that <strong>access to venue</strong> affects your regular participation in Nordic walking?</td>
<td>Definitely not</td>
<td>Probably not</td>
<td>Maybe</td>
<td>Probably yes</td>
<td>Definitely yes</td>
</tr>
<tr>
<td>Do you think that <strong>aesthetics of venue</strong> affect your regular participation in Nordic walking?</td>
<td>Definitely not</td>
<td>Probably not</td>
<td>Maybe</td>
<td>Probably yes</td>
<td>Definitely yes</td>
</tr>
<tr>
<td>Do you think that <strong>family members</strong> support your regular participation in Nordic walking?</td>
<td>Definitely not</td>
<td>Probably not</td>
<td>Maybe</td>
<td>Probably yes</td>
<td>Definitely yes</td>
</tr>
<tr>
<td>Do you think that <strong>friends</strong> support your regular participation in Nordic walking?</td>
<td>Definitely not</td>
<td>Probably not</td>
<td>Maybe</td>
<td>Probably yes</td>
<td>Definitely yes</td>
</tr>
<tr>
<td>Do you think that <strong>Nordic walking instructor</strong> supports your regular participation in Nordic walking?</td>
<td>Definitely not</td>
<td>Probably not</td>
<td>Maybe</td>
<td>Probably yes</td>
<td>Definitely yes</td>
</tr>
<tr>
<td>Do you think that you have been feeling <strong>healthier</strong> since you started Nordic walking?</td>
<td>Definitely not</td>
<td>Probably not</td>
<td>Maybe</td>
<td>Probably yes</td>
<td>Definitely yes</td>
</tr>
<tr>
<td>Do you think that your <strong>mood</strong> has improved since you started Nordic walking?</td>
<td>Definitely not</td>
<td>Probably not</td>
<td>Maybe</td>
<td>Probably yes</td>
<td>Definitely yes</td>
</tr>
<tr>
<td>Do you think that you have been feeling <strong>more active</strong> since you started Nordic walking?</td>
<td>Definitely not</td>
<td>Probably not</td>
<td>Maybe</td>
<td>Probably yes</td>
<td>Definitely yes</td>
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</table>
**STATEMENTS ABOUT YOUR MENTAL WELL-BEING**

<table>
<thead>
<tr>
<th>Statement</th>
<th>None of the time</th>
<th>Rarely</th>
<th>Some of the time</th>
<th>Often</th>
<th>All of the time</th>
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</thead>
<tbody>
<tr>
<td>I’ve been feeling optimistic about the future</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been feeling useful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been feeling relaxed</td>
<td>1</td>
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<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been feeling interested in other people</td>
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<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve had energy to spare</td>
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<td>I’ve been dealing with problems well</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been thinking clearly</td>
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<td>I’ve been feeling good about myself</td>
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<tr>
<td>I’ve been feeling close to other people</td>
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<td>3</td>
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<td>5</td>
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<td>I’ve been feeling confident</td>
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<td>I’ve been able to make up my own mind about things</td>
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<td>5</td>
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<tr>
<td>I’ve been feeling loved</td>
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<td>4</td>
<td>5</td>
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</tr>
<tr>
<td>I’ve been feeling cheerful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

*Warwick-Edinburgh Mental Well-Being Scale (SWEMWBS)*

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COUNTY/REGION: ..................................................

THANK YOU VERY MUCH FOR YOUR HELP!
Marta Anna Zurawik

APPENDIX 4

COPY OF ONLINE SURVEY

PARTICIPANT INFORMATION SHEET:
RAMBLING AND WELL-BEING

My name is Marta Zurawik, I am a research student at the University of Bolton working on a project which aims to investigate the benefits of rambling on well-being and explore what socio-ecological factors contribute to rambling participation.

Taking part is voluntary! If you agree to take part in my research, you will need to complete this questionnaire. There are no right or wrong answers! I am only interested in your opinions. All the information you give will be anonymous and used for the purposes of this study only. The data will be collected and stored in a secure manner, in accordance with the Data Protection Act 1998. The information will be used in a way that will not allow you to be identified individually. If you wish to learn more about my research or know the results of the study, you can contact me via email maz1wss@bolton.ac.uk

GENDER: ☐ FEMALE ☐ MALE

<table>
<thead>
<tr>
<th>What is your age?</th>
<th>Less than 50</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>More than 80</th>
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<td>Widow(er)</td>
<td>Other</td>
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<td>What is your employment status?</td>
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<td>Retired</td>
<td>Other</td>
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</table>

<table>
<thead>
<tr>
<th>How long do you practice walking?</th>
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<th>Weight control</th>
<th>Socialising</th>
<th>Improving mood</th>
<th>Improving longevity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you walk with walking poles?</td>
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<td></td>
<td></td>
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<tr>
<td>Have you heard about Nordic walking?</td>
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<tr>
<td>Do you practice Nordic walking?</td>
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<td>NO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How would you describe your health status?</td>
<td>Very poor</td>
<td>Poor</td>
<td>Average</td>
<td>Good</td>
<td>Very good</td>
</tr>
</tbody>
</table>
Do you think that you are feeling **healthier** since you started walking? | Definitely yes | Probably yes | Maybe | Probably not | Definitely not
---|---|---|---|---|---
Do you think that your **mood** has improved since you started walking? | Definitely yes | Probably yes | Maybe | Probably not | Definitely not
Do you think that you are feeling **more active** since you started walking? | Definitely yes | Probably yes | Maybe | Probably not | Definitely not

Do you think that **weather** affects your regular walking? | Definitely yes | Probably yes | Maybe | Probably not | Definitely not
Do you think that **location of walking spaces** affects your regular walking? | Definitely yes | Probably yes | Maybe | Probably not | Definitely not
Do you think that **access to walking spaces** affects your regular walking? | Definitely yes | Probably yes | Maybe | Probably not | Definitely not
Do you think that **aesthetics of walking spaces** affect your regular walking? | Definitely yes | Probably yes | Maybe | Probably not | Definitely not
Do you think that **family members** support and motivate you to walking? | Definitely yes | Probably yes | Maybe | Probably not | Definitely not
Do you think that **friends** support and motivate you to walking? | Definitely yes | Probably yes | Maybe | Probably not | Definitely not
Do you think that the **Walking leader/guide** supports and motivates you to walking? | Definitely yes | Probably yes | Maybe | Probably not | Definitely not

**STATEMENTS ABOUT YOUR MENTAL WELL-BEING***

<table>
<thead>
<tr>
<th></th>
<th>None of the time</th>
<th>Rarely</th>
<th>Some of the time</th>
<th>Often</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’ve been feeling optimistic about the future</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been feeling useful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been feeling relaxed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been feeling interested in other people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve had energy to spare</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been dealing with problems well</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been thinking clearly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been feeling good about myself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’ve been feeling close to other people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
I’ve been feeling confident 1 2 3 4 5
I’ve been able to make up my own mind about things 1 2 3 4 5
I’ve been feeling loved 1 2 3 4 5
I’ve been interested in new things 1 2 3 4 5
I’ve been feeling cheerful 1 2 3 4 5

*Warwick-Edinburgh Mental Well-Being Scale (SWEMWBS)
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<table>
<thead>
<tr>
<th>OVER LAST TWO WEEKS*</th>
<th>At no time</th>
<th>Some of the time</th>
<th>Less than half of the time</th>
<th>More than half of the time</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have felt cheerful and in good spirit</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I have felt calm and relaxed</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I have felt active and vigorous</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I woke up feeling fresh and rested</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My daily life has been filled with things that interest me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

*WHO-5 Well-Being Index developed by the World Health Organization Collaborating Center for Mental Health, Frederiksberg General Hospital.

THANK YOU VERY MUCH FOR YOUR HELP!
APPENDIX 5

PARTICIPANT INFORMATION SHEET: NORDIC WALKING AND WELL-BEING

My name is Marta Zurawik, I am a research student at the University of Bolton working on the project which focuses on Nordic walking motives and experiences. I am only interested in your opinions on the effects it has on your health and well-being. Taking part is voluntary! If you agree to take part in my research, you will answer questions which will be audio recorded. The conversation should take around 15 minutes. All the information you give will be anonymous and used for the purposes of this study only. The data will be collected and stored in a secure manner, in accordance with the Data Protection Act 1998. The information will be used in a way that will not allow you to be identified individually. If you do not wish to take part or decided to withdraw from the study, you do not have to give a reason and I will not pressure you to change your mind. If you wish to learn more about my research you can contact me via email maz1wss@bolton.ac.uk

SOCIO-DEMOGRAPHIC DATA (AGE, GENDER, MARITAL STATUS, EMPLOYMENT)

1. Do you Nordic walk regularly?
2. Have you been trained by a professional Nordic walking instructor?
3. Do you have an instructor certificate? Do you teach others?
4. Can you tell me more about your group? (How many people, where and how often do you practice)
5. What are your motives for Nordic walking in general?
6. What are your positive experiences in Nordic walking practice (related to well-being)?
   a) Do you feel accomplished/ sense of achievement? In what way?
   b) Do you feel pleasure/ enjoyment? In what way?
7. Does nature play an important role in enhancing Nordic walking experience? In what way?
8. How important are other people in your Nordic walking practice?
   a) Do family, friends/ company of other people play a role in enhancing Nordic walking experience? In what way?
9. Does instructor play a role in enhancing Nordic walking experience? In what way?
10. What is the most exciting thing about Nordic walking for you?
11. Is anything do you not like about Nordic walking?
12. Do you own Nordic walking poles?
13. How important are the walking poles in enhancing your Nordic walking experience?
14. In what way do poles benefit your walking experience?
APPENDIX 6

PARTICIPANT INFORMATION SHEET: RAMBLING AND WELL-BEING

My name is Marta Zurawik. I am a research student at the University of Bolton working on the project which focuses on walking motives and experiences. I am only interested in your opinions on the effects it has on your health and well-being. Taking part is voluntary! If you agree to take part in my research, you will answer questions which will be audio recorded. The conversation should take around 15 minutes. All the information you give will be anonymous and used for the purposes of this study only. The data will be collected and stored in a secure manner, in accordance with the Data Protection Act 1998. The information will be used in a way that will not allow you to be identified individually. If you do not wish to take part or decided to withdraw from the study, you do not have to give a reason and I will not pressure you to change your mind. If you wish to learn more about my research you can contact me via email maz1wss@bolton.ac.uk

SOCIO-DEMOGRAPHIC DATA (AGE, GENDER, MARITAL STATUS, EMPLOYMENT)

1. Do you practice rambling regularly?
2. Are you member of the Ramblers’ Association? Which one?
3. Do you guide/lead other Ramblers?
4. What are your motives for rambling in general?
5. Describe the experience when you practice rambling?
   a) Do you feel accomplished/ sense of achievement? In what way?
   b) Do you feel pleasure/ enjoyment? In what way?
6. Does nature play an important role in enhancing the rambling experience for you? In what way?
7. Do family, friends/company of other people play a role in enhancing the rambling experience for you? In what way?
8. Does walking leader play a role in enhancing the rambling experience for you? In what way?
9. What is the most exciting thing about rambling for you?
10. Is there anything do you not like about rambling?
11. Do you use walking (trekking) poles when rambling?
   a) If YES: In what way walking poles benefit your rambling experience?
   b) If NO: why
12. Are you familiar with Nordic walking?
13. Do you practice Nordic walking? Why?
APPENDIX 7

THE INTERVIEW WITH INTERNATIONAL NORDIC WALKING FEDERATION PRESIDENT

MR AKI KARIHTALA - INTRODUCTION

Mr Aki Karihtala was a director of Sports Division and Senior Vice President of Exel from 1986 to 2008. From 1997 to 2008, as the Senior Vice President at Exel Sports Products, Mr Karihtala was involved in the development of Nordic Walking.

In 2000, Mr Aki Karihtala together with Raija Laukkanen, Vesa-Pekka Sarparanta and Marko Kantaneva established the International Nordic Walking Association (INWA), which changed its name to the International Nordic Walking Federation in 2009. From 2000, Aki Karihtala has been an INWA President responsible for Nordic Walking education programmes for the International and National Coaches around the world. Currently, Mr Karihtala is focusing on promotion and development of Nordic walking in China and Japan. In addition, Aki Karihtala is the Senior Vice-President of Sales and Marketing for a healthy sports drink company. He also consults on projects in marketing, management brand building, sales and distribution.
ESTABLISHING CONTACT

The initial contact with Mr Aki Karihtala started in October 2012 when I applied for the Erasmus student exchange programme at Turku University of Applied Sciences (TUAS) in Finland. I sent an email, in which I introduced myself, the research project and requested a meeting during her stay in Finland between January 2013 and May 2013. The interview was conducted on 22\textsuperscript{nd} February 2013 in Helsinki, Finland. The process of conducting interview was designed as follows: preparation, introduction, asking questions, obtaining additional information and conclusion. Preparation for the interview required researching the company and its products, developing the interview questions, securing voice recorder, notepad and pens. The interview began with a brief description of the area of my research study, the purpose of the research and the use of the information. I also sought permission to record the discussion. During the interview I asked the broad semi-structured questions first to initiate the conversation. Next, Mr Karihtala discussed freely the other Nordic walking issues related to his professional background. The interview concluded with an offer to provide further relevant documents and pictures.
THEMES OF THE IN-DEPTH INTERVIEW

HISTORY AND CURRENT STATUS OF NORDIC WALKING WORLDWIDE

Taking into consideration the professional background of Mr Karihtala, the information was obtained on origin and history of Nordic walking from the “Exel-involvement perspective”, the innovation of Nordic walking, progression and promotion of the activity worldwide. All information was organised into themes after multiple readings of the interview transcript. The themes were as follows: 1) early beginnings of Nordic walking, 2) the challenges, 3) International Nordic Walking Federation, 4) Scientific evidence, 5) Nordic walking poles versus trekking poles, 6) Nordic walking promotion.

Early beginnings of Nordic walking

Mr Aki Karihtala began narrating the history of Nordic walking by describing the Exel – Finnish ski poles manufacturer, which he worked for 22 years and explaining the role of the company in Nordic walking development and promotion. Exel is a technology company, which produces composite sports equipment and industrial applications (www.exelcomposites.com). The company designs, manufactures and markets carbon fibre, glass composite for various markets including products for the sports and recreation industry (www.exelsports.com). In 1970’s the company started manufacturing alpine and cross-country ski poles.

“At that time, Exel was the biggest manufacturer of poles, but in 1990s the market for cross-country skiing equipment slowed down. We had poor winters, poor skiing weather conditions and more people started downhill skiing and snowboarding, cross-country skiing was unfashionable”.

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Therefore, the company developed an idea of a new sport based on a new product—walking poles, which can be used all year round. In 1996, Exel contacted Suomen Latu (the Central Association for Recreation Sports and Outdoor Activities) represented by Tome Jantunen and Vierumaki (Sports Institute in Finland) represented by Matti Heikkiläto and offered 30 pairs of walking poles prototypes to test the new poles.

“In April 1997, Matti Heikkilä with few athletes from Vierumaki institute’s fitness- rebuilding programme tested the new poles performing uphill - downhill exercises, similar to traditional summer training for cross-country skiers. The feedback was positive. The tests showed that walking with new poles is effective in raising the pulse from 10% to 20% higher, to levels that benefit heart and benefits muscles in the legs and upper body”.

The positive feedback resulted in publishing the first brochure on the benefits of walking with poles and establishing collaboration between three parties in order to create walking poles suitable for walking.

"In 1997 Exel signed a cooperate agreement with Suomen Latu and Vierumaki. Exel and Suomen Latu were responsible for developing the poles and marketing the activity and Vierumaki was responsible for developing an optimal walking technique”.

Further development of the walking poles included changes in material and form. The walking poles were lighter and did not vibrate when striking the ground. The grip and strap of the poles were designed to enable a relaxed grasp. Exel launched its first walking poles under the trademark “Walker”. First, Exel contacted sport shops to distribute new walking poles, and when the company was refused, they had to change the strategy. In Autumn 1997, Exel agreed with Suomen Latu represented by Tuomo Jantunen to give around 1000 poles to educate people how to walk with poles during workshops organised by Suomen Latu to interest people in a new sport.
“We placed the ad. in Helsingin Sanomat in early August and tried to lure them [...] in any way possible, really, and then we were really amazed how many people actually turned up [...] it was just impossible to continue to do that with such a big crowd”.

Nevertheless, in order to reach even larger number of people Suomen Latu decided to build a sport-instructor network in the country. New instructors taught correct technique and led the first large groups in forests for walks. The main role of the instructors was to promote the activity and explain the differences in poles so people knew exactly what kind of poles to buy.

“We prepared training materials including the first Nordic walking video. The Nordic walking network grew quickly and people were very enthusiastic about the sport and eager to become instructors … so by 1998 Suomen Latu trained more than 2,000 instructors in Finland”.

In addition, Exel started an advertising campaign among the Nordic walking practitioners. The success surprised all the parties involved, from manufacturer, instructors to sports shops.

“It all happened very quickly, shops were selling poles everywhere like crazy, that they had difficulties in delivering [...] they had people coming to their store going ‘have you got any Nordic walking poles?’ and at first their offered them hiking poles but it worked out pretty well when people started insisting that ‘they have to be Exel Nordic walking poles’, and the store managers started calling us ‘we’ve got some people here who want to buy those Nordic walking poles of yours, would you mind sending some, please?’”

The competitors also started releasing their versions of the walking poles, and Exel was worried about the poor quality of the equipment.

“The whole market of bad products emerged and dangerous products even. I mean, I don’t really mind the fact that other brands came along, but you’ve got to have some sense of responsibility that you don’t just
put anything out there. In practice they [other manufactures] just copied our brochures, simply copy pasted them. They also tried to copy our product as much as possible”.

After a commercial success in Finland, Suomen Latu and Exel began cooperation with associations in Norway, Sweden and Denmark and in 1998 introduced walking poles to the rest of Scandinavia.

“ [...] it was a pretty natural choice for us really, because of the Nordic countries... well, we’re used to skiing a lot, and even though we didn’t really mention skiing when we were marketing the product but we thought that because Nordic walking really is a northern sport, we thought it was easiest to start here”.

Further reasons for choosing the Scandinavian markets were lack of competition and the need to establish a special network of the Nordic walking instructors in each country. As in Finland, learning Nordic walking in groups seemed to be a trend abroad.

“Suomen Latu contacted corresponding associations in other Scandinavian countries and together organised events promoting Nordic walking. Instructors organised trainings through associations, community fitness centres and sports clubs”.

The opportunity for an international distribution of walking poles facilitated the changes of the activity name, from Finnish commonly known ‘Sauvakävely’ - pole walking, to gain acceptance around the world.

“The name had to describe activity - walking and second part described the geographical region of home of the activity”.

In 1998 Exel named the activity Nordic walking and the trademark walking poles changed name from “Walker” to “Nordic walker”. Exel protected the domain nordicwalking.com and copyright the name of Nordic walking. From Scandinavia, walking with poles spread to Switzerland as a key target country since the local
distributors were extremely enthusiastic about the activity. Next, Nordic walking spread to Germany, Austria and Central Europe.

“Even we were surprised how easily the words Nordic and Nordic walking have been accepted in the countries we’ve been exporting to. They seem to evoke the associations people have with the north, Nordic countries - fresh air, pure nature, healthy lifestyle. It’s been pretty easy to get those ideas through to people”.

The suitability of Nordic walking for people with different fitness levels was known, but applicability in different climates and different cultures surprised even Exel.

“When you think of it, you could never think of reason why they’d be interested in something like Nordic walking. They don’t even have this kind of nature, or the culture that we have here in the Nordic countries. But it did break through there as well, and people walk mostly on beaches on soggy sand”.

Figure 57. Early beginnings of Nordic walking
The challenges

The introduction of Nordic walking to the commercial market was problematic. First Exel contacted sport retail shops in Finland to sell new walking poles.

“In the beginning we introduced this to Finnish store executives by saying that walking with poles could become something big, as in how about it if we start taking this further together. They practically laughed in our faces; they thought nobody would start walking with poles”.

However, Mr Aki Karihtala recalled that the biggest challenge was to encourage people to walk with poles since the activity was meant to be practice outdoors. The company had to focus on creating a demand by promoting the activity and giving the people a chance to try walking with poles. Nevertheless, in the beginning people were reserved.

“People thought of it as a sport for unfashionable people, which meant that we had a lot of work to do to overcome this image problem… well, it was really quite awful, for example people were heckling when we passed the golf course, they were going ‘hey, have you forgotten your skis?’ Then we tried to provide scientific and physiological facts and emphasize the health benefits, and prove the significance of it all to them. When you convinced someone, they clearly don’t care about what other people say”.

So at first Nordic walking was practiced in big groups in the parks and forests. Later, smaller groups and pairs of walkers emerged on the pavements and slowly the threshold of using the poles in public became lower.

“ […] when people started being more aware of the health benefits of Nordic walking, the group started getting smaller and people came out of woods to walk in public places. The great thing was to see a man walking with poles alone in Helsinki city centre”.
Marta Anna Zurawik


International Nordic Walking Federation (INWA)

The fast growing network of Nordic walkers in Europe in late 1990’s needed be organised. Therefore, International Nordic Walking Association (INWA) was founded in 2000 by Aki Karihtala, Raija Laukkanen, Vesa-Pekka Sarparanta and Marko Kantaneva.

"Soon after 2000 Marko Kantaneva left INWA and established his own commercial organisation World Original Nordic walking Federation and a brand of walking poles called - MARKO”.

INWA close collaboration with Exel was criticized by other associations.

“[…] it led to accusations that INWA was a selling tool for Exel and the company influences all the decisions of the organisation”.

Therefore, in 2008 Aki Karihtala resigned from the position of the Senior Vice President in Exel and focused on developing INWA. Currently, INWA is a governing organisation for Nordic walking with member organisations in 23 countries. INWA works on a non-profit basis for development and education of Nordic walking and to expand the global network for Nordic Walking instructors. In each country there are INWA certified Nordic walking instructors who teach people to Nordic walk.

“In Germany, Nordic walking is the biggest activity there with 4 million regular Nordic walkers. In Finland 10% of Finnish population practice Nordic walking […]. In Holland and now Poland, Nordic walking is used in rehabilitation programmes. In China we have around hundred thousand regular Nordic walkers. In Japan Nordic walking is promoted by a Japanese cross-country skier who spend a lot of hit time in Finland… we still need some work to do in USA”.
Moreover, INWA is expanding its network of the instructors to new countries such as Russia, where the introduction of the activity is mentored by Poland. INWA also established its connections in Brazil, India, Greece and Spain.

“The major growth in Nordic walking has come from Western European markets however more distant markets, such as USA, Canada and Japan will be significant in the long run for Nordic walking”.

Mr Aki Karihtala highlighted the importance of promoting Nordic walking in Asia. On 9th December 2004, Exel signed the contract with the China Institute of Sports Science establishing a joint venture and creating network for Nordic walking.

"If only one per cent of Chinese took up Nordic walking as a form of exercise, this would triple the number of enthusiasts in the world".

Scientific evidence

In 2002 the Cooper Institute, Dallas published a research sponsored by Exel, which compared physiological responses of Nordic Walking to regular walking.

“Doctor Kenneth Cooper from the Cooper Institute visited Finland to give a lecture. During the visit we met him and I introduced the concept and Nordic walking technique to him and his wife […]. Exel donated money to the institute in Dallas to run the tests to compare Nordic walking to ordinary walking. Tests showed that Nordic walking has more impact on the body than ordinary walking which gave scientific proof of Nordic walking health benefits. These results were used for the promotion of Nordic walking to support the message of health benefits”.

Exel actively used the results of the international scientific research proving that walking with poles is beneficial for health and fitness, for example, the poles induce the walker to use more oxygen and burn more calories than regular walkers. The support also came from doctors who emphasized the health benefits which gave Nordic walking more credibility.

“If somebody sees advertisement which recommends trying Nordic walking it will definitely not work. It is more credible if somebody wearing a white coat points out something about Nordic walking”.

Nordic walking poles versus trekking poles

Mr Aki Karihtala stated that it was very important to highlight the differences between trekking and Nordic walking.

“[…] trekking is when you walk in the wild, where poles serve as a balancing aid and helps in carrying heavy loads in difficult terrain… Nordic walking is more of a fitness- type of walking with poles specially designed for it”.

Nordic walking is proven to benefit health more than ordinary walking, trekking or jogging due to the specially designed walking poles.
“Nordic walking poles are made of carbon fibre or glass fibre that’s durable, light and doesn’t vibrate when the pole strikes the ground. They have the forward angled lock spike tip that touches the ground and at the angle that suits the walking technique, and asphalt paws are used for street walking; the grip and strap are designed to enable a relaxed grasp that does not make the shoulder muscles sore”.

Socialising, social support and the role of the Nordic walking instructor

Social support in Nordic walking played a key role in the beginning of the activity. At first people walked in big groups in forests as they were shy to walk with poles.

“A big group gives power to an individual so naturally at the beginning the groups were pretty big and [...] away from the eyes of the world”.

In order to encourage people to Nordic walking, the instructor network was established. Each instructor had their own network of walkers who they taught the correct technique, provided information about equipment and health benefits and offered support and a positive feedback.

“Instructors explained technical details and features of the poles and differences … so people knew exactly what kind of poles to buy”.

The instructor networks offered friendly atmosphere, support and evaluation of a progress and overall positive experience of the sport.

“If you have a possibility to choose a network partner that is fun and easy to work with, it also will make your work more comfortable and interesting”.

Due to Nordic waking instructors’ support, people became more enthusiastic about the activity.
**Nordic walking promotion**

Exel used various ways of advertising and promoting the activity to the general public. In the early stages of the promotion, there was a great amount of free publicity in the Finnish television, magazines and newspapers.

“[…] the first TV program about Nordic Walking is aired. After a few TV shows the phones at Suomen Latu are ringing off the hook. People really want to know more about Nordic Walking”.

Exel found a niche market and commercialized successfully Nordic walking as a new type of activity that was targeted at people who were non-active and not keen on exercising.

“We have been trying to reach people, who are ‘couch potatoes’. There is an amazing potential there, and it is the biggest target group”.

Surprisingly for the company, the activity also attracted older women - housewives, who in 1998 were 70% of Nordic walking practitioners. Based on the target group, Exel created a profile of Nordic walkers for the marketing campaigns.

“The image of Nordic walkers was fit, middle aged women. Every picture or poster promoting Nordic walking had two women and a man, to make the activity more appealing to women. All these pictures were kept in a photo bank and ready for press releases so the media sent the correct message about Nordic walking to the public”.

The advertising messages concentrated mainly on the sport and the equipment played the minor role.

“Normally you don’t advertise the physical activity but product, but for Nordic walking it was different, Exel advertised physical activity and its health benefits with Exel poles and Exel name on poster. So when people started going to sport shops and ask for Exel Nordic walking poles, shops had to contact Exel and asked for distributing poles”.

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As mentioned earlier, in the beginning of Nordic walking, various forms of advertising and promotion, including word-of-mouth communication were used to attract new practitioners. This way, news about Nordic walking and its benefits spread quickly in the local communities.

“After they’d finished exercising they realised how little effort was needed in it, even though it still made them sweat, got them out of breath and most of all made them feel good….We started getting positive comments from people”.

The Nordic walking practitioners informed each other about Nordic walking and its benefits. The information from peers about the activity was perceived as more reliable and trustworthy than advertisements.

“How important it is when you wouldn’t really want to use any of these walking aides that label you an old person, such as a single waling pole or a Zimmer frame. Now these people have realized that Nordic walking is something for them, even though walking poles more or less act as a balancing aid or help them walk safely. It’s still an important thing for them mentally that they do Nordic walking just like other people, even though they walk slightly slower but that they can still get some fresh air and go to the corner shop a lot more easily”.

Word-of-mouth communication was successful due to a number of factors.

“People who tried Nordic walking had knowledge about the activity and equipment, they shared positive experiences with other friends and family which was made network of Nordic walkers grow bigger and bigger in very short time”.
The success of Nordic walking is based on an equal involvement of consumers and producers in the development and marketing of the product from early beginnings.

“Nordic walking is an example of a very successful venture. In 2 decades it transformed from ridiculous-looking form of training to a hobby practiced worldwide due to actions of consumers and producers, private and public interests”.

In general, it is hard to predict the development of popular movements but in case of Nordic walking the future is promising.

“Thanks to Nordic walking, the walking segment of retail has been the fastest growing product in terms of quantity and turnover”.
APPENDIX 8

THE INTERVIEW WITH THE INWA BRITISH NATIONAL COACH

DOCTOR CATHERINE HUGHES – INTRODUCTION

Dr Catherine Hughes has been involved with Nordic walking since its introduction to Great Britain. She became a Nordic walking instructor in 2004 and worked for the first British Nordic walking organisation - Nordic walking UK limited.

Picture 9. Dr Catherine Hughes

In 2008, Dr Hughes together with Karen Ingram founded a non-profit organisation - British Nordic Walking which is a part of the International Nordic Walking Federation (INWA). Dr Hughes is a National Coach for England and works as a personal trainer in Nottingham. In 2007, she was short-listed for the Community Coach of the Year Award in the Nottinghamshire Sports Review of the Year for her work in introducing Nordic Walking to the community and to the Robin Hood Half Marathon. In 2010, Dr Hughes was awarded British Orienteering Coach of the Year for her work developing new community clubs in Mansfield and Bramcote. She is also involved in organising Nordic walking charity events and running races across the country. In 2014, together with other instructors she organised the British Nordic Walking Challenge Series.
Establishing Contact

The initial contact with Dr Catherine Hughes was established with an email I sent to request the support of the British Nordic walking organisation with the quantitative data collection in April 2013. In addition, I requested more information about the origins and history of the activity in Great Britain and suggested an interview meeting. The interview was conducted on 24\textsuperscript{th} January 2014 in Nottingham, UK. To ensure that the interview proceeded properly, I had prepared a list of conversation topics and secured a voice recorder, notepad and pens.

Themes of the Interview

Origins and history of Nordic walking in Great Britain.

Nordic walking was introduced to the United Kingdom by Francis Mitchell who established connections with Finnish Nordic walkers through his wife, who had known a physiotherapist that worked with the Finnish skiing team. In addition, Mitchell collaborated with the Finnish embassy to promote Nordic walking to British people. Soon after, the first British Nordic walking classes started in Richmond Park and Francis Mitchell launched the Nordic walking UK limited and began training Nordic walking instructors. Catherine recalled: “[…] to be an INWA trainer I had to go to Helsinki, I invested my own money, got qualified, came back and delivered the trainer course”.

Moreover, Nordic walking UK limited collaborated with personal trainers to introduce Nordic walking as a part of their exercise programmes using general word-of-mouth as well as media advertising. Despite extended advertising in newspapers, TV, radio and volunteer work of 500 INWA trained instructors, the early years of introducing Nordic
walking were challenging. The organisation had financial problems and went bankrupt in 2008.

“There was no longer an INWA organisation so what do we do? We were all trained, we invested to run an INWA course so ‘let’s set up a new INWA organisation’, because we didn’t want to lose our ties with this group of 20 countries doing lots of work so we set up British Nordic walking in 2008”.

In the same year, a new private company Exercise Anywhere/Nordic walking UK was established.

**Current status of Nordic walking**

Currently there are two organisations that promote Nordic walking in the United Kingdom: British Nordic Walking, which belongs to the INWA organization and offers their certificates for the instructors and Exercise Anywhere/Nordic walking UK which have their own instructor certificates endorsed by SkillsActive.

“[British Nordic Walking] have slightly different reasons, aims and objectives and hopefully both organisations are trying really hard to get Nordic walking going and that’s good for development. I think truly in future we do need to collaborate to get proper recognition in the UK”.

Despite the promotional work of two organisations, Nordic walking is still an uncommon activity in the UK.

“Still, the majority of people don’t know what it is. It’s frustrating because between our and other organisations we’ve been in every national newspaper and lots of women magazines and between us, which it’s a good thing there are two organisations, we’ve been trying to get out there and market it and we need to keep doing more and more of that because the number of people who come along and say ‘oh wow! I wished I had discovered this so many years earlier I didn’t know about it’ ”.

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Although the British people know little of Nordic walking, it is a quite popular activity in South England and London, where it is taught by private instructors.

“There are big hot spots around here [Nottingham] and London and that’s mainly private instructors and personal trainers charging 12 pounds for an hour walk, and private instructors have been very busy as South of England is more affluent”.

Nordic walking has been in the United Kingdom for ten years now, but the character of the activity, which involves individual leisure and organised practice, makes it very difficult to estimate the numbers of Nordic walkers in the country. The organisation tried to create official statistical records.

“It’s a very hard thing for us to work out how many people practice Nordic walking. As an instructor every time I teach somebody Nordic walking for first time, I fill in a medical form and I looked at my medical forms yesterday and I counted through the last 12 months and I had 120. In 7 years I taught 600 or 700 but how many people do I see this week Nordic walking. I probably see 50 out of those 700, so I have taught a lot but I don’t know if they are Nordic walking in their own time or did they just do it for a while and then stopped. It’s really hard to measure because as I say, on one hand you have got instructors that qualify and they don’t necessary teach or they teach for a while and they stop and they start. They may have lots of clients who do it for a while and they stop and may start again, so to come up with that number statistically is really frustrating and everybody would love to know that”.

Marta Anna Zurawik
Promotion of Nordic walking

British Nordic walking organisations focus on promoting the activity in local communities, offering free or low-priced Nordic walking classes. They also collaborate with local health authorities and councils to promote the activity under the health walk schemes. The INWA helped to establish Nordic walking community walks in Medway in Kent and is planning on establishing new communities in Argyle, Scotland, Bury and London.

“We’re also going to train somebody in the centre of London, as a community instructor in February so now local authorities can offer it as more affordable for people who aren’t so affluent, which would be good”.

The British Nordic Walking organisation plans to follow the path of Age Cymru, which is the best example of Nordic walking development in local communities.

“Age Cymru train volunteers in the community. They have around 50 instructors across Wales who run classes for free or a tiny charge”.

Nordic walking events in the United Kingdom

Another development of Nordic walking is towards sport. British Nordic walking practitioners have taken part in organised charity events and running races across the country. This was not an easy endeavour.

“I went to Birmingham and I took their develop manager out and we went Nordic walking and I said ‘can we take part in your races?’ and he said ‘no you can’t because our rules say in running you are not allowed any mechanical assistance’, so I said ‘OK’. Yet we are doing this because I speak to race organisers and they say ‘you shouldn’t really be there but I don’t mind’ ”.
However, Dr Hughes eventually convinced UK athletics to include Nordic walkers in the races:

“In 2010 they officially said yes, we can now do races officially, so we do 5ks, 10ks, marathons, half marathons, but then the next step is to have just Nordic walking without running. It would be brilliant”.

British Nordic walking practitioners have taken part in many walking challenges and charity walks. One of the most popular Nordic walk challenges is called “Shepherd’s Walks”, which takes place in May every year in north Cumberland. Another very interesting development of the activity is the Nordic walking biathlon organised in Rosliston Forestry Centre, near Burton-on-Trent, south of Derbyshire.

“I went to the centre to train them and they mentioned in passing that they had those guns so I said ‘if you have the guns we can do it!’ and we developed it there. These are laser guns so we have no worries about health and safety. They are not real it has a power of remote control so we just fire to metal targets and it’s fabulous”.

The rules are similar to classic winter biathlon. The event took place a couple of times and attracted various age groups including many young people, which is unusual for the activity.

**Future of Nordic walking**

Nordic walking attracts older people age 40 to 60, mostly women with health problems.

“I know from having GP referral that the chances are in a group there would be somebody with arthritis, somebody with high blood pressure”.

However, British Nordic walking is planning to encourage more young people to Nordic walk.

“Nordic walking in schools could be really good for kids who hate the traditional sports and didn’t want to play football, they didn’t like team games”.
In summer 2013 British Nordic walking organised a 15 meter Nordic race for teenage boys 16 to 18.

“[…] their technique was rubbish, but that didn’t matter. How much fun they were having! We should think differently with different age groups and idea of doing a short sprint rather than doing 5k, half marathon. It makes it more fun and maybe that’s what young people want, maybe they want some fun sprints, something more athletic more high intensity not long walks”.

**Nordic walking versus trekking**

Nordic walking requires a special technique of walking with poles which is different from trekking due to the specially designed poles.

“When you trek you have a little move on triceps but you really don’t move an elbow joint, if you are just doing that you are not burning more calories, you are not using arm muscles. When you Nordic walk you use whole arm to push harder on the pole and use more muscles with the good technique and push through the strap, which means you burn more calories”.

The immense difference between Nordic and trekking poles is the pole handle and strap “when you grip a trekking pole you get tension all the way up to shoulder”.

Nordic walking technique is more relaxing due to the specially designed strap, which is attached to the hand and allows people to push the pole pass the hip and releasing the grip. Furthermore, the technique requires the opening and closing of hands during pole movements, which allows the blood to flow. The difference between Nordic walking and trekking is easily noticed by people who changed trekking poles for Nordic walking poles.

“Nordic walking poles are very slender and that’s very natural for a hand so that’s why Nordic technique is so natural - an arm is moving exactly how it moves normally, just swinging”.

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Benefits of Nordic walking technique

There are two techniques of Nordic walking. The modifications between techniques include bending the elbow or keeping the elbow totally straight or have it slightly bent so it is more natural and placing and pushing the poles to or behind the hips.

“We make a joke saying you are rather a mountain goat or an antelope if you a mountain goat you are a traditional rambler or if you drop my hands down you are an antelope and you are doing proper Nordic walking”.

The active use of poles during Nordic walking distinguishes the activity from ordinary walking or rambling where shoulders, arms and hands are not involved in the exercise.

“I still do a bit of ordinary walking and rambling and when I ramble my arms just hang there and in winter they are quite cold because I don’t use muscles and also my fingers at the end swell. People said the same to me and it’s really annoying. At Christmas at the end of [walk] I tried to do my shoe laces and my fingers were stiff and swollen and with poles I have no problem. When you do Nordic walking you move all of the shoulder, which is good for a modern day lifestyle, because we all are so tensed. It really does free up the shoulder so that’s also going to improve the posture and open up the chest”.
Nordic walking positively affects mental health and well-being by relieving stress of everyday lives.

“[stamping] doing that into the ground when you have a bad mood is a stress relief! It’s something about that sensation, if you think how many sports involve hitting or kicking, which is quite an aggressive thing, something about driving pole into the ground. People would arrive after a bad day at work and they go [stamp stamp stamp] and they feel better and we know obviously exercise makes you feel good, being outside makes you feel good but there’s third element of Nordic walking which is something about this pole. A retired professor of psychology from here [Nottingham] said it’s the same muscle action when you do that as hitting somebody – boxing, he said this is how you get rid of frustration, but you are hitting the ground. Then I had a Tai Chi master saying ‘oh you’re putting your bad energy to the ground’ - so that’s a bit of eastern philosophy”.

The active use of poles Nordic also encourages walking meditation.

“You meditate while you are walking but what happens with the poles is it gives you this strong rhythm – bang, bang, bang - which helps meditation and I did some sessions for the day centre with people with severe mental problems. I did three months of sessions with them and the guy who had psychosis said to me in the end - ‘concentrating on the rhythm of the poles took the mind off the voices in my head’ and I get that. It’s that focus on something that takes you away from your problems”.

Nordic walking poles also provide the reassurance.

“It goes back to when we were children we always held somebody’s hand […]. It’s reassuring like in middle eastern countries men playing with worry beads, so instead of that we have a pole in our hands and we grab and release, grab and release so there’s something about having something is your hands”.

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Socialising social support and the role of the Nordic walking instructor

Nordic walking also offers social benefits, social support despite the initial feelings of embarrassment and awkwardness.

“I realised how people bond so strongly so I encourage that in my Nordic walking group for them to bond. [As an instructor] I’m trying to get everybody talking to each other and sometimes do games that involve talking to each other and if possible we have a drink of tea afterwards. I see so many people supporting each other through serious illness and they support each other and this is wonderful”.

The social support is a very important factor as it diminishes the feeling of embarrassment.

“It takes a lot of guts and lots of confidence to Nordic walk especially in the early days. Nordic walking people have to come together in the moment because it’s new and they feel a bit embarrassed, they don’t feel brave to go out on their own but they feel a lot less embarrassed in a group so people say –‘oh I like it in your group, I would never do it on my own I will be too embarrassed’. We all look a bit funny on our own so it’s safety in numbers and that encourages other social things and I would like to develop that because it gives us cohesiveness and reasons to come together as a community”.

The Nordic walking instructors also motivate and support in regular participation in the activity in various ways.

“If it rains during my classes, at the end they get a jar of home-made jam. It’s a little token, a kind of bribe and other little incentives. […] before Christmas we were going to Nordic walk to Chatsworth Christmas Market, the famous Christmas market and we know how far it is from here to there and we log our miles and that’s the incentive of keep going, keep adding your miles. There’s lot of little things which are quite subtle”.
The instructors also play the main role in reducing the environmental and psychological barriers to the regular participation in Nordic walking.

“It’s raining and we are wet and we are cold but how good do you feel now and they say actually they say I feel really good even if I come out in the wet cold weather then you empower people cause when you stay inside you feel like a victim if you go out in bad weather you might not enjoy it in the first minutes but after a while you ignore it and go on with it and feel very empowered at the end”.

Figure 61. Development of Nordic walking in the United Kingdom.