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weather for older adults' winter walking practices in
County Durham.*

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Abstract

Currently we know that as age increases so does physical inactivity, and generally the more affluent an area is the more active people are. We also know that staying physically active through activities such as walking is important for healthy ageing for older adults. This is increasingly important due to an ageing population and the capability of preventive health care. However, in winter older adults are often less physically active citing the weather as something that dissuades participation. However, we currently know very little about *how* the varied and combined elements that comprise winter weather (precipitation, ice, wind, sunlight, snow, temperature, fog) shape older adults' perceptions and experience of walking in winter. This thesis explores the role of weather for older adults' winter walking practices. Both mobile and traditional semi-structured interviews and creative workshops were used to explore the role of the weather for older adults' winter walking practices.

Data collected was analysed using reflexive thematic analysis that facilitated the findings to be separated into four key areas: Winter Weather and Mental Health, Adapting to the Winter Weather, Constructing and Reinforcing Place Based Identities, and Sensing the weather. Overall, the findings show the complexity of how weather, person, and place interact which effect how the participants live within and are physically active with a place. The findings of this study have also informed a set of practical recommendations for people supporting older adults to be active in winter.



**Walking in a Winter Wonderland? The role of weather for older adults’
winter walking practices in County Durham.**



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December 2022

Table of Contents

Chapter One: Introduction	10
Physical Activity and Older Adults	11
Aims of the Study	17
Chapter Two: Literature Review	19
COVID-19 and Physical Activity among Older Adults	20
Walking	20
Weather and Mobility	25
Walking and the Weather	26
Knowing Weather	28
Weather and Place	32
“Good” Weather and “Bad” Weather	33
Chapter Three: Methodology	36
Methodological Perspectives	37
<i>Ontology</i>	37
<i>Epistemology</i>	38
Ethical Considerations	39
<i>Confidentiality of the Participants</i>	40
<i>Recruitment</i>	41
Participants in all Interviews	42
Participants in The Creative Workshop	43
Qualitative Methods	44
Interviews	45
<i>Interview Guides</i>	47
<i>Mobile Interviewing</i>	48
<i>Traditional Semi-structured Interviews</i>	51

<i>Field Notes</i>	53
The Creative Workshop	54
<i>Rationale</i>	56
Data Analysis	60
<i>Process of Coding and Developing Themes</i>	60
<i>Familiarisation With the Data</i>	61
<i>Generating Codes</i>	62
<i>Theme Development and Refinement of Themes</i>	63
<i>Assigning Names to Themes</i>	65
<i>Writing Up the Analysis</i>	66
Reflexivity	66
Chapter Four: Emplacing Winter Walking: Introducing East Durham as a Research Site	70
Research Site	71
<i>Weather in County Durham</i>	72
Introducing East Durham	72
<i>The Importance of Culture Whilst Walking</i>	73
Chapter Five: Findings and Discussion	79
Winter Weather and Mental Health	80
<i>Walking Outdoors to Deal with the Indoors</i>	80
<i>How People Continued to Socialise in Winter Weather</i>	83
<i>Weather Talk</i>	84
Adapting to the Winter Weather	87
<i>How Winter Weather Changed Terrain</i>	87
<i>Adapting to the Weather to Stay Active Outdoors</i>	88
<i>How People Adapted through Clothing and Equipment</i>	90
<i>Knowing How the Self-responds in Weather</i>	93

Constructing and Reinforcing Place Based Identities	96
<i>Weather and Place</i>	<i>96</i>
<i>How Outdoor Walking Sustains a Connection to Place</i>	<i>99</i>
<i>Northerners' vs Southerners</i>	<i>104</i>
Sensing the weather.....	108
<i>Intertwinement with the Weather.....</i>	<i>108</i>
<i>Differences in Felt Weather</i>	<i>112</i>
<i>Idealised Weather for Walking</i>	<i>114</i>
<i>The Offerings of Winter Weather</i>	<i>117</i>
Chapter Six: Conclusion	121
Empirical Contribution	122
Application of Knowledge	125
Partnership Working	125
<i>Reflections on Key Considerations for Successful Partnership Working.....</i>	<i>126</i>
Methodological Contribution.....	130
Concluding Comments.....	131
References:.....	132
Appendices.....	152

List of Figures

Figure 1: Example Map produced during The Creative Workshop.....58

Figure 2. Example of Map produced during The Creative Workshop.....59

List of Tables

Table 1: NS SeC and Physical inactivity in County Durham.....13

Table 2: Age and Physical inactivity in County Durham.....14

Table 3: Participant Summary of all Interviews.....43

Table 4: Participant Summary of The Creative workshop.....44

Table 5: Creative Map Summary of Figure 1.....58

Table 6: Creative Map summary of Figure 2.....59

List of Appendices

Appendix, 1: Participant Information Pack.....152

Appendix, 2: Mobile Interview Guide.....159

Appendix, 3: Traditional Semi-structured Interview Guide.....161

Appendix, 4: Walk Leaders Interview Guide.....163

Appendix, 5: Non-academic Report.....164

Appendix 6: Booklet for People who Support Older Adults to be Active in Winter...219

Appendix, 7: Poster for the Knowledge Exchange in Higher Education: implications for teaching and research' conference at Plymouth Marjon University.....227

Appendix, 8: Q&A Article with Miles Lowson.....228

Appendix, 9: Reflection Blog.....231

List of Abbreviations

Ns SeC – National Statistics Socio-economic Classification

RTA – Reflexive Thematic Analysis

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Acknowledgements

First and foremost, I would like to thank my supervisor for this project: Prof. Cassandra Phoenix. The guidance and support from Cassie helped this project to become a reality and then progress to completion. This helped me to fulfil a lifetime ambition for conducting research. I thoroughly looked forward to the frequent meetings to discuss the project and I am so grateful for the time she afforded to this project. I consider myself lucky to have worked with Cassie and had the opportunity to learn from her expertise.

I would also like to thank County Durham Sport, who funded this project. It has been an absolute pleasure to be involved with this organisation. I appreciate their evidence based approach, which I believe helps them to influence and make a meaningful difference in the community. I must thank them for all they have done to make this project a reality. In particular I would like to thank Dr. Rachel Mowbray. Rachel helped to progress the project steadily and ensure that the project was shaped to hopefully have as big as an applied impact as possible. Rachel was fantastic to work with and someone who I have learned a lot from.

Finally, I would like to thank the participants in the study. They were so welcoming to me throughout the different forms of data collection. Although I enjoyed all aspects of the project, they helped to make data collection undoubtedly my favourite part. Furthermore, without their input this project would not have been possible. I thank them unreservedly for inviting me into their lives and sharing some great insight. It is my sincerest hope that the findings of this study can be used to improve older adults walking practices in East Durham and beyond.

Chapter One: Introduction

Physical Activity and Older Adults

The benefits of physical activity are now well established. It is considered essential to engage older adults in physical activity as they are more at risk from living inactive lifestyles than younger populations and have an increased risk of mobility loss and premature morbidity (Cunningham et al., 2020). Regular physical activity has the ability to help older adults to improve physical functions whilst allowing them to remain active and independent and simultaneously improve their quality of life (Sun et al., 2013).

Evidence has indicated that regular physical activity allows both, healthy and frail older people, to reduce the risks of developing major cardiovascular and metabolic diseases. Health affecting factors such as obesity, falls, cognitive impairments, osteoporosis, and muscular weakness are decreased by regularly engaging in activities ranging from low intensity walking through to more vigorous sports and resistance exercises (McPhee et al., 2016). These benefits also extend to older adults who live with long term health conditions. For example, Reid et al., (2021:1) recent study espoused a consensus statement that “the benefits of physical activity outweighs the risks for people living with long term health conditions”. This is relevant to older adults as studies have shown that multimorbidity (presence of two or more long-term health condition) are common for older adults (Barnet et al., 2012). Therefore Reid’s (2021) study has demonstrated that physical activity is generally safe for older adults with such conditions. From this public health institutions (such as Sport England, 2021) have recommended physical activity to people living with long term health conditions. Alongside this Sport England have issued a set of recommendations for healthcare professionals to use to ensure regular physical activity can be carried out safely.

The benefits of physical activity for older adults are not solely physical. It has been suggested that older adults who take part in low-to-moderate levels of physical activity were more likely

to improve their cognitive function whilst simultaneously delaying the progression of cognitive impairment (Lü et al., 2016). Furthermore, older adults who engaged in physical activity were less likely to suffer from cognitive decline, social isolation, and loneliness (Guure et al., 2017; Mikton et al., 2021). As such, physical activity is often utilised in the management and treatment of mental health conditions including depression and anxiety (Brosse et al., 2002).

Recent reports have indicated that carrying out light physical activity during the COVID-19 pandemic helped older adults alleviate negative mental health impacts that they were experiencing whilst isolating and shielding (Callow et al., 2020; Schuch et al., 2020). Furthermore, it has been suggested people are less likely to develop conditions associated with older age such as Alzheimer's disease (Rovio et al., 2005; Santos-Lozano et al., 2016) and dementia (Knopman et al., 2001; Blondell et al., 2014; Livingston et al., 2020). Older adults who are active are more likely have a better quality of sleep (Freburger et al., 2010; Benloucif, 2004) which is significant due to older adults being more likely to experience disturbed sleep (Middelkoop et al., 1996; Adams et al., 2017). From this, it can be concluded that there is a robust evidence base that physical activity plays a significant role in having a positive mental health and well-being (Sport England, 2021a; Kelly et al., 2019).

Because of such a consensus around the impact of physical activity on health and well-being, the UK government sets physical activity recommendations for the population and defines what qualifies people as active or inactive. The Chief Medical Officer defines an inactive person as someone who, over the course of a week, does not achieve a total of 30 moderate intensity equivalent minutes of physical activity (UK, Government, 2019). Currently, the UK Government (2019) recommend that older adults should aim to; be physically active daily, spend two days a week doing activities that improve strength, balance, and flexibility. Accumulate at least 150 minutes of moderate intensity activity a week or 75 minutes of

vigorous intensity activity if already active (or a combination of both), and finally reduce time being sedentary with light physical activity where possible.

Such targets are not always achieved, and inactivity typically increases with age (Sport England, 2015) with the biggest drop in activity levels at age 75+ (Active Lives Adult Survey, 2021). Similarly, there are suggestions that generally more affluent parts of society are more likely to be active (Sport England, 2021a), which is why reducing inequalities in physical activity and sport provision is a large part of Sport England’s new strategy “Uniting the Movement”. Deprivation is particularly prevalent within East Durham (where this project is situated), and East Durham has some of the highest levels of deprivation in County Durham and England with nearly a quarter (23.2%) of the population living in the top 10% most deprived areas nationally (UK Government, 2019b). Recently, it has been suggested that poverty has a significant impact on participation in physical activity within East Durham (Edwards, 2022). Alongside this, there is evidence to suggest that both deprivation and age negatively correlate with participation in physical activity (See Table 1 and 2: Data from Active Lives, November, 2020-21).

Table 1: NS SeC and Physical inactivity in County Durham

Physical activity behaviour in County Durham 20-21	
NS SeC	Inactive (%)
1-2	18.4%
3-5	35.3%
6-8	31.9%

Table 2: Age and Physical inactivity in County Durham

Physical activity behaviour in County Durham 20-21	
Age (Yrs.)	Inactive (%)
35-54	22.7%
55-75	32.4%
75+	59.7%

Deprivation and age being determinants of whether or not people are physically active is indicative that being physically active is complex for older adults and there must be other factors that affect participation. One factor that was perceived to affect older adults' physical activity was negative attitudes towards ageing often known as ageism. The definition of ageism refers to the "stereotypes, prejudice, and discrimination towards others or oneself based on age" (WHO, 2021:1). This definition is appropriate as it considers the ideologies in society are often reflected in older adults' own beliefs about themselves. In this manner, it is suggested that ageism also affects younger people as they can internalise stereotypes made normal in society (Levy and Leifheit-Limson, 2009).

Ageism has been proven to have a negative effect on older adults taking part in health promotion behaviour including being physically active. For example, Massie and Meisner, (2019) suggested how ageism led to limited physical activity provision available for older adults and what was offered did not necessarily meet the wants and needs of active older adults making it problematic for older adults to be physically active which was noted to lead to disengagement. There are also suggestions that taking a more positive view of ageing facilitate higher levels of physical activity (Wurm et al., 2010) and interventions can be successful

(Burnes et al., 2019; Menkin et al., 2022). From this, there has been the formation of initiatives such as Live Longer Better which aim to counteract ageist preconceptions and improve life expectancy by increasing physical activity through educating key stakeholders on older adults' health and fitness needs (Live Long Better, 2021). Overall, it can be concluded that there is compelling evidence (Chang et al., 2020) that suggests ageism and previous beliefs have had an adverse impact on older adults' physical activity and threatens healthy ageing.

Healthy ageing is progressively important since the number of adults of the age 60 years within the UK is increasing (Storey, 2018). By 2068 there is predicted to be an additional 8.6 million people aged 65 and the age group 85 plus is the fastest growing and will make up 7% of the UKs population by 2066 (Office for National Statistics, 2018). This demonstrates that people living in the UK can now expect to become old and live longer lives. Scott, (2021) has suggested that because of this we are in a new stage of humanity and there is a new health imperative that involves ensuring that health span is equal to life span. With this comment he suggests that although we can expect to live longer, currently it is not necessarily in good health and there is a burden of age-related disease. Scott, (2021) suggests that government and policy should be focused on prioritising preventive health care such as physical activity.

Research has shown that older adults' participation in physical activity is influenced by a range of individual, social, and environmental factors that help and hinder their participation (Tulle & Phoenix, 2015). Physical activity in older age is commonly promoted due to the various health benefits, however, the reason that people often take part in an activity is how pleasurable they find it (Phoenix and Orr, 2014). Phoenix and Orr, (2014) argue that pleasure was an "under-theorised and under-researched area" within the context of physical activity in older age. Their findings demonstrated how pleasure was experienced in four different ways; *sensual* by coming into being through senses (I.e., the touch of wind in their hair and skin when walking outdoors), *documented* by describing activities (I.e., routes and times), furthermore *immersing*

oneself in the moment of physical activity (I.e., in a meditative state) and finally *habitual* through how participants gained pleasure through routine and rhythm (Phoenix and Tulle, 2017). All experiences of pleasure were, in, with, and through the body. From this Phoenix and Orr, (2014:102) explain that pleasures are encountered across multiple “temporalities and spaces” this demonstrates that time and space sensitivities are important to how we experience and give meaning to physical activity in older age but also how physical activity itself is an embodied experience and provides another dimension to physical activity for other adults that is absent from the traditional rhetoric that being physical active is useful for the reduction of multiple diseases.

This suggestion is furthered by Phoenix and Bell (2019) who found interesting insights into the concept of “Rhythm” and its relevance for how, when, and where older adults engaged with physical activity. Specifically, they detailed and expanded on the complexity of the aforementioned “rhythm” and how “habitual” movements and interactions were essential for people’s mobility. Such habitual movements often created familiarity and predictability that contributed to notions of pleasure and allowed older adults to carry out more rhythmic procedures. However, such procedures that facilitated physical activity were often precarious in nature and something such as the weather could stop older adults being physically active. This study also found how the notion of “slowness” and being perceived as “slow” are perceived as problematic within a society that values speed. Being slow can lead to exclusion. Expanding on this the study found that stillness was pursued by older adults to “escape, rest, restore energy, manage the physical symptoms of illness, and the emotional turbulence of grief” (Phoenix and Bell, 2019:7) and concluded that stillness can have an empowering role in maintaining health and well-being for older adults. However, stillness, could culminate in sedentary behaviour. Physical inactivity and sedentary behaviours can be considered complex problems in their own right (Brown, 2013) and both are major contributors to mortality (Das

and Horton, 2012; Wilmot et al., 2012). The various viewpoints presented here show how physical activity in later life is intricate and multifaceted and undoubtedly a personified experience.

From this, it could be argued that there is tremendous depth in the meaning people gain from being physically active and how and where they put their bodies into movement. This underpins recent calls by Piggin (2020) to broaden the traditional definition of physical activity as “any bodily movement that results in energy expenditure” (Caspersen et al., 1985, p.126). This definition could be considered outdated and not capture all the benefits that physical activity has to offer. Rather, he espouses that “Physical activity involves people moving, acting, and performing within culturally specific spaces and contexts and influenced by a unique array of interests, emotions, ideas, instructions, and relationships” (2020, p.5). Similarly, adopting a ‘new mobilities’ (see, Phoenix and Bell, 2019), perspective to understand physical activity in later life, allows consideration of how movement gives people’s lives meaning and certain mobilities are meaningful themselves (Adey et al., 2013).

Aims of the Study

Now that the importance of physical activity in older age has been introduced, it seems appropriate to state the overall purpose of the project at hand. The overall aim of the project is to achieve four objectives:

- Firstly, to improve empirical knowledge surrounding older adults winter walking practices. This will be done through conducting research with participants from East Durham, analysing data, and presenting the findings within a thesis and non-academic facing report.
- Making an applied contribution to East Durham. This will be achieved by using the research findings to improve the provision of physical activity in winter, and providing

more confidence for older adults walking in winter and people who support older adults being active.

- Providing learning in partnership working. This will be achieved through the project being completed between an Active Partnership and a University and capturing insight along the way.
- Improving the ways in which the weather is researched. This will be achieved conducting research using two methodologies. In particular one of the methodologies will be creative in nature. This will utilise the arts for furthering research of the weather.

Chapter Two: Literature Review

COVID-19 and Physical Activity among Older Adults

The way in which people move their bodies and look after their physical health has been significantly affected by the COVID-19 pandemic. Although some people were able to use the opportunity to be more physically active, such as some older adults rediscovered the potential that being outdoors had for them (Bustamante et al., 2022) many have been unable to do this.

This is due to the various lockdowns across the UK that aimed to control the virus along with closures to community and leisure centres meaning that many older adults have not had the opportunity to be physically active. Additionally, due to older adults being more likely to experience a severe illness if they contracted COVID-19 (Centre for Disease Control and Prevention, 2022), many older adults have been shielding and confined to their houses. Such shielding has led to a drop in physical activity levels (Age UK, 2021). This facilitated older adults experiencing deconditioning defined as “the loss of physical, psychological, and functional capacity due to inactivity” (UK Government, 2021: 9). Specifically older adults experienced a substantial drop in strength and balance activities putting them at an increased risk of falls (UK Government, 2021), a reduced ability to carry out daily tasks and living in significant pain (Age UK, 2021). Which it has been argued has led to a “rehabilitation pandemic” for the older adults who survived Covid-19 (De Biase, 2020: 1). These findings show that when physical activity is largely removed from older adults’ lives it has caused significant stress for them physically. This again exemplifies the significant role that physical activity plays in healthy ageing (Sport England, 2021a).

Walking

The COVID-19 pandemic reduced the activity choice available for older adults to be physically active, resulting in nearly two-thirds of older adults being reliant on walking for leisure (Sport England, 2022). Thus, walking’s popularity increased during the lockdown (Sport England,

2020). There is evidence that older people have continued to walk after the lockdown and signs they are developing the habit of walking (Active Lives Adult Survey, 2021). However, reports from Age UK, (2021) suggest that 4.3 million (27%) older people cannot walk as far since the start of the COVID-19 pandemic, so although older people are walking more, they may not be walking long distances or at high intensities.

Walking is suggested to be a low-risk activity for older adults and continues to be promoted by public health institutions (Age UK, 2022) even though older adults are an at-risk population for falls. Falls are the leading cause of fatal and non-fatal injuries among older adults and most falls lead to a loss of independence (Bergen et al., 2016). Alongside physical injuries, there can be psychological impacts of experiencing a fall often known as a “fear of falling”. This can result in older adults taking protective measures against falling again such as being less physically active (Stubbs et al., 2014; Schoene et al., 2019). Though it is important to note a fear of falling is common amongst older adults regardless of whether they have experienced a fall or not (Chippendale and lee, 2018), for some, a fear of falling helped older adults adapt their movements in safe ways that reduced risk of falling (Ellmers et al., 2022). Nevertheless, falls often occur whilst walking (Gazibara et al., 2017; Robinovitch et al., 2013) and outdoor falls may be related to outdoor weather conditions such as rain and falling temperatures (Morency et al., 2012).

Falls are estimated to cost the NHS £435 million annually (UK Government, 2022). Therefore, promoting walking to an at-risk population can be problematic as it would involve exposing at-risk adults to environmental hazards that could provide a greater chance of tripping (Okubo et al., 2014). However, for the most part, literature that analyses walking and falls recruits’ samples of high-risk participants, such as frail older adults, people with a recent history of fractures, or nursing home residents (Beauchet et al., 2009; Madureira et al., 2007). Findings from Okubo et al., (2011) have demonstrated a beneficial relationship between walking and

lower fall-risk participants and a harmful association between walking and high fall-risk participants. Overall, it can be concluded that walking can be used as an effective way to support fall prevention for older adults, however walking should be recommended at caution to older adults who are frail and who are susceptible to falling or frailty. This is the direction public health institutions in the UK are currently following (Sport England, 2021b).

Often areas people walk in are green (an area of grass, trees, or vegetation) and blue spaces (coastal and aquatic areas) in their local environments, which provides an opportunity to experience nature. Phillips et al., (2011) found that people who walked in nature found an increased sense of pleasure and an enhanced awareness of natural beauty in local areas. Other studies have supported this and suggested that walking in nature can decrease stress levels (Olafsdottir et al., 2020) and result in an increased incidence of good, self-reported health (Twohig-Bennett and Jones, 2018). Walking in nature even has an association with a propensity for pro-environmental behaviours (Martin et al., 2020; National Trust, 2021). However, Boyd et al., (2018) note social patterning occurs in green spaces thus people who live with inequalities are infrequent users of such areas. Infrequent users are defined as visiting less than once a month and are more likely to be, female, elderly, in poor health, lower socio-economic status, ethnic minorities, live in relatively deprived areas, reside in areas with less neighbourhood greenspace (Boyd et al., 2018).

Furthermore, in their study based in Miami, Florida, Phoenix et al., (2021) explain how blue spaces have limited engagement from the African American community, despite engagement being conventional in previous generations (Neely and Samura, 2011). It is argued that coastal and blue spaces having an absence of the African American community are due to loss of racial memory as a “symptomatic” of historic events such as segregation (Phoenix et al., 2021: 125). This has led to a transmission of “strong lessons” (Thompson-Miller et al., 2015) across generational groups about coastal life and reinforce experiences of disparity, marginalization,

and racial inequality at the coast. From this, activities often associated with blue spaces such as swimming to become “white” (Wheaton, 2013:148). Therefore, it is shown that green and blue spaces are not always inclusive for all populations, affecting who visits and walks in such areas.

Walking is perceived as being accessible to all. For example, it is affordable and suggested to be easily integrated into a daily routine (Yang et al., 2010) requiring no skill as a prerequisite to participation (Ball et al., 2017). Walking can be seen as an “individualised” regime of exercise due to its nature of being able to partake in it alone, because of such reasoning walking is suggested to be practiced more often by older males (Tischer et al., 2011). Conversely, many older adults people tend to choose walking for social benefits as it is an activity that can be done with others. Kritz et al., (2020) study supported this and suggested that walking with others in a group contributes to better behavioural and health outcomes than walking alone. Specifically, walking groups present an opportunity for those feeling isolated, lonely, or experiencing bereavement to socialise and for many, this was a great motivation for joining a walking group (Grant et al., 2017). Although walking groups can be seen as a social experience it is noteworthy that this can also have a negative effect on participation. Social expectations can be perceived as a barrier to participation, and ultimately attendance in walking groups is more probable amid those who are socially- well situated (Hanson et al., 2016).

Additionally, studies such as Rigby et al., (2020) found inequities and inequalities in outdoor walking groups. For example, participation was more likely among white, more socioeconomically advantaged, middle-to-older aged, able-bodied adults, and female. With regards to walking groups recruiting more women than men Morris et al., (2019) suggested that for most women in walking groups the act of moving and socialising together in outdoor environments was highly valued. In this manner, participation was intimately intertwined with their life, circumstances, and relationships and even offered a “lifeline” for older women in

making an improved contribution to their social, emotional, and physical health and well-being in times of change. Times of change such as retirement or death of a spouse can lead to changes in physical activity preferences (Enberg et al., 2012; Barnett et al., 2012) and walking groups can become a mobility in which people navigate and deal with such changes (Morris et al., 2019).

Contradictorily Pollard and Wagnild, (2017: 9) explain that women report a higher prevalence than men for walking for leisure. Such findings are suggested to “progressively decline” as women age and then reverse so that in the oldest age groups more men walk for leisure than women. Nevertheless, this raises a crucial point that gender has an intricate position within all physical activity including walking. It is important to note that “bodily and gendered politics” (Clement, 2020:62) shape everyday mobilities that govern how we put our bodies in movement. This leads to walking practices being quite different for older women and men. For example, many older adults draw upon narratives perpetuated by health and beauty industries that portray ideals that older adults should strive to look like which often chase youthful ideas of beauty through physical activity and sport (Pike, 2015). Thus, it is understandable that women’s physical activity is often related to the quest for a slender body (Pike, 2011b). Older men are affected in a comparable manner, it is suggested that they often make negative comparisons with their younger selves and have negative perceptions of their ageing bodies which advertised physical activity as a desirable goal (Higgs and Gillard, 2015). Such ideologies create expectations of participation in physical activity for both men and women (Pike, 2011a). This demonstrates that walking is not always an inclusive activity for everyone and is often experienced differently and is innately interwind with who you are as a person.

Experiences of walking are also influenced by the weather (Dunn et al., 2012). Due to walking in weathers centrality to the project the next section will be spent mapping how weather has

been conceptualised and considered in relations to the areas and places that bodies move (walk) through.

Weather and Mobility

People are constantly navigating their localities and moving *with* the weather. Vannini and Austin (2020:1) argue we assume practices “through which we control, modify, endure, adapt to, enjoy or remove ourselves from the weather-places we inhabit.” This quote is attentive to human agency and shows how we engage with the weather, developing knowledge and behaviours that in turn provide meaning and experience. Ingold, (2007: S29) suggests that feeling “infuses our entire being”. When talking about how people put their bodies into movement in the weather, it is not so much that they make bodily contact with their surroundings. Rather feeling demonstrates a mixing of the beholder with the world they inhabit. The beholder touches the weather and is touched by the weather.

Weather practices are embodied and felt (Simpson et al., 2019). This is exemplified by Bell et al., (2019) study which focused on people’s weather experiences within the context of living with sight impairment. These authors found that weather elements influenced emotions of comfort, invigoration, and connection but also, disorientation, threat, and isolation. Such contrasts in how the weather made participants feel are also exemplified through experiences of wind. For example, a participant in Bell et al., (2019:275) study found the wind acted as a “caffeine hit” whereby the participant was awoken by gaining sensual invigoration from such weather. On the contrary, another participant suggested that strong winds drowned out auditory cues that people who have sight impairment use as navigation tools. This led to unnerving feelings of disorientation and proved a challenge to mobility. This demonstrates that weather and in particular the wind are personal for people in how they demonstrate well-being. Another area that is significantly personal for people is how they are physically active.

De Vet (2017) study in Australia found that people often portrayed a willingness to be weather connected in their day to day lives. Participants in the study stayed weather connected despite access to air-conditioning and experiencing frequent, less than comfortable, or impractical weather conditions (such as the heat from the sun). People within the study demonstrated a willingness to stay weather connected through behaviours. For instance, moving exercise times to predawn or post-dusk when there was less presence of light and movement was not supplemented by an onslaught of biting insects. It was established that staying tolerant to the weather in such challenging conditions was essential to have an increased sense of enjoyment of the weather. This also allowed an ability to move easily between spaces without discomfort, whilst also having less of a reliance on expensive financial and environmental costs associated with air conditioners. Therefore, tolerance to the weather was integral to how people continued to be physically active.

Walking and the Weather

One way that feelings of the weather and physical activity combine are through walking outdoors. Rooney, (2018) explains that walking is a form of mobility in which people open themselves up to the elements, often making them become more aware of their weathering and weathered bodies. In this way, it is important to note that the feelings towards the weather are bi-directional, so not only can the weather shape experiences of walking, but equally, walking outdoors can influence how people experience and give meaning to weather. However, understanding of this relationship is somewhat limited within research.

There are undoubtedly areas we still do not know about when it comes to older adults and walking that this study endeavours to address. For the most part, studies evaluate walking from a quantitative standpoint (Dunn et al., 2012; Prins and Lenthe, 2015; Clarke et al., 2015), which can suppress social and cultural understandings of the weather (Tadaki et al., 2014). Such

conclusions have only begun to be amended in recent years through a growing interest in weather experiences being met through the use of qualitative research (Allen-Collinson et al., 2019; Bell et al., 2019; Simpson, 2019). However, research in this area is limited and needs expansion. This in mind, De Vet, (2017:1) has suggested that qualitative research has value in being able to “reconnect weather with its diverse local meanings” which is important in the increasingly de-cultured notions of how humans interact with the weather.

Few studies have analysed walking through qualitative research (Moran et al., 2014; Leung et al., 2021), and there have been calls for future qualitative research to investigate “older adults’ perceptions of walking for different purposes” such as recreation (Leung et al., 2021:16). From this, there is a lack of knowledge surrounding older adults and their weather perceptions. Therefore, there may be value in exploring older adults’ weather relations through walking.

Such research would provide an in-depth understanding of the lived experience of older adults walking practices which could be important given the current climate of Covid-19. Although the seasonality of physical activity has been widely researched (Witham et al., 2014) understanding how seasonality affects older adults walking practices is less understood. This is puzzling given that seasonality and the weather are undoubtedly aspects that shape the meaning and experiences of why, how, and where people move in later life and can have an impactful influence on older adults walking ability and perceptions. From this, researchers have suggested a need to consider seasonality when analysing walking with older adults (Kimura et al., 2015). To summarize, there are fundamental gaps within our knowledge for understanding older adults’ perception and experience of walking in winter weather.

Currently we know, people in adverse weather conditions are more likely to choose non-environmentally friendly ways of travel such as driving (Pooley et al., 2011), meaning they are not being physically active or mobile. We also know that the weather can stop people from

being physically active. In recent research of 2000 adults it was found that more than half go out less in winter blaming the cold, wet weather, less daylight, and a lack of motivation (Hughes, 2021) The weather can also affect people mentally, meaning people feel the need to sleep more and activities normal done with ease become a struggle (Met Office, 2022a). On the other hand, adverse weather conditions do not deter all people from being physically active and we are aware that certain “weather-connected” groups within society (e.g., dog walkers, active commuters, farmers) continue to engage in outdoor activities whatever the weather (Pooley et al., 2014). In addition, we know that people alter their behaviours to achieve feelings of comfort when walking in adverse weather such as using hats and umbrellas (Clement, 2020).

Aside from inclement weather being cited as a factor that dissuades older adults from getting outside and getting active (Gallagher et al., 2010; Li et al., 2013), it is noteworthy that we know virtually nothing about *how* the varied and combined elements that comprise winter weather (precipitation, ice, wind, sunlight, snow, temperature, fog) shape older adults’ perceptions and experience of particular outdoor spaces. Developing this knowledge is important because it may then allow us to promote winter physical activity realistically.

Against this backdrop, the overarching intention of this project is to understand how the varied and combined elements that comprise winter weather (precipitation, ice, wind, sunlight, snow, temperature, fog) shape older adults’ perceptions and experiences of walking in disadvantaged areas in County Durham. This project will also consider, how walking can shape older adults’ perceptions and experiences of weather. I am aware that weather shapes experiences of physical activity, but equally, being physically active outdoors can influence how people experience and give meaning to weather. I anticipate that this study will provide us with greater clarity on the complex relationship between older adults walking practices in winter weather.

Knowing Weather

Weather is often understood as the state of the atmosphere at a particular time or area (Cambridge English Dictionary, 2022), that said, this definition alone is inept at defining the true magnitude of the weather and its influence. Ingold, (2005, 2007) argues that weather, place, and being are indivisible, although we might not always notice this entanglement, he suggests that weather is an unavoidable means of our presence in the world. Ingold's work suggests all actions are weather-related and often bi-directional, for example, see Ingold's (2011:115) thoughts on air:

“To feel air and walk on the ground is not to make external, tactile contact with our surroundings but to mingle with them. In this mingling, as we live and breathe, the wind, light, and moisture of the sky bind with the substances of the earth in the continual forging of a way through the tangle of lifelines that compromise the land.”

Here, Ingold (2010) explains how people are continually moving from and in weather-worlds, yet often air we breathe that is essential for survival can become a “figment of imagination” (2011:138) and not observed. In this way, Hulme, (2017:3) describes the relationship between weather and people suggesting that people are always in “Flux” with the weather, and therefore, affects how humans are intertwined with the world (Edensor et al., 2020).

Weather can be considered as a cultural phenomenon. For example, the weather is often used to perform social functions via “polite chit-chat” whereby strangers might connect through a shared experience (“Lovely weather today!”). This is more prevalent in some countries and cultures as research has suggested that “94% of British people admit to having discussed the weather in the past six hours, whilst 38% say they have in the past sixty minutes” (Maloney, 2017: ix). This suggests the British public are obsessed with talking about the weather. Rationales for such “obsessions” and weather talk are suggested to occur because Britain's weather is so variable and unpredictable throughout the year and there is little presence of

distinctive seasons with often “intermingling of both weather and seasons” (Allen-Collinson et al., 2019:782). Such unique weather is proposed to occur because of Britain’s unique geography. For example, Britain is an Island on the edge of a continent and the weather is influenced by the Gulf stream providing more milder conditions than most locations on the same latitude (Harley, 2003). In contrast, Fox, (2014) explains that conversations about the weather are not actually about the weather at all. Fox suggests that English weather talk is essentially a form of code that has evolved in order to help the English population to talk to each other and socially bond. In this way, Fox, (2014) suggests that weather talk is often a series of conversation starters or as a filler subject and social prop, with often most conversations solely requiring mutual agreement about the weather. Nevertheless, Horn (2007:9) suggests that the weather creates a sense of communality, whereby strangers can talk to one another through a shared experience that everyone has in common. Horn explains “everyone has a story about the weather” and suggests “some say talking about the weather is talking about oneself.”

The fascination of the weather and the world is then comprehensible. Consequently, it is perhaps unsurprising that the popular weather forecasting company AccuWeather receives over 45 billion data requests each day (AccuWeather, 2022). Such high numbers are due to technological advances and being able to access weather data at ease through smartphones and other devices around the world. Therefore, weather forecasting has become a valuable commodity, and weather forecasting agencies such as the Met Office (National meteorological service in the UK) which provide benefits valued at 1.5 billion per annum and are only expected to grow in coming years (Met office, 2015). Weather forecasting provides benefits to multiple sectors (Aviation, Civil contingency, Land transport, Flood and Storm damage avoidance etc.). However, the most common benefit is to the public who will often “check” on the weather in the morning and shortly after planning their day in accordance with what they see, such as what

clothing to wear or when to walk their dogs. Yet, when people engage with weather data they encounter a list of numbers, and this leads to people often “reading” the weather rather than understanding the weather. This is perhaps better explained by Hulme (2008:7) who describes:

“a rainstorm which offers an African farmer the visceral experience of wind, dust, thunder, lightning, rain—and all the ensuing social, cultural, and economic signifiers of these phenomena—is reduced to a number, say 17.8 mm. This number is propagated into globalised and universalising machinery of meteorological data where it loses its identity.”

The weather can become decultured and people become increasingly disconnected from the weather. For example, increased office-based work rather than work on the land and use of heating and air conditioning all year round tend to remove people from having to consider the weather in their everyday lives. This has led to calls from some researchers to preserve the value of traditional knowledge surrounding the weather. Traditional knowledge of the weather may well involve understanding indigenous people and their collective knowledge of the places in appreciation of their abilities as observers and interpreters of fluctuations in the environment. Traditional weather knowledge has become increasingly important given such knowledge can build adaptive capability to climate change (Granderson, 2017; Chambers et al., 2017). This is necessary to preserve culture within an everchanging world (Nalau et al., 2017). Thus, traditional weather knowledge has a role within developing countries where technological advances are not so apparent (Siambombe et al., 2018). It has also been suggested that “a community collectively held knowledge offers critical insights that can complement scientific data” (Tanyanyiwa, 2018:1) hereby connecting people to cultural definitions of the weather.

This in mind, the weather also has the power to connect people to place and contribute to a sense of identity often creating a local sense of belonging (in the Northeast of England where

the weather is often cooler than in the south, locals can be referred to as “hardy northerners!”). The weather does so by providing a “shared experience of unique rhythms and patterns of a place” that are sensed locally (Hoskins, 2020:134). In turn, people develop emotional attachments to the weather creating recollections of weather experiences that connect them to places (Adams-Hutcheson, 2020). From this people can acquire identities (Endfield and Osiris, 2011). In this way, people can develop identities locally, Edensor et al., (2020:3) espouse that weather is a “global phenomenon sensed locally” and such weathers differ locally across the world. For example, Chicago in the USA has been dubbed the “windy city” whilst Manchester in England is renowned for being a particularly rainy city. From this, cities and localities can develop reputations for certain weather. That being said, an understanding of how people who reside in such cities and localities and live with such reputations and identities is, to date, unknown.

Weather and Place

Vannini et al., (2012) examined how the weather is interlinked with place and via people’s experiences of “ordinary” weather. It was found people sense the weather multisensorially whilst moving through place. The weather played a central role in the way individuals and collectives define sense of place. This occurs through the process of “dwelling.” Ingold, (2007: S20) suggests that dwelling means to “inhabit the open... within a weather world in which every being is destined to combine wind, rain, sunshine, an earth in continuation of its own experience”. Such definitions explain the connection between people and weather and its importance to daily existence. Vannini et al., (2012:363) repositions this definition slightly by suggesting that dwelling is “an analogy for “weathering” recognising the bodily embeddedness of human experience in place”. This details how place is innate to dwelling with dwelling being a placemaking process in and with the weather.

This in mind, there are suggestions that weather has a considerable historical significance and can create national identities showing the weather's ability at connecting large groups of people. For example, Edensor, (2020) claims that representations of “light” in Australia are part of a national identity. Edensor’s (2020) work analysed Australian painters and poets and found that artists portrayed bright specifics of landscapes in Australia as part of developing a national identity that distanced itself from British influence that was prevalent in earlier phases of settler-colonialism. It has also been suggested that historical views of the weather can position the weather not only as a naturally occurring event but also contribute to social and cultural aspects within society (Sherrat et al., 2005). In this way, weather, and the cultural history of certain aspects of weather such as rain can contribute to pop culture references and ancient rituals that form history (Barnett, 2016). Often the weather can create local history itself and is often celebrated and remembered. This can be seen through historic weather events still being discussed decades later such as the Great London Smog of December 1952 (Eden, 1995). Overall, it is simple to draw the conclusion that culture, history, and the weather are affiliated with one another. This is supported by Hulme (2017: 27) who asserts that all such weather knowledge and practice “cannot exist separately from the cultures in which it is made or through which it is expressed”. Although, understanding how history, culture, and the weather influences older adults being physically active is mostly undiscovered.

“Good” Weather and “Bad” Weather

“Bad” or “adverse” weather often adheres to emotions of discontent and unease in the direction of the weather. For example, public health research such as Wagner et al., (2019) study demonstrated that “adverse” weather conditions such as rain led to people being more likely to delay their physical activity practices when compared to “non-adverse” weather conditions. Additionally, Connolly, (2013) found that life satisfaction decreases with the amount of rain on the day of interviews. The rain itself has been demonstrated as having significantly negative

connotations (Gössling et al., 2016), where it is noted people have real and anticipated uncomfortable experiences with the rain, such as dampening clothes (Nascimento, 2019; Qu et al., 2021). Such experiences are not conducive to everyone and many people, are lovers of rain (see, Thoudam, 2021). Another adverse weather condition is the prevalence of winds. High winds (15 knots and above) have been noted to be significantly negative, decrease happiness (Krekel and Mackerron, 2020), and can cause distress (Van Tilburg et al., 2018).

For the most part “good weather” adheres to emotions of comfort and happiness towards the weather, and the weather has been suggested to be an important determinant of quality of life (Oswald and Wu, 2010). This has been documented in the literature such as Kämpfer and Mutz, (2013) found that respondents surveyed on days with exceptionally sunny weather reported higher levels of life satisfaction. In their study there was an increase in serotonin in the brain compared with respondents interviewed on days with “ordinary” weather. Furthermore, studies have demonstrated how good weather and happiness can be related to temperature with happiness being maximised at a modest 13.9°C (Tsutsui, 2013).

Temperature itself is often difficult to place when understanding people’s perceptions to it. Kööts et al. (2011) explain how warmer temperatures increase both positive and negative emotions. It could be suggested that the saying commonly used in English culture “hot and bothered” holds weight within the literature. Nokelke et al., (2016) explain how high temperatures (above 21°C) reduce positive emotions for older adults such as happiness, and increase negative emotions such as stress and anger, whilst increasing fatigue. High temperatures are accompanied by a wealth of potential detriments to human health and well-being (Wang et al., 2020). Such high temperatures and further erratic variations of weather are only expected to increase due to climate change (Clayton, 2020; Ebi et al., 2021).

Reactions and feelings towards weather and temperature are underpinned by an understanding that temperature is significantly affected by climate change. Neimans and Walker, (2014:562) expand on this detailing how we “reduce the distance between the enormity of climate change and the immediacy of our own flesh”, explaining how we are integral to understanding how climate change is affecting our interactions within weather worlds. Humans are makers, transfer points and sensors of climate change (Neimans and Walker 2014: 559). Henceforth, understanding the weather and how people sense certain elements can open “new pedagogical possibilities for developing response to the climatic challenges ahead” (Rooney, 2018: 2).

Weather, mood, and behaviour are thought to be influenced by the seasons. This can be demonstrated through a prevalence of seasonal affective disorder sometimes termed “winter depression,” which is a type of depression that comes and goes in a seasonal pattern (National Health Service, 2022). Some studies that have endeavoured to understand the relationship between seasonality and mood have suggested that increased mental distress was found in periods of reduced sun time hours (Beecher et al., 2016). This often occurs during seasons with shorter hours of sunlight. Other studies have found that season and weather influence behaviours such as travel-related mood and satisfaction (Ettema et al., 2017). However, correlations between seasonality and mood are not homogenous and other studies found no connection between mood and seasonality (Winthorst et al., 2020).

It would seem, how weather and seasonality are sensed and experienced differs between people and place (Klimstra et al., 2011; Lucas and Lawless, 2013). For example, if a person lives in an area that experiences droughts they will long for rain. Such weather perceptions are also suggested to be linked to physical activity (Miranda-Moreno and Nosal, 2011) and how people can mobilise themselves in and through the weather.

Chapter Three: Methodology

Methodological Perspectives

Within any study, it is important to explain the ontological and epistemological assumptions that underpin the study. Research that explores the way in which people sense and experience the weather including being mobile within weather is “bestowed within cultural, social, and political resonance by its incorporation into national, regional, and local special entities” (Edensor et al., 2020:18). Such aspects are integral towards how we interpret our everyday weather involvements. Henceforth, there is a requirement to openly reflect on the ontological and epistemological viewpoints and the way in which these may inform the development of suitable research paradigms (Bracken, 2010). Ontological and epistemological beliefs played a role throughout the whole study including a commitment to qualitative methodology. Indeed, Smith and McGannon (2018) suggest that all research methods are informed either knowingly or unknowingly by these concepts.

Ontology

Ontology is concerned with the question “what is the form and nature of reality, and, therefore what is there that can be known about it?” (Smith and Sparkes, 2016: 2). In the case of this study, research was dedicated to understanding how winter weather can shape older adults’ perceptions and experiences of walking and vice versa. Throughout this study, a *relativist* ontology was taken. Smith and Sparkes, (2014) explain that this approach presumes that social reality is humanly constructed and shaped in ways that make it fluid and multifaceted. Thus, “reality is multiple, created, and mind-dependent” (Burke, 2016:334). The presence of a “mind-dependent” relationship with the nature of social reality suggests a subjective experience (Denzin and Lincoln, 2005). For example, humans attach significance to objects, interpret movement and spoken word, and attach meaning and motivation uniquely (Sparkes and Smith, 2013).

From this, multiple interpretations of experience are present alongside multiple realities – “there are as many different realities as people” (Levers, 2013:2). It is important to note that within this approach there is an acceptance of a physical world (Smith and Hodgkinson, 2009). However, it is argued that the interpretations and descriptions of physical beings that make up the physical world are not independent of our interests and purposes (Smith and McGannon, 2018). This study takes a relativist ontological stance, given that opinions people hold about the weather and walking are not objective. Rather they are subjective, and people have inherently different experiences of walking and weather as demonstrated in the literature review.

Epistemology

Ontology and epistemology are very much associated, and they must be aligned and have a logical relationship between them to effectively guide research (Smith and Sparkes, 2020). Epistemology is concerned with the questions “How do I know that reality?” and “What is the relationship between the researcher and research participants?” (Smith and Sparkes, 2020: 1002). When explaining epistemological perspectives there is a requirement to question the researcher’s role and their views of reality (Denzin and Lincoln, 2005). This is underpinned by an understanding that researchers are influenced by a host of factors including, “training, experience, and immediate surroundings” (Gill, 2011: 309).

This in mind, this study was informed by a *constructionist* epistemology. Such an approach endorses beliefs that there can be no separation of the researcher and the participant. This is because people’s experiences and principles will always negotiate and influence what is feasible to understand and how that understanding is attained (Smith and Sparkes, 2014, 2020). Thus, the researcher is not an isolated individual who is absent from the social world. Rather, as Denzin, (2017:12) explains, the researcher “is historically and locally situated within the

very process being studied”, where there is “no possibility of theory or value-free knowledge”. The purpose of the researcher is to understand and interpret the world from the participants' point of view (Sparkes and Smith, 2014: 13). This facilitates the researcher becoming a “co-constructer of knowledge” by working with participants to unearth truth (Smith and Sparkes, 2020).

Ethical Considerations

Ethical approval for this project was secured from the Department of Sport & Exercise Sciences Research Ethics Committee on the 2nd of November 2021. Ethical approval was gained prior to any data collection processes beginning (Reference: SPORT-2021-11-01T14_18_28-clxb15). In any research project, ethical procedures must be handled with due diligence to protect the participants within the study and the researcher.

Potential participants were informed of what was being asked of them verbally and also through an information sheet (See, appendix 1). It was imperative that any information that was dispersed was presented in an accessible way. This was perhaps more significant because of the partnership working between County Durham Sport and Durham University. County Durham Sport wanted to ensure that the potential participants would be able to fully understand what the project entailed. Therefore, the information in the participant packs was engaging and absent of academic jargon.

Participants were given assurances about how their data was handled and kept secure. This was done verbally as well as through a written privacy notice. These steps were taken to provide clarity about the project and ensure the participants understood the project prior to deciding whether to participate. Participants were given an opportunity to ask me questions about their involvement. After these steps, if participants were still interested in taking part in the project, they were given a consent form to sign. Additionally, participants were made aware that they

can withdraw from the study at any time without offering a reason. All participants were offered clarification on any aspects they were uncertain about before the commencement of any data collection.

Confidentiality of the Participants

Confidentiality of the participants was kept by ensuring data was anonymised by using pseudonyms at the point of entry and prior to analysis with participants being assigned fictitious names. Furthermore, any information from participants' answers that could have identified them (e.g., specific names of organisations that they work for, names) was removed. No data that identified a participant was used in any form of written work including an academic thesis or report. Although some data was linked to some demographic categories (e.g., ages 65+) this was done in a way that does not reveal participants' identities. I kept a list of all participants assigned fictitious names. This was kept allowing me to obtain clarification on areas that could be missed in interviews. Similarly, if participants decided they wanted to withdraw from the study the list allowed me to identify participants' data and remove it. This list (often called a 'participant key') was stored on a password-protected computer in a separate storage place (or 'folder') to other personal data of the participants such as interview transcripts, consent forms, and maps.

If participants decided to participate in a mobile interview, confidentiality was ensured by recording the route part way through. That way, the final map that was produced did not include start and finish locations (which might include participants' home). Any photographs that were taken of the route only included people if they could not be identified (e.g., the back of a person far in the distance, some feet walking through a puddle).

If participants decided to take part in a creative group workshop, it was not possible to conceal their identity from other participants involved in the workshop. The research team spent time

at the beginning of the workshop explaining the ground rules of the group. This included not sharing information about fellow participants outside of the workshop. The research team took notes of what types of things were discussed during the workshop. These notes did not contain details that would compromise participants' identities.

Recruitment

County Durham Sport supported the recruitment of participants via their connections to older adults who attended community centres and walking groups in East Durham. The initial inclusionary criteria were that participants had to be 65 or over, have experienced winter weather in East Durham, walk outdoors (any distance, purpose, frequency, and people who use mobility aids are eligible), and be English-speaking. This was so I could understand the role the weather had for older adults' winter walking practices in East Durham.

Recruitment started initially by talking to walk leaders and community centre managers in East Durham about the project. Once they understood the project, they invited me to attend the community centres and gauge interest from older adults in their facilities. Following this, walks (of their choosing) were set up with individuals who signed up and I met at a neutral ground which was typically community centres. After this, participants then referred other participants that they thought would be happy to be involved in the research, following the process of snowball sampling (Parker et al., 2019). Furthermore, I joined some participants on walks within a walking group. In this instance, the participant would either walk at the back or front of the group with me. This was useful as it allowed people to feel safe within the interview process as they were in a group. Another benefit of this was that other participants in the group, saw the interview process and volunteered to be interviewed. This provided a steady stream of participants that met the criteria for the study.

Within the study, the majority of people who engaged with the project were made up of older adults who attended walking groups. This was despite stating within the participants' packs that I was interested in all levels of walkers and the offering of traditional semi-structured interviews to discuss walking in East Durham. One reason for this may have been due to misconceptions that participants had around the project. As the project was about winter walking many participants may have speculated that they would have to engage in walking in winter and decided against it. Nevertheless, the creative workshops were a place in which I felt could amend this. The session was advertised via word of mouth and participants spread the timings of the session through various group chats.

It is important to note that participants were able to take part in a semi-structured interview, a mobile interview, a creative workshop, or a combination of all three. How much a participant wanted to participate in the project was entirely their choice. This variety and flexibility recognised that people feel comfortable expressing their experiences in diverse ways.

Participants in all Interviews

Within this study, sixteen participants were interviewed. Of those sixteen, thirteen of them were “older adults” categorised as being 65 or over. Older adults were categorised as being 65 or over as this is what is most commonly used in the UK such as by the NHS and Age UK. However, due to the nature of recruitment in the study and gaining participants through word of mouth I gained interest from one slightly younger participant, aged 62. The overall age ranges for the project were 62- 90, with the mean age for the participants being 74.4. The other three participants were walk leaders who invariably lead walks around County Durham. There were also some older adults who had received walk leader training. Overall, the total of people who had received walk leader training among the participants was seven. The reason for including walk leaders within this study was to understand walkers’ needs (See, Kassavou et

al., 2015). Of the sixteen interviews, eleven were mobile interviews, one was a mixture of both walking and traditional semi-structured interviews and four were solely traditional semi-structured interviews

Table 3: Participant Summary of all Interviews

Interviews	
Characteristic	All participants
Total	16
Older adults (mean age = 74yrs)	13 (12 female, 4 male)
Walk leaders	3
Received walk leader training	7
Mobile interviews	11
Traditional Semi-structured interviews	4
Mobile and Traditional Semi-structured interview	1

Participants in The Creative Workshop

The creative workshops involved nine participants with two having completed a traditional semi-structured interview, one having completed a mobile interview, and another having completed a mixture of both. The other five participants were new to the study, did not regularly attend walking groups, and were seen as more “casual” walkers. This session had a range of people, that walked on their own or with others in groups.

Table 4: Participant Summary of The Creative workshop

Creative workshop	
Characteristics	All participants
Total	9 (6 female, 3 male)
Involved in interviewing	5
New participants to the study	4

Qualitative Methods

Considering the ontological and epistemological approach, qualitative research methods were chosen as the most appropriate approach to data collection to understand the role weather has for older adult's winter walking practices. In recent years qualitative methodology has made significant strides in the field of sport and exercise sciences, with suggestions that it is now the preferred form of methodology within the field (Evans et al., 2021). Qualitative methodology was deemed a valuable method for this project due to its proposed characteristics of understanding meaning and experience (Smith and Sparkes, 2020). As demonstrated in the literature review experiencing both the weather and physical activity are embodied practices (Phoenix and Orr, 2014; Simpson, 2019; Rooney, 2018). Therefore, it was hypothesised that qualitative methodology would facilitate for an insightful and original contribution to understanding the meanings and experiences older adults bring or do not bring to walking in winter (Anderson and Jones, 2009).

In order to contribute insightful and original understandings, data collection was separated into two phases. Phase one involved focusing on older adults' experiences of walking in winter by collecting data through mobile semi-structured or traditional semi-structured interview. Phase two involved undertaking creative workshops that allowed participants to build upon findings

within the interviews and talk about their walking routes. When mobile interviews were undertaken the route walked was recorded and on the day of any interview the weather was recorded through a brief description by the researcher.

Both phases one and two were included in the the study given increased recognition around using new creative and innovative methodologies to generate insight into the intricacies of weather-ways (Bell et al., 2015; De Vet, 2013, 2017). Specifically, De Vet, (2013) espouses the difficulty of getting participants to express the complexity of everyday weather experiences and practices. Suggesting that “High-profile weather events such as droughts, floods, cyclones, bushfires” and other weather events typically come alongside an emotional attachment and stay in the memory of participants. However, capturing memories of everyday mundane weather is harder to collect. Within this project, the aim was to capture the role of winter weather which most would associate with not being mundane and having elements such as snow that often create an emotional response (Middleton et al., 2020). Though, I wanted to understand winter weather and how it affects walking. Therefore, I wanted to pay attention to elements that may be more “mundane” and aim to capture winter weather in its entirety. That being said, it is recognised that the high prevalence of wind and the red weather warnings issued through the winter of 2022 may have contributed to a “high profile weather event” that could have led to more emotional accounts shared within the study.

The two phases of data collection will now be separated into different sections and explained thoroughly.

Interviews

Phase one of data collection involved undertaking semi-structured interviews with older adults. It is important to note that this research responded to calls by Vannini and Vannini, (2020:23) of carrying out research *in* weather as opposed to research *on* weather. The latter, treats the

weather as a unit of analysis and research *in* weather “reflexively examines the processes and outcomes of a research project as an experience and practice immersed in a specific weather world,” which will be important for unravelling the complex intertwinement of winter weather with older adult’s walking practices.

To Vannini and Vannini, (2020), the weather influenced the design, planning, and execution of this project. For example, during the execution of the project, the weather and place at times were challenging. For instance, visiting rather remote locations that were often situated near the sea, at times, caused a loss of signal when recording routes walked. Furthermore, the wind provided occasions of difficulty rendering some parts of audio recordings inaudible. Likewise, before the beginning of this study, it was anticipated that there would be certain weather in winter that older adults simply would not want to or feel safe to walk in. This was ultimately down to personal preference but there were occasions that walks had to be altered given safety concerns. For example, in the winter of 2022 there was a high prevalence of storms; Arwen, Barra, Malik, Corrie, Dudley, and Eunice (Met office, 2022b) which at times led to walks being cancelled. These storms were felt at various ferocities with a rare red weather warning issued for storm Arwen and two red weather warnings issued for storm Eunice which was the most severe and damaging storm to affect England and Wales since February 2014 (Met Office, 2022c).

Red weather warnings are rare by nature and the last time one was issued before this winter was in 2018 in late February and March (Morton and Lee, 2022). All these storms respectively ran through the months of November to February which coincided with the months data was collected. In accordance with this, I had to be flexible in how I conducted the interviewing. Similarly, within the study, there was a range of walkers whom all had various levels of ability. From this, I was aware that walks would vary in length. This provided an opportunity for flexibility in how the methodology was conducted. All the aforementioned were areas I

anticipated. This provided an opportunity to be flexible with the methodology. Thus, I carried out both mobile and traditional semi-structured interviews with participants and on occasion a mixture of both.

Interview Guides

Participants chose which type of interview they wanted to participate in, however, all interviews were individual, semi-structured with an open-ended interview guide being used (See, appendix 2, 3, 4). All questions were designed to understand different aspects of the role winter weather had on peoples walking practices and how these experiences and perceptions were connected to place. Semi-structured interviews involve asking a series of focused but broad enough questions to allow participants to contribute, drawing upon their own tailored experiences (Smith and Sparkes, 2016). This was a strength of this method as they give the interviewee an onus of control whereby, they can speak about what is innately important to them (Brinkmann, 2013). Given the constructionist epistemology that underpins this study, this method acknowledges the researcher's role in the knowledge-producing process, where "lines of enquiry can be perused to follow up on interesting and unexpected avenues that occur" (Blandford, 2013). Although it is useful to state the distinction between what type of interviewing has been used within a study. Brinkmann, (2013:18) reminds us that this distinction should be thought of as "a continuum ranging from relatively structured to relatively unstructured formats". Therefore, no interview can be entirely unstructured, and no interview can be completely structured (Parker, 2004).

In total, three interview guides were created, mobile, traditional semi-structured interviews, and a walk-leaders interview guide. The walk-leaders interview guide was used with those who held or previously held walk-leader training. All the interview guides were constructed well in advance of the interviews and followed the process of first considering "topics" that would be

discussed within interviews (Arthur and Nazroo, 2003). These topics included, ice breakers, lifestyle and identity, route-specific, weather, movement, and motivations. The use of topics allowed questions to be grouped together to aid participants in their answers.

Again, the constructivist epistemology was prevalent here and it was important to build relationships and rapport with participants through stages such as the “ice breaker” stage and building the core questions into the middle section of the interview guide (Legard et al., 2003). Furthermore, in aid of rapport building I utilised some techniques suggested by Sparkes and Smith, (2016). For example, ensuring that questions (where possible) addressed one point and questions were free from academic jargon. This prevented any confusion among participants and gave them the ability to express their views and experiences with greater ease.

All interview guides also utilised open-ended questions. Close-ended questions often elicit short answers from participants that lack depth. An example of a close-ended question perhaps would be “Do you like this route?” this often only gives participants scope to answer either “yes” or “No.” Therefore, open-ended questions were preferred as they are designed to encourage detailed answers from participants. For example, “What does this route mean to you” or “How do you typically feel when walking this route” (Smith and Sparkes, 2016). The latter question was a typical question used during mobile interviewing.

Mobile Interviewing

Mobile methodologies are typically wide-ranging and diverse in nature with all such variations having their own strengths and limitations (Carpiano, 2009; Finley and Bowman, 2017). What most mobile methodologies share is that they all aim to do “data gathering techniques” such as interviewing whilst on the move (Foley, 2020). Mobile interviewing also known as walk-along or go-along interviewing, involves the researcher interviewing participants as they move through contextually meaningful space. Such space is often chosen by the participant or

researcher (Smith and Sparkes, 2016). In the instance of this project, I asked to join participants on a walk of their choice where variants such as distance, duration, terrain, time, and day were all in the hands of the participant. All these variables were agreed upon by the participant and researcher one day prior to meeting. With hindsight participants allowing the researcher to join them on a walk of their choice was a true strength of the method as it negated any ethical concerns, such as making the participants walk too far. Secondly, it allowed me to get to know in-depth details about places and spaces that were otherwise unfamiliar. Participants allowing me into their contextually meaningful spaces led to them explaining in-depth accounts of how they walk within these spaces, what such spaces mean to them, and how these areas were influenced by winter weather.

Mobile interviewing had strong suitability for this project. Mobile interviews were used due to their notorious strength of allowing participants to feel comfortable (Foley et al., 2020; Bell et al., 2019). Mobile methodologies had value for encouraging focus on “how interactions between human and nonhuman actors’ matter in the moment” (Coen et al., 2018: 558) such as the weather. Furthermore, as the researcher and participant move together through meaningful space the researcher has access to knowledge-constructing tools of questioning but also observation. Through observation and questioning the researcher gains insight into lived experiences as they “witness an array of embodied and emotional practices as they are experienced and performed by those involved” (Anderson and Jones, 2009: 299). In turn, this helped to “examine the participants’ practices and interpretations within a place of interest” (Smith and Sparkes, 2016: 106).

The tools of observation were useful on walks as any areas that participants reacted to were able to be explored further through additional questions. In addition, certain aspects of the environment could be used as probes and pointed at allowing participants to contribute their

thoughts on such features (Kusenbach, 2003). Similarly, the participants reacted to whatever the weather was on the day and the effect that had on the route walked.

The value of mobile interviewing and specifically how observation can be effectively used are demonstrated by Bell et al., (2015). For example, one participant prior to a mobile interview suggested that they enjoyed the lack of presence of other people when walking. Yet during mobile interviewing, they engaged happily within multiple sets of conversations with other walkers. When questioned on this, the participant explained how they did not enjoy certain types of conversation surrounding topics such as “work” as this reminded them about the “real world.” However, the participant was happy and willing to engage in “silly” and light-hearted conversation surrounding topics such as the weather (Bell et al., 2015: 93). This opportunity to probe further based on this observation facilitated an enhanced richness to the data helping to understand valuable insights into social contexts of participants well-being and their connection to place and weather talk.

Mobile methodology also allowed County Durham Sport to achieve their research aims, which included mobilising local people as data collectors. Additionally, exploring an “active scientist” approach whereby local people engage in research whilst also being active. Henceforth, mobile interviewing allows these research aims to be met as it involves people talking about their experiences within place whilst being physically active, combining both physiological and psychological responses (Spinney, 2015).

Critically a typical issue with mobile methods can be surrounding safety. There are often questions raised over whether this method is inclusive for all. Mobile interviewing can be known as “walking interviews” which often assume that people are able-bodied and can walk or move confidently through space (Harris, 2016; Curl et al., 2018). Within this study, I do not adhere to this assumption and offered alternatives such as traditional semi-structured

interviews. I used the terminology “walking interviews” when communicating with participants as I did not want to cause confusion that the methodology involved telephone interviews. Nevertheless, our inclusion criteria for participants included the use or not of any mobility aids, and participants were given the choice of how long walks were. This involved what Foley et al., (2020:516) label a “supporting ethic of care”. This involves open dialogue between researcher and participant to “ensure participants did not feel obligated to push themselves too far for the sake of the research” respecting the boundaries of their physical health, fitness, and comfortability. This involved matching the walking pace of participants and observing participants, taking the decision to walk slower or end routes earlier if required. Furthermore, all participant’s understood that walks could be any length and supplemented with traditional semi-structured interviews if needed.

Traditional Semi-structured Interviews

Traditional semi-structured interviews were also offered to participants, this typically involved sitting down and interviewing participants in a location of their choosing, using a semi-structured interview guide. Participants were given the choice of what type of interview they participated in with no one interview type advocated by the researcher over another. As aforementioned, there is a wealth of studies that document the strengths of mobile interviewing for capturing insights into embodied experience and place (Smith and Sparkes, 2016; Hand et al., 2018; Foley et al., 2020; Stevenson and Farrell, 2018). Mobile interviewing is constantly compared to traditional semi-structured interviews interviewing in terms of mobile interview superiority for capturing insights into place and experience. May and Lewis, (2020) contend this by suggesting that the only value that comes from pitting distinct types of interviewing against one another is the potential that traditional semi-structured interviews have for unearthing embodied knowledge is lost.

May and Lewis, (2020) believe that traditional semi-structured interviews also allow people to explain and share their embodied experiences. This is bolstered by an understanding from Mason and Davies, (2009) that people's experiences are sensory and remain so whether a participant is seated or walking. Within a traditional semi-structured interview, the interviewer and interviewee discuss the sensorial qualities of what has been experienced (Pink, 2009; Vianni and Vianni, 2017). May and Lewis, (2020:139) found that traditional semi-structured interviews slowed the pace of interviews, allowing participants time to reflect on their embodied experiences of place. This provided a rationale for using traditional semi-structured interviews within the study to understand the role weather had for people's walking practices combined with how and where they experienced this.

That being said, May and Lewis, (2020:137) acknowledge that walk-along interviewing evokes a "different quality" of discussion about the experience. Whereby participants provide more detailed descriptions of their immediate surroundings and such findings have been seconded by researchers (Hand et al., 2018; Carpiano, 2009; Stevenson and Farrell, 2018). However, they found by using certain topics of conversation lend themselves to participants discussing embodied talk. The topics they used were not applicable to this study, but a similar approach was taken during our traditional semi-structured interviews. Within this project and topics of ice breakers, lifestyle, and identity, route-specific, weather, movement, and motivations were all discussed within traditional semi-structured interviewing.

All traditional semi-structured interviews within the study were conducted at a place the interviewee was comfortable with. For some, this was community centres from which they lived nearby or walked, for others this was their homes. Within this study, it could be proposed that this was a strength of the methodology as it gave the interviewees control over the environments in which the interview was conducted (Smith and Sparkes, 2016). This was attentive to power relations and the decision was taken to give participants the choice of where

they were interviewed. This helped them to feel “empowered in their interaction with the researcher and provide an opportunity to examine participants’ choices for clues of the places where research is being carried out” (Elwood and Martin, 2000: 656). In this way, traditional semi-structured interviews were conducted partly *in situ* (May and Lewis, 2020) where participants would explain detailed accounts of their routes, with regard to the house or community centre and how winter weather would affect such routes.

Additionally, participants being within settings they have chosen for the traditional semi-structured interview provided an environment in which participants could speak freely (Elwood and Martin, 2000). This allowed some strengths of the interviewing process to flourish. Interviews facilitate a source of new knowledge whereby participants can contribute what is personally meaningful to them often contributing avenues of knowing they have not previously considered (Smith and Sparkes, 2016). Furthermore, talk within interviews captures shared cultural understandings and enactments of the social world. Such understanding affects how participants experience. This is underpinned by the understanding that “talk is socially created, and experience and meaning are inherently shaped by our social-cultural landscape” (Smith and Sparkes, 2016:108). Finally, the makeup of traditional semi-structured interviews affords observation as the interview situates the interviewer and interviewee face to face. This allows the interviewer to take advantage of social cues (Opdenakker, 2006). For example, voice, intonation, body language and more can contribute to how an interviewer comes to know the experience and meaning of the interviewee.

Field Notes

All observations made by me were recorded through written field notes (Sparkes and Smith, 2014). These field notes were written down straight after the conclusion of the interviews in my car away from the participants. On occasions, I would stay with participants and have a

drink. In these instances, the field notes were written after this. The field notes were broad in nature and aimed to summaries my initial thoughts and feelings that I took away from the interview or anything significant that stood out that the participant said.

The field notes included a brief and informal description of the weather. This involved taking a temperature measurement from the weather app on iPhone and a brief description of felt weather. (Weather description: 3 Degrees, light wind, temperature low, began raining as I left).

Additionally, within the mobile methodology routes walked with participants were recorded. Routes were recorded by myself, on my phone using the mobile application (app) STRAVA. Strava is an app used for tracking physical exercise which also incorporates social networking features such as sharing routes exercised amongst friends (Strava, 2022). Strava was used for its proposed reliability for recording routes. At the time of writing, it is suggested that over 91.54% of the world's population own a smart and feature phone (Bankmycell, 2022). Additionally, STRAVA currently boasts 76 million users and reportedly adds a million more a month (Curry, 2022). Henceforth smartphones and the apps that accompany them have become commonplace within culture and society and the presence of it within the study would not cause concern for participants. Garcia et al., (2016) and Patel et al., (2013) suggest reliability can sometimes become an issue, especially when recording within remote locations and at times. This was true within this study and at times I was unable to record routes. The routes recorded will not be presented within the thesis and were purely for refence and to support my field notes. This also helped to understand participants' experiences within place and learn about the routes walked by individuals. Once the field notes had been completed following a walk, the Strava route was deleted.

The Creative Workshop

After all the data was collected from the interviews there was a two-month break to allow transcription and the research to identify initial findings before analysis. Then attention turned to the second phase of data collection which was the form of a creative group workshop.

Within the creative workshops, there was the presence of three members of the research team. Lead researcher (myself), supervisor (Cassie), Creative facilitator (Mary). Out of the three members, two (myself and Mary) were respectively stationed in the groups in the role of a “facilitator.” Firstly, participants were split into two groups and encouraged to draw a map(s) either imaginary or similar to a route they have walked around East Durham. Participants were invited to illustrate areas they found difficult to navigate such as areas of steep inclines and declines, fallen trees, bridges, and steps. After this, participants were told to draw any areas that they would typically encounter when walking in East Durham. Participants here contributed with key landmarks on walks such as bridges, tall trees, the coastline, or meaningful rocks. Then people began to add areas such as flora and fauna that they encountered. Within this people began to personalise the maps noting areas they enjoyed or found fascinating such as certain types of trees, birds, or flowers. People even added areas such as their own houses and areas they sit down on their walks. People were then asked to consider how weather interacted with these spaces and which areas of the route were most affected. Typically, people detailed how paths became muddy. Finally, the session concluded by talking to participants about why they walked and writing words around the edges of the maps. People did not explicitly go through these stages and people continued to label the map throughout the entire process demonstrating how participants experienced mapping as an ongoing process (Giesecking, 2013).

At the beginning of the session, people were relatively anxious about drawing. Some participants felt as though they could not draw in a group scenario or that their drawings would not be accurate. This is in accordance with findings from Giesecking (2013). For most this was

only bouts of brief hesitation (Winnicott, 1992). Once a few members began drawing and the role of the facilitator became apparent the same individuals who hesitated, joined in.

Rationale

The use of creative mapping in sport and leisure research allows participants to control variables such as how “leisure spaces are explored and brought to the attention of the programme organisers, and which emotional or psychological strains are elucidated” (Merchant, 2017: 186). Using mapping tools and creative methodologies can in fact stipulate further discussions of places and events from participants (Jones, 2014) such as about their typical routines and walking practices. This is done so through engaging participants in the interpretation of their own practices and the mapping process aids them to provide detailed accounts of their local environments. Which in turn would create a more holistic understanding of place and how it affects how they are active, but also how they feel whilst being active (Merchant, 2017). This specific area was of interest to this study as I wanted to emulate engaging participants in their own walking practices. It was hypothesised that this would allow us to gain detailed accounts of participants’ perceptions of their local environments and how these are influenced by weather which I felt that mapping would provide us with.

Creative mapping can be mental. Giesecking, (2013:712) suggests that “mental mapping is the representation of an individual or group’s cognitive map, hand sketched and/or computer-assisted, in drafting and labelling a map or adding to and labelling an already existing map”. Mental mapping facilitates the way in which people experience space and in turn what these places mean to them. Within everyday life that is not always available through dialect. Powell, (2010:553) suggests that this occurs as mental maps facilitate for “understanding what is important to them, what their social relations are and where they spend their time”. Therefore, mapping as a method allows diverse ways to see and hear experiences. This can facilitate

insight into the participants' lives. Such as, understanding complex relationships between the weather and older adults' walking practices.

Additionally, some participations asked the facilitator to draw areas for them and contributed important drawings in the session.

Such drawing anxiety did cause some group members to suggest that their maps were not accurate. From this, some participants aimed to disengage and get others to disengage with the drawing or attempt to control the drawing. Again, the facilitators' role was essential here by reminding participants that maps did not have to be accurate. Again, it was useful to have the facilitator getting involved within a group helping them construct their visual representations of walking in East Durham. This at times included changes in the way people drew their maps. For example, the facilitator suggested that participants could put stickers on the map of their route and create a key to what the stickers meant.

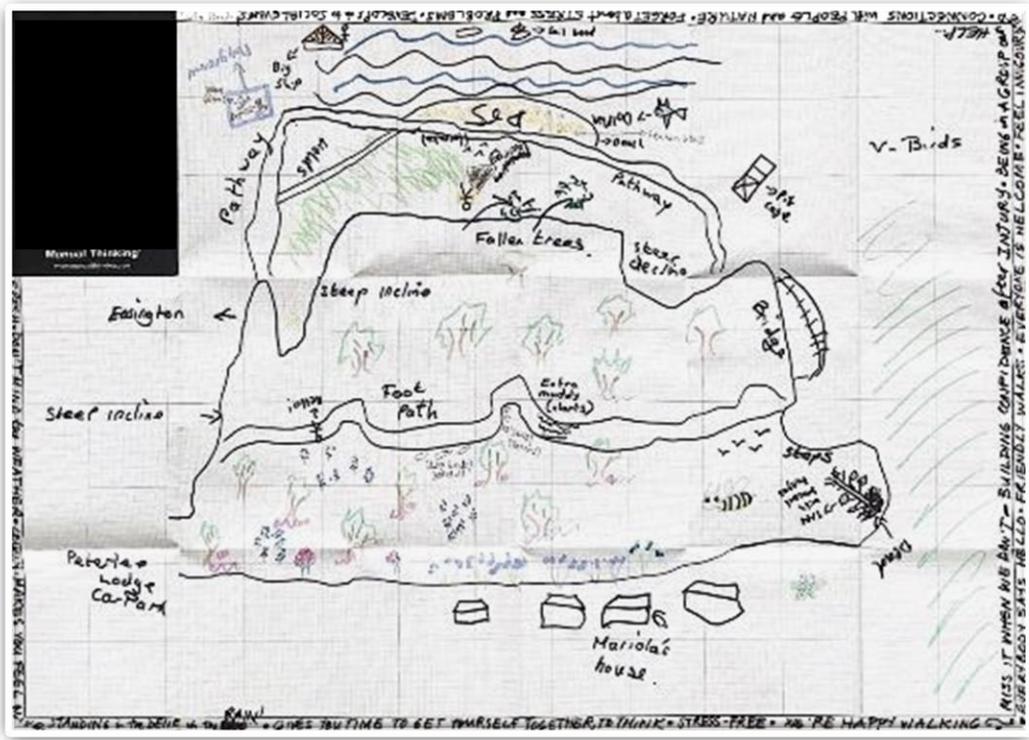


Figure 1: Example Map produced during The Creative Workshop

Table 5: Creative Map Summary of Figure 1.

<p>Drawn images</p>	<p>Large ships, sail Boats, playgrounds, people being social, pit cage, birds, tree with bracket fungus, fallen trees, Bluebell plants, trees, flowers, bees, insects, dolphins, birds, starling birds (flying in formation), themselves in the maps (rock), their own houses, a need for more benches (could be natural), the sea, the beach, bridges, Seaham glass in beach</p>
<p>How the route was described</p>	<p>Steep inclines, car parks, footpaths, extra muddy (clarty) terrain, steep declines, fields, grass, steps</p>
<p>Words around the perimeter of the map (taken from conversations during the mapping process)</p>	<p>“Fresh, don’t mind the weather, lovely, makes you feel alive standing in the Dene with the Rain!, gives you time to get yourself together – to think, stress free, were happy walking, everybody says hello, friendly walkers, everyone is welcome, feel invigorated, miss it when we don’t, building confidence after injury, being in a group can help, connection with people and nature, forget about stress and problems, develops into social events, clarty, friendly.”</p>

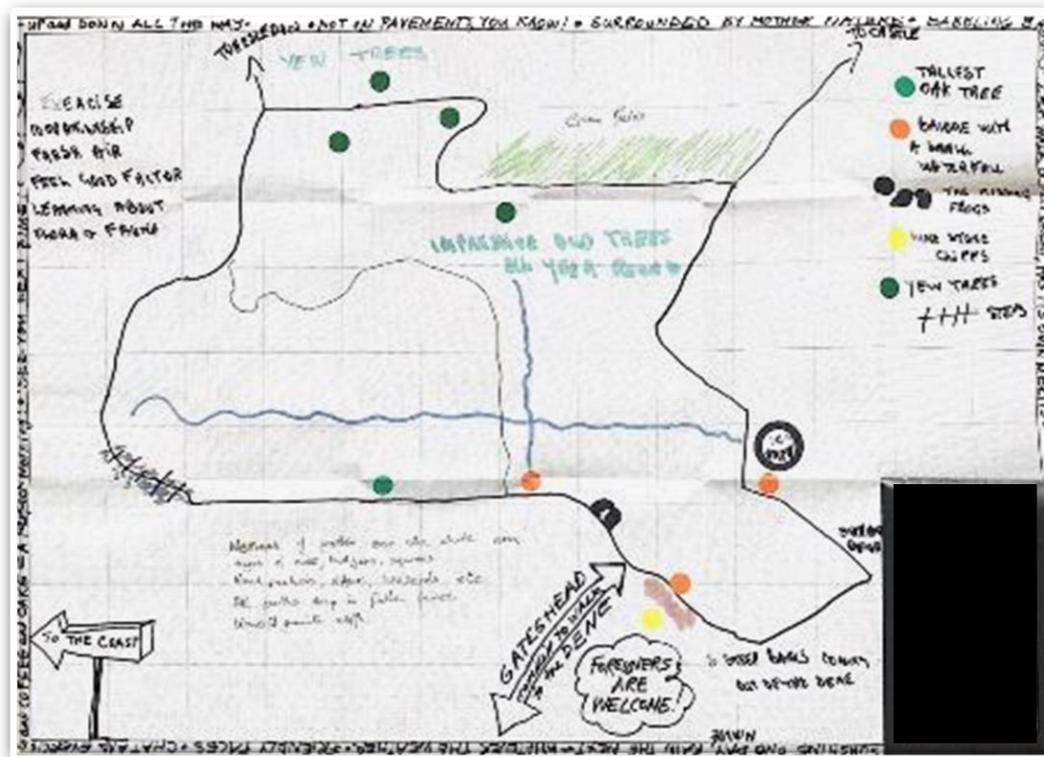


Figure 2: Example of Map produced during The Creative Workshop

Table 6: Creative Map summary of Figure 2.

<p>Drawn images</p>	<p>Tallest Oak tree, sign to the coast, green fields, bridge with a small waterfall, The kissing frogs, limestone cliffs, Yew trees.</p>
<p>How the route was described</p>	<p>Steep banks coming out of the Dene, entrance to the Dene, steps, difficult terrain, impressive trees all year round, key area, network of paths over the whole area, signs of deer, badgers, squirrels, woodpeckers, dipoles, buzzards ect. All paths deep in fallen trees, wonderful giant cliffs.</p>
<p>Words around the perimeter of the map (taken from conversations during the mapping process)</p>	<p>“see you next time!”, chat and exercise and coffee and cake = a perfect morning!, friendly faces, sunshine one day/ minute rain the next – whatever the weather, up and down all the way, not on pavements you know!, surrounded by mother nature, babbling brooks, each walk is different has its own merits, exercise, companionship, fresh air, feel good factor, learning about flora and fauna, foreigners are welcome”</p>

Data Analysis

Interview data was analysed using a process of reflexive thematic analysis (RTA). Braun et al., (2019:848) outline RTA as a method that allows a researcher to “explore and develop an understanding of patterned meaning across the dataset” that are substantiated in the data and in turn address the research question. RTA was well suited to this project because it enables “patterns in peoples (reported) practices or behaviours related to, or their views and perspectives on, a certain issue” to be identified (Braun et al., 2016:193). It also allows the creation of rich descriptive work offering great suitability for those wanting to create research for public consumption (Braun et al., 2016). As prior mentioned, this project is funded by County Durham Sport and the research findings will need to be accessible for the public to understand and comprehend.

Another strength of RTA is that it is not tied to a particular theoretical framework and allows the researcher significant flexibility in how they use the method (Braun et al., 2016). Despite such flexibility, Braun, and Clarke (2017) suggest that reflexive thematic analysis needs to be implemented with theoretical knowingness and transparency. Researchers must be fully aware of theoretical assumptions and philosophical awareness informing the use of thematic analysis. Put simply this means that the researcher must make informed choices about how they engage with the data (Braun and Clarke, 2006) otherwise vastly different forms of RTA can be developed. As ascertained, this study understands that physical activity and weather practices are embodied activities. Such understanding was used throughout the analysis.

Process of Coding and Developing Themes

The process of coding and developing themes were guided by Braun and Clarke (2006, 2013). This included six phases: including familiarisation with the data, generating codes, theme

development, refinement of themes, assigning names of themes, and writing the report. Although the research was guided by such stages this study will not demonstrate the use of all these criteria as it is overly authoritarian and is not in conjunction with the research paradigms that underpin this study (Smith and McGannon, 2018). Importantly, there is significant strength in using the six phases as guidance rather than a list that must be followed and demonstrated. From this, there is an understanding that this approach is not intended to be followed “rigidly” whereby the phases can somewhat “blend” together (Braun and Clarke, 2021: 331). The process of the six phases below will now be outlined below:

Familiarisation With the Data

This process involves deeply immersing oneself in the data to allow the researcher to become intimately familiar with the content (Braun et al., 2016: 196). Within this study, every aspect of the interviewing was done by me (organising interviewing, conducting the face-to-face interviewing, and transcribing them). This meant that I was immersed in the data from the outset and facilitated valuable familiarisation with the data. Although transcription software was used, I had to review and edit each interview to ensure accuracy. This allowed me to immerse myself in the data and was an extremely useful way of getting “intimately” familiar with the process as it “slowed” the interview process down (see Wheeler, 2021).

This allowed me to understand participants’ accounts and even notice things that were not apparent when conducting the interviewing in person. For example, whilst walking with individuals they would refer to some health issues or places that I was not familiar with. However, I could pause interviews and research diseases, or places people discussed and develop a better understanding of them and simultaneously the participant. Additionally, some participants expressed themselves through phrases or humour which again could sometimes be better deciphered through hearing the audio again and checking my understanding. Throughout

this process, informal notes were written. However, after the transcription and editing process, there was a break to conduct other areas of the project. Such as the creative workshops and writing procedures. So, when analysing the data, transcripts were re-read, and more informal notes were written.

Generating Codes

Generating codes, takes the informal approach of familiarising oneself with the data and turns it into a more “systematic and thorough process” (Braun et al., 2016: 196). Coding of the data was done for both mobile and traditional semi-structured interviews simultaneously. The coding process involved questioning and querying. Braun and Clarke (2019) suggested that quality RTA involved reflective and thoughtful engagement with the data and reflexive and thoughtful engagement with the analytic process. In simpler terms, reflecting on and identifying what is assumed, and then interrogating whether such assumptions hold for the project. Given the beliefs of the project that underpinned the study, throughout the analysis I sought to interpret the data and engage with it fully. This included bringing any subjectivity to the research and using it as “a resource” within the analysis (Braun and Clarke, 2021: 330).

The coding process was carried out by reading each transcript line by line and applying codes to anything that was identified as meaningful. For example, how people adjusted to the terrain was simply labelled “adjustment.” The codes were mostly noted at a latent level, although there was the presence of some semantic codes. When first reading transcripts, semantic codes were used yet when further reading these codes were developed into latent codes (Braun et al., 2016: 197). Latent codes involve interpretation and focus on any implicit or underlying meaning behind analysis whereas semantic refers to the more obvious and surface-level meaning (Braun and Clarke, 2021). For example, the aforementioned “adjustment” code was then developed into more about “how” and “why” participants adjusted (using walking poles, changes in

clothing, and editing routes). It is important to note that the choice of using these two orientations is often presented as dichotomous, yet this is a misconception (Robertson et al., 2013). In practice, most thematic analyses include both semantic and latent elements. Nevertheless, there was more of a preference for a latent approach that was taken throughout this project as this is in accordance with the beliefs that underpin this study.

Transcripts were re-read multiple times, especially areas that were sparse with coding to ensure that all areas of meaning that were expressed by participants through the transcripts could be disclosed. Also, as coding and understanding developed, the first transcripts were revisited. This was done because as codes developed alongside understanding, I wanted to ensure the same understanding could be applied to the earlier analysed transcripts. Additionally, within this process, I would revisit my literature review. I found this helpful as it ensured that the understanding, I was obtaining from the themes was able to progress understanding in the field and to draw parallels and similarities, that were apparent in the data.

Theme Development and Refinement of Themes

The process of theme development signifies a move into the core analytical component of the methodology (Braun et al., 2016: 198). This involved clustering the codes collected from the interviews and organising them to reflect any similarities among participants' dialogue. Obviously, all participants in the study contributed to their own unique and tailored experiences (Smith and Sparkes, 2016) but there were commonalities found within their experiences. Codes were clustered around "bigger meaning" which allowed for the identification of larger patterns across the data set (Braun and Clarke, 2006) which in turn formed some provisional themes. For example, there was some overlap between how people talked about the weather in the place they lived in by referring to other locations and how people defended the weather they

experienced. However, these commonalities were clustered around a bigger meaning which was how older adults constructed identity through the winter weather.

When creating provisional themes, the maps produced in the creative workshop were consulted. It is important to note that as the maps were not created individually and were produced by the group collectively, they could not be analysed alongside the interviews. Therefore, the maps were seen as a complimentary methodology within this project whereby the main resource of data collection was the interviewing. Nevertheless, during the construction of provisional themes the maps were consulted. This is because of the reasoning that the maps were co-produced within the workshops by a multitude of participants and therefore what is included in the map is *mostly* agreed on by multiple participants and provides insight into commonalities held among the participants. The analysis itself included a list of drawn items on the maps (Giesecking, 2013) and a list of words that were explained around the boarder of the map. Furthermore, any areas of meaning that were created in the themes and illustrated through the maps will be included in the findings and discussion section, to provide a visual aid to analysis.

The provisional themes were refined by identifying large overarching themes that aided in organising the structure of the analysis. Under this, there were themes that provided detail of meaning related to the overarching theme. Then under that, there was a subset of themes that identified the characteristics of themes (Braun et al., 2016: 198). It was also useful to colour coordinate codes around the “bigger” meaning. This helped to easily see which codes belonged to which “bigger” meaning and helped to decipher the boundaries of themes. This helped the identification and understanding of themes including how they relate to one another. Undoubtedly, this was the most challenging part of the analysis. It was important to make distinctions between each theme whilst ensuring that each theme progressed the understanding and answering of the research question. This was achieved through constantly comparing the

themes to one another and writing summaries of each theme. At this point some themes were collapsed together. I had a theme that surrounded safety and a separate theme around terrain. It became apparent that these two themes related to each other, and people obtained their feelings of safety through adjusting their walking practices to the different terrain that the winter weather offered. So, these two themes became one “Adjusting to winter weather”.

All the themes were then reviewed throughout the process of identification in what was an iterative process. Themes were refined by revisiting the initial codes and comparing them to the whole data set (Braun et al., 2016: 198). This allowed me to ensure that the codes were representative of the data and that the narrative portrayed through the themes could effectively answer the research question (Braun et al., 2016: 198). Ensuring that there was a coherent explanation throughout the analysis that informed the reader about the role winter weather had for older adults walking practices.

Another aspect that undoubtedly helped my understanding of the themes was the fact that the project was underpinned by partnership working between County Durham Sport and Durham University. Throughout the analysis I received constant feedback, from my academic supervisor and insight manager at County Durham Sport. This was done in multiple ways through written communication and through numerous meetings where I would discuss my themes and my understanding of them in depth. It was useful to do this from an academic standpoint as this revealed the real depth and complexity of the themes. But also, it was useful to do this in a non-academic sense so I could understand the potential practical implications that my findings had. Coupled together this enhanced my understanding of the themes.

Assigning Names to Themes

Once the themes had been checked and reviewed thoroughly attention then turned to the definition of themes. This provided a polishing of themes ensuring that they are suitable for a

reader to comprehend. This involved clarifying and refining the scope and focus of each theme and building a narrative that will be presented to the reader (Braun et al. 2016: 199) in the next section. A useful technique that aided this process was writing definitions of themes. These were brief, bullet-point descriptions of themes that captured the central characteristics of the theme alongside its scope and limitations. Having the shortened versions of the themes helped when comparing all the themes together and even naming the themes. Initially the theme “sensing the weather” was titled weather and place. However, whilst reading the definition of the themes I realised that the components of the theme related more to how people sensed the changes in weather through their interactions within a place. This was less about the place but how people interacted with the weather within a place and sensed the differences that winter offers. Which is why the name was changed to “sensing the weather”.

After this, the final themes were named Winter Weather and Mental Health, Adapting to the Winter Weather, Constructing and Reinforcing Place Based Identities, and Sensing the Weather).

Writing Up the Analysis

The writing process is not a separate phase of the analysis. This phase is an extension to assigning names to themes phase and involves further editing of existing analytical writing and ensuring that it can be presented in a compelling and engaging narrative for the reader. Throughout this process, I recruit excerpts from the data to fully tell and explain the role winter weather had for older adults’ winter walking.

Reflexivity

There is an inherent need within qualitative studies to explain reflexivity within research and how it may have affected the research to enhance the rigor and trustworthiness of the work (Teh and Lek, 2018). Indeed, when researchers acknowledge this reflexivity in research it

constitutes part of the research findings (Palaganas et al., 2017). Across the interviews and workshops, there is the presence of sixteen women in this project compared to just five males. This reflects known difficulties that males are harder to recruit into research projects (Bell et al., 2015), and walking groups are more female dominated (Rigby et al., 2020; Morris et al., 2019). However, I am a male. Although insights were shared within the research surrounding elements of gender, this relationship may have influenced how participants shared their responses. Participants possibly would have shared more with someone more sympathetic to their situation (Berger, 2015) i.e., a woman. For example, when discussing topics such as participants' physical responses to the winter. Participants may have felt more comfortable talking to someone about how their body reacts to the weather if it were someone, they felt would have had similar experiences. Although I did obtain some useful responses on these topics, I felt they could have been richer in depth.

Additionally, I am a twenty-one-year-old whose line of inquiry surrounded understanding older adults winter walking practices. Here it was important to not bring any ageist stereotypes to the research that can become engrained within society (Chang et al., 2020). Additionally, here careful consideration was given to how I would refer to participants within the study. I decided to have an absence of any terminology that had negative connotations such as "Elderly." Furthermore, I am a 6ft male and was a stranger to most participants before conducting interviews. Therefore, it was important to be as less intimidating as possible for potential participants. This involved wearing bright colours and being conscious of my facial expressions, ensuring I was often smiling to come across as more approachable (Willis et al., 2011). Additionally, I was clean shaven, given the understanding that facial hair can provide ambiguity and sometimes intimidation (Dixson et al., 2018). Furthermore, I sat with participants after the conclusion of interviews at a café to build rapport with participants and

potential participants. It was hoped that these factors would help participants feel more at ease and comfortable to express their answers in rich detail.

The research site was a relatively deprived area within County Durham. I am a student not from the area and who has not lived in these circumstances. In this way, I could have been considered an outsider to participants which may have affected the way in which data was collected from participants (Dodgson, 2019). Here it is important to understand power relations as it can be hard for researchers to understand groups to which they do not belong (Grove, 2017). This may also have affected what I saw within the interpretation of the research that was collected (Berger, 2015).

Dodgson, (2019) suggests a way of equalising these power relations is by using participatory methods such as mobile interviewing and creative workshops. This is because “all who participate in the research are seen as equal partners in developing, creating, analysing and disseminating research products” (Dodgson, 2019:221). Furthermore, multiple forms of data collection in the forms of interviews and creative interviews, where any research findings could be amended are useful. Due to time constraints on the project, this could not be carried out with all participants within the project.

We chose to not include methods such as member checking into the study as we agree with Smith and McGannon, (2018) that it does not ensure that qualitative research results are valid or trustworthy. This is because it does not correlate with the ontological and epistemological beliefs that underpin the study. Because it is believed that no theory-free knowledge can be achieved. Member checking “is unable to access an independent social reality in order to demonstrate that the results correspond to the reality and the truth has been objectively found” (Smith and McGannon, 2018:117). Instead, I enhanced the credibility of the findings through the combination of interviews and creative workshops. With hindsight and a lengthier period,

it would have been useful to try and get all participants who had previously been involved in an interview to also participate in a creative workshop. However, this could have caused participant fatigue.

Chapter Four: Emplacing Winter Walking: Introducing East Durham as a Research Site

To understand the role of weather for older adults' winter walking practices in County Durham it is important to understand where the research took place. This is underpinned by understandings that not only can weather shape experiences of walking, but equally, walking outdoors can influence how people experience and give meaning to the weather. Henceforth East Durham will now be introduced. Firstly, the research site will be discussed with regards to the levels of deprivation within the area. Secondly, the typical climate and weather experienced during winter 2021-22. Finally, how people personally related to place and how historical significance was important to people.

Research Site

The study site for this project was across East Durham including Peterlee, Seaham, Easington, and Blackhall. These sites were chosen particularly as these are some of the most deprived areas of County Durham (County Durham Sport, 2021b). This understanding came from consulting data from the Indices of Multiple Deprivation (IMD), 2019). The data from IMD is the measure of relative deprivation across a range of factors that could contribute to deprivation (Income, employment, education, health, crime, barriers to housing and services, living environment) (Ministry of Housing, Communities, and Local Government, 2019). The data ranks small areas (Lower super output areas) from Rank 1 – most deprived to Rank 10 – least deprived. Respectively, Easington Colliery (Rank 1), Seaham: (Rank 2) Peterlee (Rank 1), and Blackhall (Rank 1) all were ranked in either 1 or 2.

Within this study, the decision to focus on disadvantaged areas was taken because Sport England's data has shown that activity levels amongst lower socio-economic groups (routine/semi-routine jobs and those who are long-term unemployed or have never worked, NS-SEC 6-8) have decreased by 2.1%. Such groups have experienced higher drops in activity levels when compared to those from higher socio-economic groups (managerial,

administrative, and professional occupations, NS-SEC 1-2) experiencing just a 0.9% drop (Active lives, 2020). Alongside this, there were recent suggestions by Edwards, (2022) that poverty has a significant impact on participation in physical activity within East Durham. Furthermore, Wagner et al., (2019) suggest that “a person’s cultural, situational, and personal factors can moderate an individual's thermal comfort and response to weather” therefore this was an area I was attentive to in our interpretation of the data gathered in this project.

Overall, I knew that generally as people age inactivity increases, that people who live in deprivation are often less active, and the weather in winter can be a barrier to physical activity. This study hoped to understand these barriers in more detail.

Weather in County Durham

Britain has a varying climate, whereby the seasons can intermingle (Allen-Collinson et al., 2019). Thus, it is important to explain the typical climate of County Durham and the weather that was experienced during data collection in winter of 2021-22.

County Durham has a relatively cold climate where summers are short, cool, and partly cloudy and the winters are long, very cold, windy, and mostly cloudy. Over the course of the year, the temperature typically varies from 2°C to 19°C and is rarely below -3°C or above 23°C (Weather Spark, 2021).

The average temperature for the winter (months of December, January, and February) of 2021-22 was 5.7-degrees Celsius. This was a 0.3-degrees Celsius increase in the winter of 2020-21 and a 2.0-degree improvement in 2019-2020. The past two winter seasons were particularly mild, with this winter being 5th equal warmest winter since 1844, with the mean maximum temperature third equal highest of record (9.4 degrees Celsius) (Durham University, 2022).

Introducing East Durham

I now move to introduce East Durham with regards to how people related personally to place and how historical significance was important locally to people. This important context is integral to understand the relationship of people who live in East Durham and how they related to the typography of the landscape. Indeed, the landscape was shaped by the weather and how the weather was experienced affected how people feel about the weather. But also, the landscape was shaped by how people lived within a place. This occurred through important historical context made up by the populations who, lived and worked in East Durham. This affected how they related to place and their weather experiences whilst walking in winter.

The Importance of Culture Whilst Walking

When walking in winter weather with older adults, it became apparent that the places, participants had walked through held significant meaning to them. This was revealed typically within the mobile interviews. When walking through place with participants they described areas as being contextually meaningful (Sparks and Smith, 2016) by referring to topics that were specific to the self. For example, where they live/ used to live and where they engaged in activities with their children, grandchildren, and spouses. This reflected their personal culture. They described how they interacted with place creating remembrances that made the places they walked meaningful to them. Some of the participants had lived in East Durham for the whole or majority of their lives and were able to discuss a lifetime of engagement with areas. As described by John and Carol:

(John) “Yeah, yeah, always been a walker, well when I was younger what, 18, 17, 19, 20 I used to run, I used to run up what they call calender or Wembley I used to come out and run all the way along here up and back.”

(John) “I mean the Dene used to be private land and they used to have a game keeper and we used to go into the Dene and get chased, we used to knock trees down and try

and make a house, you know. So, he used to come and chase us. I mean down here we used to make fires on the beach because you've got coal”

(Carol) “The house I actually lived in, that's a big farmhouse was pulled down the one further down. So, I had an idyllic childhood, really and I was very popular at school because everybody used to come, and my mum used to make gorgeous chips and custard (laughter). They were always well fed, yeah.”

As you can see through these accounts John and Carol spoke about lifetime engagement whilst walking in winter weather. The fact that these memories came to them whilst walking in winter weather was indicative that the areas, they walked created positive emotions for them. Such reasoning is perhaps a rationale for why they decided to walk in such areas. Furthermore, moving through place, with a myriad of weather allowed for the memories to be created in the first instance. However, referring to personal culture was not exclusively for people who had lifetime engagement within place. People who recently moved to areas discussed how they made memories. However, such memories were more recent and people who had a lifetime engagement with place had a bigger reserve of experiences.

Older adults within the study also referred to cultural influences that were important throughout history in East Durham. This typically involved topics such as the railway lines (Kelly, 2015), ships, and the mining culture. This reflected local culture. To understand this fully, it is important to discuss a brief overview of East Durham's history. East Durham had a considerable number of colliery villages that were responsible for mining and shipping coal. The collieries were a significant part of people's culture with some being opened as many years ago as 1725 (Collieries, 2022). At its peak, the mining industry was an employer of a sizeable proportion of people in the Northeast and was one of the most important industries in the UK. However, this industry began to decline due to the emergence of new sources of energy

amongst other reasons (Pettinger, 2016). There were numerous strikes and closures of mining villages that were stained with political influence and caused notable discontent amongst the inhabitants (Pettinger, 2016). To date, thousands still gather every year to honour the county mining culture (BBC, 2022).

Consequently, the older adults who took part in the study were born or moved into a culture that heavily revolved around mining. Many of their families and relatives were involved in mining. One symptom of mining culture was experiencing tragedies associated with the pits such as the explosion in Easington Colliery in May 1951. With this in mind, it was not difficult to locate people who had lost loved ones (Sheldrick, 2018) or indeed had been influenced by mining culture. This culture played a significant role in shaping the identities of the participants in the study. Whilst walking with participants in 2022 there was still a significant prevalence of the mining culture and identity being present. People mentioned how areas used to look historically and there was the prevalence of old pit cages as a sign of remembrance.



Easington Colliery (Credit: Muggleton, 2017)

Referencing such local culture showed how such places were inherently meaningful to people and full of social significance. Therefore, culture and history perhaps were important for people

when choosing where to walk and most definitely affected their engagement on walks. As demonstrated by the following:

(Ellen) "I've never seen as many ships on before! See I get this, you get this view when I walk over my long paper round. You're looking at this all the time when you're walking back home. But then again, you know, sometimes I never see it because you think oh, well. See just out there. That's Horden and then the next little bit will be Peterlee there all the little colliery villages that way. And then this way is, old Hartlepool and Seaham and Redcar so."

(Joan) "So, all of this used to be the colliery site. They landscaped it into a nature reserve. This used to be the pit heap. This is it, during the spring you'll see loads of flowers up here and were getting all the different flowers and orchids and those great big daisies', the big ones, you know."

Additionally, within the creative workshops the maps participants drew had visual representation of ships and the old pit cages, showing the significance of local culture.

Whilst speaking to participants it also became apparent that the area was significantly altered through human interaction. Staying with the mining culture participants espoused how areas were weathered through human interaction:

(John) "Well what it was like an like, steel girders and you used to have a rope and used to be out in the sea about 100 meters out or something a big wail and then you had these tubs and when it went to the wail there used to be a bar, great big bar on the thing that used to tip and then when it came back round the other way it used to right itself and go back and just continues and then they put it in the 90s, no 80s they put a conveyor belt, just put a conveyor belt, all covered in like so none could get in.... Just, stone, rubbish from the pit and just dump it. But yeah, I mean some people used to ride

it, but the conveyor belt you couldn't because it was all sealed in.... Well, when you were a kid, you never thought much of it, you know it was just the thing, I mean all the collieries had them.”

(Carol) “So, you can see where it's all the water. This here used to be, at the end of there used to be a big wire sort of come down with big buckets on used to take all the waste from the colliery down there... Yeah, and it went in the sea. And what didn't go in the sea went on the beach. That's why we had a black beach. But they are gradually returning back to normal? They had a big sort of effort. You know, to get it back, but that's it came right out over there.”

Within this excerpt, John and Carol talked about how the beaches became weathered through waste from the pits. Other participants suggested how beaches became black from the coal waste. In turn, this changed the terrain on the beaches making it more stoney through the rocks and debris that were tipped into the sea. Some participants also mentioned how the steel girders that carried pit waste were stationed in front of the cliffs which consequently saved the cliffs from years of erosion from the sea. Therefore, human weathering has had a significant impact on how the coastal areas in East Durham and how they look today.



There were further examples of human weathering that were demonstrated through sea glass searchers that was famous in the town of Seaham. Throughout history, there was a bottle works that used to tip glass waste over the cliff into the sea, in Seaham (This is Durham, 2019). The glass was then churned up by the sea over years. To date, the glass washes up on the beaches in the form of coloured pebbles which people then collect. Such detail shows the incredible complexity to how people were connected with place and how place was weathered manually through culture and history.

In this way, history significance had the ability to unite a large group of people. The history of human interference created a unique coastal landscape that became part of how the participants related to place. In this way how place was weathered became a social and cultural aspect within this society and even formed history itself (Barnett et al., 2016).

The mentioning of historical significance through personal and local culture was not separate and occurred simultaneously. Many participants illustrated their own personal culture on the maps during the creative workshop. Such as, in Figure 1. The rock that was facing outward towards the sea was where a participant named Bethan typically stopped on her walk to look at the sea. This rock was then christened “Bethans rock” by people who lived locally and knew Bethan. Similarly, some elements and characteristics of walks were named within walking groups such as “yellow brick” road referring to a dolomite path or “heart attack hill” referring to a steep incline. This became known locally and how local people referred to such areas.

What is undoubted throughout all the aforementioned is that historical importance that was often portrayed through personal and local culture was significant for older adults’ winter walking practices.

Chapter Five: Findings and Discussion

This chapter will discuss older adults' experiences of winter walking in East Durham. To do so, this chapter focuses on four overarching themes, (i) Winter Weather and Mental Health (ii) Adapting to the Winter Weather, (iii) Constructing and Reinforcing Place Based Identities and finally (iv) Sensing the Weather.

The first theme will focus on Winter Weather and Mental Health. This theme details the importance that winter weather exposure had for people's mental well-being. Specifically, this theme demonstrates how:

- Older adults needed to experience winter weather to be content with staying indoors
- How people continued to socialise in winter weather
- How people talked about winter weather

Winter Weather and Mental Health

Walking Outdoors to Deal with the Indoors.

Whilst walking with older adults it seemed that the weather helped to support people's mental health. This was first demonstrated through participants explaining how they wanted to be outdoors to help them to then manage being indoors. Anne expands on this in the following:

(Anne) I think it just makes us feel good when we get back in and you know, put the kettle on and you just feel good really because you've had some fresh air, and you know, we don't get fit doing it much really, because we amble about. Then sometimes well just go and have a coffee on the way or something like that, you know what I mean, just it's like just a nice treat and it just makes you feel good because you've been out, and you bump into people and it's nice.

Participants also detailed, how the weather and fresh air exposure was something that helped them to manage the Covid-19 pandemic. As shown by walk leader Daniel in the following quote:

(Daniel, walk leader) Just getting out and being in the countryside and walking in general. I think particularly for people's mental health, and I noticed over, previous lockdown the amount of people who had actually been when were walking around the Dene, who you had never seen before. There were so many people you knew before they had dogs, they'd just got a dog just to get them out of the house and get them walking, I think it's been one of the major things for like, you know, keeping the body and soul together, you know keeping the mind intact. Rather than just sit on the couch and vegetate.

Getting out of the house and into fresh air was something that became apparent to people as they lived isolated lives during the Covid-19 pandemic. Sadly, this was a permanent reality for some older adults in the study who lived alone, as explained by Joan in the following:

(Joan) Well, I think it just, it just gets you out of your, I hate stopping in the house if I've got nothing to do. If you know what I mean because it's in the same four walls and I live on me own, so unless I go out.

The exposure to “fresh air” provided feelings of well-being that only tended to grow throughout the day even when indoors. The weather provided energy and set participants up to complete the rest of their day. This feeling was typically only once felt when arriving indoors and not always whilst experiencing the walk. As shown by Bethan in the following quote:

(Bethan) “Health and Mental wise, both that's what it's done for me. Yeah... I know, and sometimes if I've missed a couple of days I go, you're going to have to go out. You have to go, you can't just miss, you know, and not go. So, and I make myself go then

and then I don't get out the door and I go oh this is nice. I think in mental awareness sort of out. And you don't realise till you've come in you go. I really enjoyed that."

Participants had to remind themselves of the benefits that they obtained from walking. Participants had to force themselves out of the house to be able to obtain the benefits walking in winter weather had. This was indicative that familiarity was inherently important for people when choosing to be active. Once participants were out and walking in the weather, suddenly, the emotions and benefits flooded back to them, and they realised how beneficial walking in the weather was for them.

This was underpinned by the understanding that there were differences in how people undertook walking in winter weather within the study. Zurawik, (2020: 1) explains that leisure walking provided an escape for participants from their routines and daily lives, whereby they can gain mental relaxation from outdoor encounters. Zurawik goes on to explain how the process of exploring places builds bonds between people and the places they walk, through overcoming challenges associated with demanding landscapes often worsened in winter.

For the participants who walked on their own, mental relaxation seemed to be important as shown in the following:

(Janet (Walking alone) "Well I think you can. I find I often walk into home matches, for example. And I can solve any problem if I'm walking alone. Give me half an hour. Your mind sort of goes into the zone. And you just sort things out. Now whether that's called relaxation or meditation, I don't know but I always have my best ideas when I'm walking."

Those who walked alone tended to want to go at their own pace. Some participants worried that their fitness levels would not allow them to navigate the terrain with ease whilst being able to talk to someone. Additionally, participants wanted to be able to personally engage with their

walks. For example, they wanted to pick which weather they decided to go out in and choose where to sit down to rest whilst walking. It seemed clear that whilst walking participants were able to deal with their stresses and clear their minds. Some participants in the creative workshops detailed how walking in winter weather allowed time to “get yourself together” which in turn allowed participants to think “stress free.” People further suggested how whilst walking you would “forget about stress and problems.”

It became increasingly apparent that these people who walked alone seemed to take greater appreciation of their surroundings. They would take great enjoyment from the offerings of weather, paying close attention to how the weather made them feel and what it looked like. This is demonstrated by Janet talking about a holiday when she was walking alone:

(Janet (Walk alone) The sun came up and the sun was behind me. And you're in this most beautiful place, you know it's one of those real Awe and wonders. And I thought oh it would be nice to have somebody here to share it and I thought that for 10 seconds. And then I thought NO! it's much better for me to be here. It's all mine (shared laughter).

In her account, she feels happy to have had the view all to herself and alluded to being grateful that none was with her to ruin such a moment. When pressed further for what exactly caused the feelings of “awe and wonder” she recounted that it was a mixture of the cliffside, vegetation, and the light interacting with it all. All the aspects she mentioned are a product or result of weather and weathering. Therefore, it seems, the affordances of weather and place helped her to feel pleasure and create a memory that she was able to recount accurately to date.

How People Continued to Socialise in Winter Weather

Participants who walked in a group tended to put a greater influence on social interaction as shown in the following quote:

(Ellsa (Walking in a group) "Well, totally whole round the exercise, the mental health of like keeping your brain active just by talking, well cut up here, just by talking to people, keeps your brain active and keeps you active. Like I said before it's the spin offs of other things, you know, like, you know, in the group those maybe say oh there is so and so, we all going to go to the so and so if you fancy, you know the spin offs as well of things to do and it's yeah, definitely the company and so that's what helps us the mental health isn't it."

Firstly, participants in walking groups, tended to not feel confident in being able to navigate a route alone, and feared getting lost. Whilst they were present in a walking group, they knew the chances of getting lost were reduced due to the prevalence of a walk leader who guided them. Additionally, participants wanted to obtain some form of social interaction. For some participants, the motivation behind joining a walking group was to stave off feelings of social isolation caused by bereavement or loneliness (Grant et al., 2017). The walking groups negated such social isolation by allowing people to meet naturally and even created social spin offs where people socialised away from the group. For most participants, the walks were filled with experiencing and engaging with humour amongst one another. This in mind, seeing how weather interacted with place and walking in different areas stimulated participants and provided talking points along with focal points of interest that were topics of conversation. For example, participants would often exchange stories of different walks they had been on, the best way to get to such walks, and what they saw on their walks.

Weather Talk

This was furthered by people finding it easy to talk about their preferred environmental factors that accompany their walks (Evans and Jones, 2011). The participants would talk about what the weather had been like this winter, how it had interacted with their surroundings, as well as

what the weather was like on the day that they were walking. Fox, (2014) argues that this type of weather talk was less about the weather and in fact a way in which the English population bond, using the weather as a social prop and filler subject. If Fox's claims are true, it strengthens arguments that weather in addition to being physically felt is also socially and culturally situated (Sherrat et al., 2005).

It was also found that when people were being social in winter weather, the lure of social inclusion pulled people into experiencing weather they may not have otherwise gone out in. Similarly, it was found that when people socialised in the weather it somewhat negated the weather they experienced, As shown in the following:

(Anne (Whilst walking in rain) "People are laughing and having a nice chat and having a good time, nobody wants to get wet and bored, but I think it's not the most important thing and we can just override that really. I'd rather be walking in this weather with having a good time and a laugh with the girls than sitting indoors in the warm and dry and not."

This is perhaps more significant to people who live in the UK and experience varied and unpredictable weather (Allen-Collinson, 2019; Harley, 2003). This was also backed up in the creative workshops with some participants detailing phases such as "sunshine one day/ minute rain the next." People in the UK are likely to experience significant variations in the weather whilst walking. Thus, being social as a way of negating the weather could be considered important.

Other participants, added to this by suggesting socially interacting whilst walking in weather made the time go by quicker and took their minds off things such as the weather. This finding was further reinforced when speaking to walk leaders. They suggested, that when participants were talking to one another they became so engrossed in their conversations that they

simultaneously became oblivious to their surroundings and the weather they were experiencing. This was realised when they stopped for breaks, they did not know where they were. They stopped taking in their surroundings and the weather by escaping into the narratives of their conversations which mentally shielded them from the weather. This led to participants having moments of realisation once finishing walks or stopping on walks that they were indeed touched by the weather, such as being soaked by the rain.

In this theme walking alone and walking with others were presented as two separate ways that people experienced walking in winter. However, it is important to note that some of the participants engaged in both, being able to gain the respective benefits when they did so. Additionally, those who walked alone were by no means anti-social individuals, and often they referred to walking alone as providing them with a balance to their relatively busy social lives. Additionally, the majority of participants greeted fellow walkers who were typically strangers whilst walking.

This in mind, being social in the weather might be an actionable recommendation to aid older adults to be more active and tolerant to the weather (De vet, 2017; Allen-Collinson, 2019). Specifically, this may help participants tolerate weather that is typically termed “adverse” and would lead to older adults delaying their physical activity practices less (Wagner et al., 2019; Gallagher et al., 2010; Li et al., 2013). However, being social in weather did not just help people to deal with “adverse” or “impractical” weather, being social in weather led to people negating all types of weather. So even when walking on a warm, sunny, and pleasant day, they would not always take in the direct benefits the weather was having on them at the moment. Until they took a break or completed their walk.

The second theme relates to how people in the study adapted to the weather they experienced and how they continued walking during the winter. Specifically, this theme demonstrates how:

- How winter weather changed the terrain that older adults walked on
- How people adapted their walking practices to stay active in winter
- How people adapted to the weather through clothing and equipment
- Finally, how listened to their bodies and adapted to how it reacts in winter

Adapting to the Winter Weather

How Winter Weather Changed Terrain

In the UK, the winter season signals a change in weather. Most winters typically involve a continuation of “stormy” weather experienced in autumn, with a considerable proportion of rain, and some of the strongest winds of the year. Some winters can also facilitate much colder climates, with lots of fog, frost, and even snow (Met Office, 2022d). Rather unsurprisingly such weather brings about changes to the terrain that people experience whilst walking. For example, the rain-soaked terrain created a muddier terrain. When mixed with the leaves that clothed the floor from Autumn this made areas such as woodlands feel unstable underfoot and created safety concerns. The same was true of the Ice as shown in the following:

(Margret (Walk leader) “You get some really bad ice in the Dene when it's cold. I wouldn't take them down if it was icy because lodge bank, is like an Ice slide when it's really bad, because water runs down it and then it freezes and it is literally just like a sheet of ice all the way down. So, I would not when it's that bad we actually close the path. I think that happened last year. So yeah, ice. Ice and like really like slippy snow.”

Despite the terrain being difficult to navigate, the older adults in the study continued to engage with these terrains. There was even a desire amongst most participants to engage with different

surfaces within one walk as this simultaneously meant that they were engaging in a variety of areas and environments. As shown in the following:

(Janet) “I call this a varied walk where you’ve got climbing up you know the steep rough track and then we’ve got this and then we’re going to go back through the woods. I think breaking it up a bit makes it a little more interesting. But yeah, there’s Hawthorne Dene along the way that’s a very nice place and I said now the big thing is to walk the coastal path which is fine as long as there’s not an east wind.”

(Miles Lawson (Researcher): “So, when you say a varied walk, what do you what do you mean by that?”

(Janet) “Well I mean... totally, perhaps totally different surfaces to walk on”

Some terrains were difficult to navigate in all weather conditions such as steep inclines, declines, or narrow paths. In addition, areas where there were branches along with bits of root on the path people walked. Such types of conditions are typical of woodland areas. However, participants were not put off nor deterred from engaging with such terrains. This was illustrated within the creative workshop by one participant who wrote “whatever the weather, up and down all the way” and “not just on pavements you know!”

Participants paid close attention to what these types of weather conditions did to terrains and seemingly adapted their walking practices to accommodate the weather. If it were significantly muddy due to the rain saturating the soil some participants would walk on flatter terrain. This meant that falling was less of a risk and they would be able to navigate terrain at relative ease. Some participants recruited, flatter terrain by walking on old and disused railway lines as these tended to be level and not steep, also there was a high prevalence of this in East Durham.

Adapting to the Weather to Stay Active Outdoors

Whilst talking to walk leaders in the study it became apparent that adaption was important for how people interacted with the weather elements. As shown in the following:

(Daniel (Walk leader) "You've just got to keep an eye on the weather forecast. Aye you have to deal with the high winds. Tailor the walk to the conditions, I mean if it's snowing for instance you know, you can always find an alternative route because we have a repertoire of routes that you can take in certain conditions that you know will be better than going down in the Dene itself because you may get people down there but if it's snowing you might not get people back out."

Participants furthered this by explaining how they adapted to different weather conditions. Taking the wind as an example, people would pay attention to the direction the wind was blowing and then walk with the wind. This, in turn, helped them to manage the walk as the wind worked with them by blowing them in the direction, they wanted to head rather than working against them. Furthermore, when it was considerably windy participants would avoid walking beside the sea, as wind was felt more heavily beside the sea and had the potential to blow them over. Similarly, people didn't walk in woodland areas in considerable wind as it had the potential to bring down trees or heavy branches. Instead, participants would calculate routes that provide a notion of shelter from the wind that also would not cause a safety threat, such as a route that had cover from hedges.

The same was true for a range of weather conditions. If it were particularly sunny and people wanted to experience the sun people would avoid woodland areas as the trees provided mostly shade from the sun. Yet when it was rainy, people tended to seek out woodland areas, due to their ability to shelter them from the rain.

This was true even in winter when trees had shed their leaves. There are perhaps elements of tolerance prevalent in such accounts as in winter the lack of leaf coverage would not fully

shelter participants, but it certainly would make the conditions more manageable than walking in completely open spaces. Additionally, the woodland areas in winter were more penetrated by the sun making areas feel warmer, but also providing areas of shade from the trees casting shadows. There were areas of personal preference in the accounts of the participants, so for example if participants wanted to avoid the winter sun on a sunny day, they walked in woodland areas that were more shaded.

The prevalence of winter concurs with shorter daylight hours and darker nights. When walking some participants felt that had to turn back earlier from walks or shorten their lengths of walks due to dusk settling in earlier. Some participants, especially the women participants mentioned safety concerns with walking in the dark (Obordo and Otte, 2021). They also suggested that there was a lack of pleasure in walking at night because there was less to view whilst walking. Participants again would adjust their schedules, so they were walking earlier. This allowed them to get the benefits of the daylight and the weather. If people were to walk at night, they would walk in more built-up areas where there was a presence of people and well-lit streets.

Being able to calculate routes and understand how they would feel, and experience weather differently came from participants geographically understanding their areas. This gave them a knowledge base to stay weather connected. This understanding was built up from trial and error of walking and learning from walk leaders.

How People Adapted through Clothing and Equipment

Some people did note that they had bad experiences with certain types of weather. Typically, within the sample, this was the presence and combination of wind and rain. This was because the rain soaked the participants as well as their clothing (Nascimento, 2019; Qu et al., 2021). The wind pushed the rain into all the uncovered crevasses and caused the participants to feel cold. However, people adapted to the weather by recruiting clothing that helped them to

manage such conditions (Clement, 2020). Edensor et al., (2020: 3) suggested weather is immediate and sensory. The changes to the weather in winter can force people to adapt by donning clothing such as, “wellington boots, hats, thick coats.” Such items helped the participants in the study to manage the conditions. Furthermore, participants learned how to deal with being touched by the weather as demonstrated by Joan in the following:

(Joan) I have a picnic blanket and on one side it's plastic, you know, you will have seen them, on one side it's tartan on the other it's plastic and rubbery underside. And i've only twice had to use that, i'm going back to the car and i've had to put that over me seat otherwise, i'm going to actually strip off in the car (laughter). So I just get in soaking wet and just take the rug in and just dry the rug out. And it lives in my car, like another bag i've got with my earmuffs, me gloves, i've got a scarf, you know them over things them blue over things, over shoe things, yes, some of them. Gosh i've got all sorts of things I carry around.

That being said, there was an understanding that whilst walking their body temperatures would increase and provide warmth. Participants again learned, what to wear for different types of walks and when walking in different areas.

However, such adaptations were not necessarily enjoyable for all participants as shown by Janet in the following:

(Janet) “Oh this is wonderful yeah, because you've got blue sky. I prefer good light. I don't know if you've got nice brooding clouds, you know, like that's quite nice sometimes aswell! you know, so I prefer to walk with not so many clothes on. But you know, in the winter that's not always possible. Unless you walk abroad like Spain or, and then you just wear shorts and T-shirt.”

Within her excerpt, she explains how although she continues to walk in winter, summer seems to be her preferred walking season. This is because of the changes in the clothing she must wear. Janet alludes to how her body feels more physically burdened in winter by the presence of winter clothing. Such burdens are only likely to amplify as a consequence of winter weather such as rain that soaks clothes (Clement, 2020), adding to the weight of clothing on the body.

The light and temperature that summer affords facilitate Janet to wear fewer clothes. This perhaps provides her with feelings of freedom. Whereby the clothing she chooses allows her to obtain a sense of liberation where she can envision her body in the way she would want (Lunceford, 2010) but also provides an opportunity for weather intertwining. Such as, the sun penetrating the skin and simultaneously tanning. This showed that adapting to the weather in winter was not ideal for all participants.

The participants also seemingly adapted to the winter weather by investing in equipment such as walking poles. The majority of participants invested in at least one walking pole which helped them to negotiate steep terrain by giving them more power to push against the steep terrain. The reverse of this was also true as it provided balance for participants when walking downhill or on uneven terrain. The poles provided feelings of confidence and security to participants which allowed them to tackle such terrain with relative ease. Participants indicated that without the use of walking poles in woodland conditions they would not feel confident attempting such terrain.

In Corazon, (2019) study it was noted that woodland areas changed the way in which people with mobility disabilities experience place. For example, unstable terrain often led to people having to use “a lot of energy just looking down and keeping an eye on the path” (Corazon, 2019: 7). This was also seen with the participants in the study as shown in the following:

(Ellsa) I spent too much time well, not too much time, obviously. But watching me feet, where I am putting me feet to notice the surroundings which is a shame. But obviously in the Dene, you have to watch your feet because there is slippy leaves, there is bits of root, you know there is narrow paths.

From this, it could be suggested that older adults were robbed of the benefits the areas they walked offered. Such as taking in the beauty of local areas (Phillips et al., 2011) or the benefits of walking in and with nature (Olafsdottir et al., 2020). However, people seemingly adapted by ensuring that they took regular breaks. These breaks had a dual purpose of allowing participants to catch their breath and to take in and appreciate their surroundings. Such breaks were characteristically short (between 4-8 minutes) and made-up part of a routine whilst walking, through stopping at the same spots (Phoenix and Tulle, 2017). Typically breaks were taken after a steep incline or if there was an admirable view to be taken in.

Knowing How the Self-responds in Weather

Adjusting to the weather also involved an element of personal engagement from the participants. Participants had to be self-reflective. This was underpinned by the understanding that the older adults in the study had varying degrees of health, and some had a prevalence of long-term health conditions. Despite this, as mentioned, there is evidence that physical activity is generally safe for people with long-term health conditions and being active can even help them to manage such conditions (Reid et al., 2021).

Within the study, some participants had to manage the long-term health condition of asthma. Asthma can be significantly triggered by the weather. For some people, extreme weather events (Sario et al., 2013) can irritate airways, something that is likely to worsen in the coming years (Poole et al., 2019). For others, the heat helps common allergens like dust mites and mould thrive aggravating allergic asthma. The winter in the Northeast often provides dry and cold air

which is a trigger for airway narrowing. This can be worsened if people have exercise-induced asthma (Asthma and Allergy Foundation of America, 2022).

When walking in winter with older adults who had asthma it became apparent that they adapted their walking practices to accommodate the weather as shown by Bethan in the following:

(Bethan (Managing Asthma) "I walk all the way down the street because it's a good start. Because it's all downhill. I don't like to start with a hill because with having asthma I need to sort of pace myself. So, I walk down the hill, and then up on to the fields, and then right around the fields, and then somebody has no matter what the farmer does, they, somebody makes it a path, right across the field. So, we go right, I can go right and make it extra-long and so then I would come and end up nearly home. So that's what I would do. But if it's raining, I walk right around the village, which means I'm on a path then. So, it's not quite as muddy."

Bethan here allowed herself to acclimatise to the weather with easier terrain to tackle when beginning walking. This allowed her to get into a rhythm of breathing before tackling steeper terrains later in her walk. This adjustment through being knowledgeable of her local environment allowed her to obtain the benefits of walking in winter weather safely. Other participants who also had asthma had to adjust their walking habits on particularly difficult days and participate in shorter and flatter routes.

Other participants would apply this to their everyday lives and would adapt their terrains to how their health was in the moment. For example, following bouts of illness, changes in health or physical capacity participants would adjust the type of terrain they walked on to flatter and easier to manage routes. This allowed them to build up their fitness to tackle tougher inclines and terrains.

Overall, participants wanted to walk on a multitude of terrains. This can be difficult for older adults however through adaption this was able to occur. They adapted by geographically knowing their areas and how the weather would interact with place. Using walking poles and appropriate clothing, and finally listening to their bodies - knowing how it reacted in winter and choosing a route that was correct for them.

The third theme to be explained focuses on how people within the study constructed and reinforced place based identities. The theme focuses on:

- Firstly, discussing how people walked in winter within place.
- How people sustained a connection to place through walking in winter weather
- How participants created the identity of being a Northerner or Southerner through tolerance of the weather. This will also discuss how people lived with and managed this identity.

Constructing and Reinforcing Place Based Identities

Weather and Place

Vannini et al., (2012) remind us of how the weather is interlinked with place and how weather plays a vital role in the way individuals define a sense of place. This occurs through the bodily embeddedness of human experience within place, with dwelling being a place making process in and with the weather.

When walking with older adults in winter, it became apparent how older adults noticed how the weather interacted with the places they walked. This became part of how they came to know and define a sense of place. Specifically, they espoused how typical winter weather such as the snow and Ice drastically altered place creating a visual spectacle that caused strong emotions for participants.

(Joan) "I mean we were halfway through the Dene when it started snowing. Oh, it was lovely.... Because it makes everything look different."

(Ellen) But the last time I was over there was just a thin layer of ice well must've been last winter must it. And then the sun just peeped through behind the Cloud and bounced Oh, God was lovely. Really nice."

There was a complex relationship with the snow as there had to be specific types of “grippy” and “light” snow that allowed walking to continue and allowed areas to be observed. If the snow was too heavy or merged with ice this was not possible. Indeed, both the snow and Ice here served the purpose of changing how place looked visually. The snow changed areas with a sharp contrast of white colour which changed how places were visually perceived. As Jensen and Gyimóthy, (2020: 112) aptly write “snow transforms a familiar landscape into an other-worldly, sparkling utopia”. The snow and significantly muddy terrain also allowed for increased visibility of animal footprints. In this way, people who had observed how place looked in the snow had an increased knowledge of how places looked that others who were not weather tolerant would not have observed. People also suggested how the Ice and Snow created visual spectacles that were “breath-taking” or “picturesque” creating an excited “atmosphere.” The participants here were perhaps indicating how the snow is tied culturally to winter and Christmas (Middleton et al., 2020; Hall, 2014). This is perhaps better demonstrated by Joan in the following:

(Joan) We used to have a place called, it was, a landslide it's not there no more, it is but it's inaccessible, so they say. It was what we used to call the grotto and it was a big, great big, like rock coming down and the path was below it. Yeah. And in the winter, there was great big, long icicles dropping down from, then oh, it looks like one of these Christmas the Christmas cards. Oh beautiful. And of course, the snow over all the trees, oh I love the snow me.”

As you can see through this expert, Joan came to create connections with the place she walked in through how a certain rock looked in winter weather conditions. The nickname “the grotto” came to be known by herself and fellow people she walked with. This demonstrated how people take on a sense of ownership of their own localities and the influence of the weather, played a key role in this. This was how people came to understand their own personal interpretations of

place. Additionally, the participant here was indicating how the entanglement of weather and place created a visual exhibition that created positive emotions for herself.

Such entanglements continued when people discussed how the weather interacted with the bodies of water. For example, the colder temperature in winter froze bodies of water into ice shields in an ever-changing motion (Vannini and Taggert 2014). People also witnessed how the weather interacted with the sea. This is shown in the following quotes from Anne and Bethan:

(Anne) "It's always dramatic when there's a good wind and the waves nearly come up to the top of the lighthouse, and that is, you know it is lovely to see."

(Bethan) "It's just the peace of it just coming in, it's going out in this note nothing and it's just something and it goes whoosh (breaths out) down here like that (Actions a calming affect). You know and I'm Cancerian as well and were governed by the moon and the moon has a lot of influence on the sea. That's when the highest tide is after the full moon things like that."

Here the participants indicated how they enjoyed seeing the wind interact with the Sea. Anne enjoyed seeing the wind and the sea interact at a high tempo. Seeing the waves "choppy" evoked emotions of excitement and exhilaration whereby the sea was displaying its potency. Other participants found delight in seeing the sea absent of wind and still, this evoked emotions of tranquillity and serenity (Anderson and Peters, 2014; Borovnik, 2020). This also welcomed the acknowledgement of other forms of weather such as how the sunshine gleamed off the surface of the water or observing how the light interacted with the materials in the sea creating distinct and contrasting colours.

Some participants also tended to indicate a deeper connection to the Sea or an affinity towards the Sea. Such as in the abovementioned Bethan tied herself personally to the Sea by discussing

her star sign. Other participants suggested how the Sea appealed to their artsy side. Bethan went on to suggest that she did have ties to the sea and regularly enjoyed going to sit and watch the sea suggesting that throughout her life she always tried to live beside it, even when abroad. This was also found with other participants who tended to want to live near the sea or if they had been away from the sea, they would aim to swiftly see it once they returned. Some participants indicated this was because it provided them with feelings of being on holiday and the novelty never wearing off. Such factors are undoubtedly true, however, the weather at the coastline does tend to be different and significantly windier (Met Office, 2022e). Therefore, their relationship with how they saw and felt such weather at the coastline will undoubtedly have an impact on how they felt about the sea.

How Outdoor Walking Sustains a Connection to Place

It is known that people can develop strong connections to the weather they experience (Adams-Hutcheson, 2020). This is because although the weather is a global phenomenon it is something that is “sensed locally” (Edensor et al., 2020: 3). From this, place can develop different reputations and identities (Enfield and Osiris, 2011). However, what is less known is how people react to such reputations and identities and in this study, it is shown that people attempt to defend the climates and weather they experience.

For example, some participants offered justifications for their climates such as how the wind created illusions of a colder climate. As shown by Bethan in the following:

(Bethan) “The Northeast gets a bad press and sometimes they deserve it because they'll say the temperature in the Northeast is I'd say 18,19, but, because of the wind chill. It is 14. Wind makes it colder.”

Bethan could pick out the finite details of the especially distinctive weather she experienced. From this, Bethan argued that the Northeast got a “bad press” for their temperature. She

justified this by suggesting people did not understand the detail of what made the Northeast cold despite ultimately conceding that the felt weather was still cold. This was indicative of an emotional attachment to the weather (Adams-Hutcheson, 2020) as Bethan was excusing the colder climates she experienced. She did this by attributing such experiences to the presence of wind, which was something people who live in East Durham had to learn to tolerate. People also added further justifications that defended the climate they experience.

(Ellsa) So yeah, I think we do get a bit colder weather up here. I do think it is colder up in the Northeast especially. But that's the way it's always been so we appreciate the nice warm days."

(Olivia) "Well I don't think were bad, I don't think we bad. I think there's sometimes they say oh the northeast is freezing but, sometimes it is sometimes it isn't at all you know. In Liverpool, London like they get the heat waves, and they think what's happened to us but they maybes get something, they get the rain, and we haven't so... It stops the wrinkles, Miles! too much sun gives you wrinkles."

These quotes showed how participants made sense of winter weather through comparison of weather in other locations. This illustrated the relational nature of weather worlds. Participants came to know the weather they experienced and how it fitted within their identities because of other places they had visited. Serving the purpose to reaffirm their own weather identities as people demonstrated they were content with their climates and winter weather they experienced.

Participants defending the weather they experienced was common throughout the participants descriptions. It became increasingly apparent that people felt a sense of loyalty to the weather they experienced. To criticise the weather you experienced would be to criticise the self (Horn, 2007). If the older adults in the study suggested something adverse surrounding winter weather,

they would typically follow up and end with a positive statement, which again served to explain their weather. For example, one participant, when questioned on what his thoughts were on the weather, he was experiencing at the time of the interview, suggested that he “didn’t expect frost” in the morning. However, directly after this, he asserted that the frost had “gone off quickly” and it was now a “lovely sunny day.”

Much can be learned from how the participants talked about the weather. Staying with the earlier example the participant suggested something that could be perceived as negative (I.e., frost) and then quickly moved to end on a positive statement. It seemed the participant moved to justify the weather he experienced and repair any damage done by the perceived negative statement (Albert and Kessler, 1978; Ma, 2021). This showed how participants defended their own identities. This was supported by the participants within the study continually suggesting that the weather was something they got used to and that the winter of 2021-22 was “not bad”.

Participants articulated how there was a notable absence of snow and noted how the weather had not stopped them from engaging in walking. In this way, they suggested that they were lucky to be experiencing this type of weather. These responses were given despite the presence of multiple storms that had hit (Arwen, Barra, Malik, Corrie, Dudley, and Eunice (Met office, 2022b). The storms included a rare red weather warning issued for storm Arwen and two red weather warnings issued for storm Eunice, which was the most severe and damaging storm to affect England and Wales since February 2014 (Met Office, 2022c).

Admittedly, the storms were felt at varying ferocities and the storms tended to hit on days the walks were not scheduled for participants. Despite this, participants were considerably offhand about the effects of the storm. Some participants discussed how they identified the storms by seeing that plant pots and wheelie bins had moved, as well as some fences being brought down. Additionally, participants marvelled at the power of the weather surrounding fallen trees. Such

reactions and interpretations of the storms show how the weather entered the everyday lives of the participants (De Vet, 2017). Hulme, (2008:7) suggests that storms “provides visceral experience of wind, dust, thunder, lightning, rain”. Yet all of this entered the everyday life of participants (Edensor et al., 2020) through mundane activities of regaining wheelie bins, rearranging plant pots, and fixing fences. In this way, in a world where the weather is increasingly a scientific figure, in actuality, the results in the study reinforced how the weather is a locally sensed phenomenon (Endfield and Osiris, 2011) that is experienced in a personified manner.

As previously mentioned, the majority of participants in this study were walkers and attended walking groups. As, such, continued engagement with weather may have led to an increased tolerance to winter weather. De Vet, (2017) suggested in her study in Australia that a willingness to stay weather connected despite “impractical” weather conditions led to an increased ability to be able to move easily in such conditions without discomfort. Therefore, the same could be suggested about the participants. Since they continued walking in winter, they might have acclimatised to the winter weather which in turn allowed them to be able to move within spaces with relative ease.

Nevertheless, such utterances of tolerance and acclimatisation are also perhaps another way that participants aimed to defend the weather they experienced. Such as, by suggesting that the weather in winter did not affect or bother them. People appeared to have a greater tolerance when walking as whatever weather participants then experienced was deemed to be out of their control. The participants tended to be less tolerant when rain was prevalent before walking as demonstrated by James:

(James) About the only weather I wouldn't walk in is, I wouldn't start off if it was raining. If I'm out and it rains well that's tough. But I wouldn't go out in, mind, having

said that I was out in drizzle which gradually turned heavier yesterday. I was soaked through.

Such difference in personal perceptions of the weather was perhaps influenced by the fact the sample had significant diversity in terms of where people had lived throughout their lives. Some participants had lived in East Durham their whole lives, some had lived abroad and returned, some had lived in East Durham and had migrated south, and some had moved to East Durham from down south. Although it must be noted that, the scale of this study was not big enough to come to an absolute conclusion, what did seem to emerge was the fact that people defended the weather of where they resided. This would once again maintain that weather creates a belonging to place (Vannini et al., 2012) and is a part of peoples' identities.

*(Anne (Moved to East Durham from South) "I haven't found it much colder than down south, and everyone did warn us about that oh it's cold up north and it's not been like that. I say it's very similar to where I used to live. Right down near Dover and *names relative* still lives down there and we sort of like message every day and you know what, it's hardly any different.... Weather, weatherwise, you know, she'll say, oh, it's lovely and sunny and I say it's nice up here as well! You know it's just like that."*

(Tabitha (Moved down South from East Durham) "I get to Pontefract, and I said the wind changes. Somebody puts the light out and somebody turns the wind up high. I always say because I've travelled up and down for years now. I've been down there 20 odd years, haven't I in Northfork and I hit the air, where's me fleece. I am freezing!"

This exemplifies the suggestion that weather was a part of people's identity as when they live in an area, they come to know their weather and unique rhythms in detail. This also shows how people defend the weather they experience as a way of justifying and defending where they live as the weather became an important aspect of how they defined their sense of home.

Northerners' vs Southerners

The distinction between people who live in the North of the UK versus people who live in the south is something that has been a constant throughout history. The debate between the two places revolves around contrasting the differences between the two regions, one being the weather people experience (Kettle, 2019). Typically, Southern regions of the United Kingdom tend to be “drier, warmer, sunnier, and less windy” than those further North (Met office, 2022f). Thus, Northerners are often subject to harsher weather conditions and developed a reputation within popular culture for being more tolerant of the weather than southerners (iNews, 2018).

Numerous discussions with the participants detailed the longstanding distinction between Northerners and Southerners regarding the weather they experience as demonstrated by Ellen and Janet:

(Ellen) “I know, well, it's like (Laughter) my brother used to live in Oxford. And his wife and his family. When they used to come, he used to say God it's freezing up here. I used to say don't be so soft (Shared laughter) But there again when we go down south it's a lot warmer.

(Janet) “You see, I don't mind it and I don't mind it being cold. It's when people come up to stay with you or when you go somewhere else. I mean, I notice in Rotherham it's at least four degrees warmer there, you know, you can even notice it over that distance. If you go down where my brother is in Wiltshire, you know, when they come up here, they're just absolutely shivering the whole time. And they think it's really, really cold, when it's not really that cold.”

These comments illustrated how there was an understanding from the participants of this study that the weather they experienced was generally colder than in southern regions. Both, Ellen and Janet, noticed an obvious temporal difference when they had travelled down South, with

the South being warmer. This supported the findings of Hoskins (2020:134) who suggested that the weather has the power to connect people to place through a “shared experience of unique rhythms” and in this instance that was the colder temperature in East Durham. However, people experiencing such stark differences in climate served a purpose as a way for Northerners to distance themselves from their Southern counterparts and reaffirm place-based identities. This reflects the work of Vannini et al., (2012) who endorsed that the concept of weather dwelling was integral to how people define their sense of belonging within a place. In this way, place came to feel like home through their relationship with the weather.

Henceforth it is unsurprising that participants suggested that they became acclimatised to the winter weather they experienced. Revisiting the very first quote from Ellen where she discussed how she felt it was a lot warmer when travelling down South. Ellen also suggested that she always used to feel cold a night, yet, when staying at home it never used to bother her. She summed this up by suggesting “It's just what you get used to, I think isn't it.” This further demonstrated how weather became a part of the self as the older adults in the study became accustomed to the weather places they encountered daily (Vannini, et al., 2012). When removed from such places they noticed alteration which was significant enough to stay in their memories.

The participants in this study who lived in the Northern colder climates were not necessarily proud of being able to withstand colder climates. Instead, the Northerners offered an aura of nonchalance around being able to withstand and tolerate such weather. This was typically shown by suggesting that “Southerners” exaggerated about the weather they experienced and suggested that the weather they experienced is not actually “that” cold. Participants suggested that there was a reputation that the Northeast and East Durham had developed that was held by others who do not live there. This reputation was that the temperature was lower, there are higher levels of wind, and an absence of heat. This reputation created a sense of shared

experience that everyone who belongs to the Northeast has in common. In this way, Horn, (2007:9) reminds us that “to talk about the weather is actually talking about oneself”. Therefore, the weather people experienced and the reputation they developed became a part of their identities.

In this manner, to suggest that the Northern regions such as East Durham have a less desirable climate was a way of othering such areas whilst simultaneously reaffirming motivations for choosing to live elsewhere. This in mind, the weather knowledge comes to reflect history and culture. Hulme, (2017: 27) explains how weather knowledge and practice “cannot exist separately from the cultures in which it is made and expressed”. In other words, the weather contributes to social and cultural aspects within society (Sherrat et al., 2005). One participant developed such cultural understandings of weather and place and felt that people who lived in East Durham had a reputation for being “poor Northerners.” From this, there was an understanding that people who did not live within the Northeast held historic stereotypes of the mining and working-class cultures such as suggesting people who resided there still possessed “flat caps and whippets.” This quote shows the detail of this reputation:

(Ellsa) “I got asked the question once a few years ago, maybe 15 years I got asked the question, do you have green grass? I said green grass what other colour is it for grass, but they expected it to be all pit apes and slag still, which still from the coal mines, you know? And I said No! in fact where all the coal mines ones have been like flattened and they either got trees on them or, you know, and no I said of course we've got green grass. I mean, can you imagine somebody asking that, have you got green grass!”

When explaining this the participant was clearly insulted and went on to elaborate that other people who did not live in the Northeast of England thought everything was still covered in “coal dust.” This stereotype and reputation are not representative of East Durham today.

However, this has become a reputation that people had come to live by. This was not dissimilar to how the weather creates and obtains a reputation. Reputation is typically hard to recover and often can be seen as a life-long sentence that can be held for numerous years. Therefore, within this project, I argued that such a reputation becomes part of the people who live in East Durham's identity, which was reinforced through the weather experienced within place.

The fourth and final theme will focus on how participants in East Durham sensed the weather in winter through walking.

- This theme will detail in what manner people experienced the weather
- What type of winter weather participants strived for whilst walking
- How older adults felt winter weather change across their lifespan

Sensing the weather

Intertwinement with the Weather

The participants in the study became one with the weather. Rather than the weather and person being separate they combined whilst walking to create an intertwinement between the person, and weather. For example, one participant, named Bethan, espouses how the wind intermingles with her presence moving around her body with her outstretched arms and even within her through inhalation:

(Bethan) “if it's windy, I actually quite liked the wind. I don't like the damage it does on things, and I wouldn't go out when you have to really walk, you know, into it, but I feel sometimes invigorated with the wind. I stand I stand there open me arms and get the wind in me.... I feel as if it's invigorates me, I feel, I feel like, oh, this is like, (smiles and breathes in) lovely the wind.”

It seemed that the way the wind moved around Bethan's body, reminded her of her presence, giving her the sensation of invigoration. Similarly, one participant in the creative workshop detailing how they “felt alive” when standing in a woodland area in the rain. When discussing the wind, it was obvious through facial expressions and body language that Bethan gained a sense of pleasure from the wind. For instance, she smiled when discussing the wind. Furthermore, she would perform physical actions by raising her hands with her palms facing

upward in front of her body which demonstrated how the wind would fulfil her alongside a proclamation of a “whoop” sound. The wind animated Bethan, fuelling her with life and energy.

Phoenix and Orr, (2014) found that pleasure was an “under-theorised and under-researched area” within the context of physical activity in older age. Their findings demonstrated how pleasure was experienced in four diverse ways; *sensual* by coming into being through senses, *documented* by describing activities, furthermore, *immersing* oneself in the moment of physical activity and *habitual* through how participants gained pleasure through routine and rhythm (Phoenix and Tulle, 2017). The feelings Bethan obtained from the wind were through a sensual nature of the touch of the wind. She deliberately opened her arms up which invited the surrounding weather to slide around her body. It seemed that this allowed her to be connected with the weather and world as it enhanced her ability to feel the wind (Phoenix and Orr, 2014).

Bethan’s account supported arguments that physical activity movements in weather are embodied practices (Phoenix and Tulle, 2017; Simpson et al., 2019; Bell et al., 2019; Allen-Collinson et al., 2019). Bethan adhered to seminal thoughts put forth by Ingold, (2005, 2007) that weather and being are indivisible, as it appeared, that Bethan collaborated with the wind through an intricate intertwinement. Such intertwinement was also reported by other participants. For example:

(Ellen) “I mean, like today it's not windy. It's the North wind that really makes it bad. But the usual walk I usually do keeps you going right over the fields. oh (groans) and it blows at you, you know. But once you get over, I don't know I just feel refreshed when I've done it, either refreshed or numb (shared laughter).”

Firstly, Ellen discussed the velocity of the wind, and how the wind blew “at” her whilst crossing the fields. However, when she passed, Ellen received a reprieve of more sheltered ground

which allowed her to appreciate the feelings of refreshment. This was another example of how participants felt they intertwined with the wind. Additionally, this echoed, Bell et al., (2019: 275) study where some participants found the wind acted as a “caffeine hit”. Participants were woken up by gaining sensual invigoration from the wind. Here, Ellen showed the same energised persona after experiencing the wind and alluded to gaining pleasure from this type of winter weather. What would be added within this excerpt was that Ellen could also be defending the weather she experienced and being optimistic about the cold and windy weather she experienced, as other participants did in the earlier theme.

That noted, not all intertwinement with the wind created pleasurable encounters and some participants demonstrated how their experiences were extremely different:

(Janet) I don't mind rain. I don't mind cold. But winds likely we had last weekend. One, I wouldn't walk in that because it's dangerous, falling Rubble. Two, I just can't bare it blowing round me.

(Tabitha) It's biting! and I forget. So, I think for me having been away then coming back. When I open that car door. I think Jesus! It just sorts of hits you and it's cutting it's absolutely, icy cutting... It's freezing, freezing, and having to hang on your car doors, because they're going to swing out your hand at any given minute.

Janet suggested a dislike for how the wind blew around her. This was again in a similar fashion to how some participants in Bell et al., (2019) study where participants who had sight impairment felt disoriented by the wind, due to it drowning out of auditory cues. Although Janet, did not have a sight impairment, the wind inherently created elements of disorientation through its intertwinement with the self and how it moved around the body. Additionally, the wind posed a risk of danger through how it could interact with the surroundings of place by causing “rubble” or trees to fall. Thus, causing feelings of unease or distress for Janet (Krekel

and Mackerron, 2020; Van Tilburg et al., 2018). Such distress was also clear in Tabitha's accounts where she detailed how the wind shocked and unsettled her. Tabitha went on to suggest that her intertwinement with the wind made everyday activities difficult to manage (Edensor et al., 2020).

As discussed in the previous theme identity was integral to how the participants made sense of their weather worlds. However, what was also apparent was that how they came to know their personal affiliations towards such weather was through intertwining with the weather. Even within Janet's account where she suggests she would not walk in high winds, she had to experience high winds at one point in her life to come to the conclusion, that she disliked high winds and wouldn't walk in them.

Nevertheless, most participants rather than explaining their reasoning as to how they intertwined with the weather, they would often simply refer to "getting fresh air." As expressed in the subsequent quotes:

(Olivia) "I like the outside; I like the fresh air and the vitamin D if you get the sun. I think it's more beneficial."

(Joan) "But yeah, think you need to get out in the fresh air and walk especially when you get older."

The participants inadvertently mention the weather through the blanket term "fresh air." Experiencing fresh air was a change in atmosphere that distinguished outdoor from indoor. Air was the medium through which the weather was experienced. Experiencing fresh air was something that most participants mentioned as reasoning for wanting to be able to walk in winter. Ingold (2011: 115) asserts that feelings of the air whilst walking "is not to make external, tactile contact with our surroundings but to mingle with them". This in mind, simply experiencing fresh air can be considered an intertwinement of weather and people. However,

the way in which people intertwined with the fresh air or indeed the weather seemed to differ across the participant set.

Differences in Felt Weather

The outdoor temperature that is reported frequently varies quite significantly from how high temperature is felt. The outdoor temperature is reported by taking a thermal measurement expressed in degrees of the ambient air (Netatmo, 2022). However, such measurements can be starkly different from how the temperature feels (See, Hoskins, 2020). Differences in felt weather can be due to where a person is positioned as the temperature can be often felt uniquely at various altitudes. For example, when travelling up hills, wind strength and speed will increase, accelerating over ridges and hilltops (Met office, 2022g), which makes people feel the impact and strength of the wind. Likewise, when an area is made up of such as “the presence of dense vegetation and other human structures” such as, buildings, can alter the weather conditions for specific areas (Bianchi and Smith, 2019: 2).

Such objective trues of how the weather is felt differently across various altitudes were supported by the participants in the study:

(Bethan) “But when you talk about Durham, I can get the temperature here and I can go to Durham and its so many degrees warmer. Just in Durham from here, because actually we're really high. In fact, the church the village church there was used as the highest point for the ships from years ago because that's the highest point so were high. And then if you want to go down to the colliery you go all the way down because I have seen snow here and I've gone down the colliery and there isn't any snow.”

Within the last quote, Bethan clearly explains how there was a difference in felt weather when comparing where she lived in East Durham to Durham city centre. The weather that Bethan

experiences was be due to the unique makeup of where she lives in East Durham, and her opinions, support claims that local climates vary over short distances (Nadeau et al., 2017).

One participant opened up about rarer weather conditions that affected their experiences within a place such as Janet's in the following quotation:

(Janet) Oh the other thing beware the sea fret. Because that is a horrible and It's horrible to walk in... That's when the fog comes in, in the summer sometimes when you have a fantastic day. You can be sitting in the garden, and you see as the tide comes in the fret comes in front of it. To do with the temperature and all this sort of thing because the water is so cold and it just makes everything cold and damp, blocks out the sun. If you want to stay in the sun, you have to drive to Durham.

Here, she demonstrated how the weather has the capacity to shift a warm and sun-filled day to an on the contrary, cold, and damp day. In this way, the weather interweaved with human experience creating ultimatums of either travelling to other locations to continue experiencing a sun-clothed day or succumbing to the fog-filled encounter. This account supports Borovnik and Barrys, (2020: 168) comments on how the fog captures human attention. It does so by being a “mysterious and ominous force” that alters the way in which humans must move within a landscape (Borovnik and Barry, 2020: 168). Additionally, participants were able to pinpoint specific areas that felt differently in various weather conditions. This demonstrated how through felt weather people came to understand their local geographical landscapes, and how to inhabit then live within such places.

Sensing the weather was inherently local (Hulme, 2008). This sub-theme showed how people talked intimately about the weather and it became part of their recollections which tied them to place (Adam-Hutcheson, 2020). It seems that through walking in winter and across various locations participants learned in-depth knowledge of their geographical landscapes.

Idealised Weather for Walking

Within Bell et al., (2019: 275) study one participant described how “weatherless” days provide difficulty for them as they could not sense the weather. Participant Eve described this concept as “flat, grey, nothing kind of days where there's really no weather at all.”

The participant went on to suggest how such weather starved them of their connection to the world. However, this same weather was desired among participants in this study. In this study I use the term “middling” as opposed to “weatherless”. This was because for participants within this study the weather was present but was simply neither here nor there. The middling weather was “not too hot” and “not raining or windy.” Importantly, the middling weather allowed participants to continue walking absent of discomfort as shown in the following quotes:

(Carol) “Well this today is an ideal one, isn't it? You've got a little bit breeze but it's fine, it's not raining... sunny, there's a danger of you becoming too hot because you've got you put too many clothes on (laughter), but this is ideal weather for walking. Because when you walk you can start off and you can be cold, but once you get going and get the exercise and you get up to speed, you're really warm, the cold doesn't affect you that much” (Weather description: 7 Degrees, Low wind, cloudy, sunny)

(Joan) “Well this is quite nice today, you get restless... In sort of June, July that's horrendous really because you get the sun, you get more breathless and your uncomfortable. So really, I would say this is quite nice, apart from if it's really windy, but it's lovely. When the sun's shining you've got to put your sun lotion on, you've got to have a hat on, you've gotta have a water with you (laughter), sun gets in your eyes, you've gotta have your glasses on.” (Weather description: 7 Degrees, cloudy, sunny breakthroughs, slight wind)

Here Carol and Joan showed how the middling weather conditions were ideal for experiencing walking and how, for them such weather was more likely to be encountered in winter. Through their accounts, they seemed to advocate for winter weather. Specifically, Carol focused on the absence of heat as this caused significant discomfort when layered up and walking. This could be due to the increased likelihood of sweat which has been documented to cause emotions of shame and disgust (Waitt and Stanes, 2015), which middling weather conditions did not create. Furthermore, this could be underpinned by older women's physical activity being influenced by portrayals of youthful ideals (Pike, 2015), which in the past have not celebrated sweaty ideals of physical activity for women (This Girl Can, 2022). This in mind, middling weather conditions created less need to prepare for the weather conditions ahead, such as less of a requirement to carry water, apply sun cream, and have sunglasses.

Some participants did suggest that the sunnier days tended to entice more people to come and walk. They noticed that the walking group tended to have more people on sunny days as opposed to rainier days. However, there was also understanding from some participants that sunny and hot weather would lead to other activities such as sunbathing as opposed to walking. When speaking to walk leaders they even suggested an element of risk to health of the participants on sun-filled and hot days. As shown by Margret in the following:

(Margret, walk leader) On the Thursday walk in that summer if it was really really hot. On my dynamic risk assessment I would write that down I would put risk of dehydration is really high. Because yeah, well isn't it isn't you never know You know, when people come to the watch. You never know how much they've already had to drink on a morning you know, they might have had not no water at all.

Other walk leaders advocated that ideal walking conditions were:

(Mary, walk leader) "A little bit in between. Not hot, not cold, temperatures where you would need a coat and it's obviously not pouring down and not windy. So just, in between. Just not too hot, because then it becomes hard work and your dehydrated"

Again, this supported that middling weather conditions were best for walking. Furthermore, when participants were asked on the day they were interviewed "what weather would be ideal for them?" a significant proportion of the sample tended to suggest that the weather they were experiencing at the moment was ideal.

(Olivia) "This is ideal weather, spring, late summer when it's when it's a red-hot summer. It's not very comfortable, but I still do it." (Weather conditions: 5 Degrees, no wind, slight sun with cloud)

(Venessa) Well this I mean is not bad today, but not too hot, no. (Weather description: 7 Degrees, cloudy, no wind, warm, grey)

There was some variation among these answers. Generally, the participants seemed happy to experience quite low temperatures that people from different localities may not have enjoyed experiencing (Tsutsui, 2013). Most participants alluded to the absence of heat, rain, and wind as ideal, something which has also been supported in the literature (Connolly, 2013; Gössling et al., 2016; Nascimento, 2019; Qu et al., 2021; Krekel and Mackerron, 2020; Van Tilburg et al., 2018; Nokelke et al., 2016; Kööts et al. 2011).

Although participants tended to prefer middling weather, it can be suggested that if this was the weather, they always experienced, this would cause discontent amongst the participants. This is because as indicated earlier, participants enjoyed intertwinement with the weather. If they continued to experience middling weather their intertwinements with the weather would be void of context. Thus, they would not be able to distinguish their personal connections to the weather. This is in the same way that happiness would have no meaning without a degree

of sadness. If participants continually stayed in the limbo of middling weather, they would not be able to contextualise their weather experiences.

Overall, some weather such as sunny weather would excite and entice people to want to walk, providing enjoyment along the way. However, the same weather would mean that some participants did not walk on that day. Conversely, middling weather provided conditions that most older adults could walk in, but if such weather were always prevalent contextualisation of the weather would be lost.

The Offerings of Winter Weather

It is known that the weather and different seasons significantly change areas. In the winter there then tends to be a significantly different landscape to that of summer, spring, or autumn. Within the ensuing section, I detail how participants in the study observed, sensed, and experienced such changes.

The participants indicated that the winter landscape provided increased visibility when walking in winter. This is not something that upon first thought one would associate with winter due to the increased likelihood of weather such as fog which would reduce visibility. However, the landscape was changed by the seasonality of winter and provided increased visibility as well as rare areas of place to be noticed. This is demonstrated in the following:

(Margret (Walk leader) "I was gonna say visibility in the Dene as well. It's really interesting how it changes over the year. I mean, because in the in the winter, you can see that you can stand right on the edge of the cliff and see right down to the viaduct all the way down to the coast. And standing on this side of the dean. You can see the castle from the other side, you can see like the castle wall, and we can't see any of that in the summer. No, no. So, I think it opens up. It makes the woodland field bigger in the winter. I've had this conversation with a lot of people, and they agree with me it's kind

of it just feels like a completely different place. Yeah. Whereas in the summer, when we put the leaves on the trees, it could be anywhere because you can't really see very far. It's quite disorientating. For a lot of people, I know. They, they kind of don't feel like they've got anywhere in the summer because they just constantly like in leaves and the trees.”

As vividly put by Margret the landscape of place in winter significantly changed and made the place seem completely different. Such changes in the landscape are due to weather and seasonality but it also changes how the weather is felt and experienced within place. Due to the absence of leaves on trees, more weather can penetrate the area. This means when participants are walking in place, they can feel the weather that they may not have been able to before. For example, without leaves on trees, more light can shine within an area, this means that participants will be able to feel the effects of the sun more whilst walking within a place. This shows that in winter not only can there be visual changes that change how areas are perceived but also changes how a place is experienced sensually.

This would also indicate that people enjoyed seeing the gradual changes in seasonality and all that it offers. This is something that was rare in an increasingly impatient world, where the weather and how it changes are often captured through “time-lapse cameras” (Adams-Hutcheson, 2020: 225). However, people who have seen areas throughout all seasonal changes, gradually, have a better understanding, knowledge, and connection to place.

This in mind, the way in which the older adults involved in this study sensed and felt the change in seasonality seemed to differ throughout their lifetime. Earlier on in the participants’ lives, they suggested how seasonality was inherently more defined into exact seasons (Spring, Summer, Autumn, and Winter). This would bring about typical and rather predictable weather for that period. This is shown in the following piece from John:

(John) “Well, what can I say, this time in life it's getting warmer, so therefore you aren't getting the winters that you used to get I mean when I was a child, I mean we had snow from November right through to March and snow used to be really deep. I mean I used to sledge, when I was younger, I used to sledge right through to march and this winter we have hardly had any snow, bit of frost, that's it... Well, it's for the better really, but it's not on the environment.”

Here John suggests how winter has become a lot milder over time with a noticeable absence of snow this winter. There were suggestions that weather now was absent from such distinctions and there are multiple variations of weather that can be experienced all year round. Understanding this phenom was complex as the weather in winter and in the UK has almost become less of a barrier allowing walking to continue and warm weather to be enjoyed. However, John and other participants did acknowledge that such weather was evidence of climate change. This in mind, older adults could be a useful tool for measuring rich accounts of felt differences in climate change. This was because older adults have seen the weather, change throughout the course of their lives and could provide in-depth accounts that detail how such change affect how people live within a weather-world.

This is endorsed by an understanding of the need to “reduce the distance between the enormity of climate change and the immediacy of our own flesh” (Neimans and Walker, 2014: 562), whereby climate change has little local resonance (Adams-Hutcheson, 2020: 227). Adapting to this may in turn provide “new pedagogical possibilities for developing a response to the climatic challenges ahead” (Rooney, 2018: 2) by applying a more human understanding that accompanies the vast quantities of statistics (Adams-Hutcheson, 2020).

There was no doubt that over time climate change had indeed changed the landscape of areas within East Durham, and this had implications for people when they are walking. In the winter

streams and rivers tend to fill up due to the increased rainfall in the winter periods. This provided different spectacles for people whilst they are walking but also affects the routes they can walk. Some participants indicated how when the streams and rivers are not there, they can walk up the paths as they are dried and absent of water, yet in winter this is not possible. However, this relationship was bi-directional, and the winter landscape offers some routes to be walked that are more overgrown in summer. In this way walking in winter was an inherently embodied experience that offered variety for people when they walked.

Such variety was added to when different elements of nature began to blossom such as the “snowdrop flowers.” This flower became a way in which people sensed the turning of the seasons from winter to spring and created activities such as “snowdrop walks.” People would actively walk to see the flowers; this was something that typically took place year after year. This shows how winter walking offered habitual movements whereby participant’s gained pleasure from routine (Phoenix and Tulle, 2017) showing how place was significant for peoples walking practices.

Furthermore, different elements of nature are visited or placed in different areas in the wintertime. For example, different birds came to visit, and the farmers changed what was in their fields in the winter providing an increased sense of pleasure and an enhanced awareness of natural beauty in local areas for those who walked (Phillips et al., 2011). This demonstrated how walking in winter weather provided significant detail to be observed, sensed, and experienced within place.

Chapter Six: Conclusion

This study has made four key contributions:

- Empirical contribution, increasing the limited knowledge surrounding the role of weather for older adults' winter walking practices.
- Applied contribution, in helping people who support older adults to be active in winter.
- Better understanding of partnership working between a University and Active Partnership.
- Finally, a methodological contribution through the use of "Creative Workshops" to understand peoples walking experiences in winter. These contributions will now be separated and explained in detail.

Empirical Contribution

At the beginning of this study, we knew that physical inactivity in East Durham increased with age (See, Table 2). It also seemed that the more affluent an area was the more likely they were to be active (Sport England, 2021a). We also knew the weather in winter was something that dissuaded older adults from being active (Gallagher et al., 2010; Li et al., 2013).

However, we knew very little about *how* the varied and combined elements that comprise winter weather (precipitation, ice, wind, sunlight, snow, temperature, fog) shape older adults' perceptions and experience of walking in winter. This relationship was bi-directional as not only can the weather shape experiences of walking, but equally, walking outdoors can influence how people experience and give meaning to weather. However, an understanding of this relationship was somewhat limited within research.

This research project addressed this lack of knowledge through researching the role that weather had for older adults' walking practices in East Durham. I have done this through conducting research in East Durham, analysing the data using reflexive thematic analysis and presenting the findings through four themes: (i) Winter Weather and Mental Health (ii)

Adapting to the Winter Weather, (iii) Constructing and Reinforcing Place Based Identities and finally (iv) Sensing the Weather.

The Winter Weather and Mental Health theme detailed firstly how walking outdoors helped people to deal with returning indoors. The theme progressed detailing how people who walked alone tended to have a greater appreciation of their surroundings and how the weather made them feel and what it looked like. This allowed participants to feel mentally relaxed. Finally, the theme discussed how people continued to be social in winter weather.

Participants in the study found it relatively easy to talk about the weather, the lure of being social often ensured people went out in weather they otherwise wouldn't have gone out in and whilst talking with others they became oblivious to the weather they were experiencing at the time.

The Adapting to the Winter Weather theme firstly detailed how rather unsurprisingly the winter weather worsened the terrain older adults had to walk on. Despite this older adults within the study wanted to continue walking on these terrains as this meant they were engaging with multiple environments. Older adults within the study seemingly adapted their walking practices to ensure they were able to continue walking in winter. Adapting to the weather was achievable through the participants geographically understanding their areas. This included understanding how the weather felt and what it would do to the landscape. The theme progressed to detail how people adapted through the use of winter clothing. Although the use of such clothing created discontent for some participants. Other participants also adapted through the use of walking poles that provided confidence for people when negotiating steep inclines or declines. Finally, participants in the study adapted to the weather by listening to their bodies and understating how they reacted to the winter weather conditions.

The third theme detailed how participants reinforced and constructed place based identities. This occurred through noticing winter weather within place. The participants noticed how traditionally wintry weather such as, wind, snow, and ice interacted with their surroundings. Such weather altered how place was perceived whilst simultaneously making place meaningful. The theme then progressed by discussing how outdoor walking sustained a connection to place. Participants in the study came to know the weather they experienced through comparing the weather they experienced to other locations. This demonstrated the relational nature of weather worlds. Older adults in the study seemed to defend the weather they experienced which in turn was a way of justifying and defending where they live as the weather was an important aspect of how they defined their sense of home. This was reinforced by the distinction between North and South. Historical stereotypes of the North East were reinforced through the weather people in the North experienced.

The fourth and final theme this firstly detailed how participants sensed the weather. By sensing the weather participants became one with the weather. Rather than the weather and person being separate they combined whilst walking to create an intertwinement between the person, and weather. This provided the participants with notions of pleasure. The participants in the study came to understand how they felt about the weather through this intertwinement. This allowed them to make decisions such as which weather they would walk in. The theme progressed by discussing idealised weather for walking in winter. Surprisingly, this was “middling” weather. This was weather that was not on either end of the scale, this type of weather was “not too hot” and “not raining or windy.” This type of weather provided conditions that most participants would walk in and was more likely to be encountered in winter. Finally, the theme detailed how older adults in the study had seen the weather change throughout their lifetime and understood how winter was much milder than previous years and the seasons were less defined.

Application of Knowledge

As explained earlier this project was part of partnership working between Durham University and County Durham Sport. This involved creating an academic thesis for Durham University and a non-academic facing report for County Durham Sport (See appendix, 5). The non-academic report was based on the research but was intended to be a public facing. As such, it was absent of academic jargon and went into less detail than the academic thesis. The non-academic report also included some recommendations for walk leaders. From this, County Durham Sport commissioned a 3-month full time role for me, with the objective of refining these recommendations. The resultant booklet (See appendix, 6) provides top tips for people who support older adults to be active in winter. It offers five top tips for walk leaders informed by the research findings, that aim to build upon the great work that walk leaders are already doing.

The recommendations will hopefully have a direct impact on helping walk leaders to achieve best practice. This may challenge walk leaders understanding of how older adults are active in winter. The overarching narrative to all of the recommendations was building the confidence of the walker to feel comfortable being able to walk in winter.

The booklet also details the immediate benefits of walking in winter and the physical benefits utilising quotes from the participants of the study throughout. The booklet also features the good work walk leaders are already doing and also provided signposting to corporations that help support older adults' physical activity in winter and towards training those challenges understanding and negative thinking around older age. In the coming months the booklet will be dispersed to numerous stakeholders in County Durham and across the UK, with the sole aim of improving older adults winter walking practices.

Partnership Working

This project developed understandings of partnership working between an Active Partnership (County Durham Sport) and a University (Durham University). Partnership working can lead be difficult and it has been deemed difficult to make partnerships succeed and add rather than to consume value (Hunter and Perkins, 2012). However, in this study I feel the collaboration between County Durham Sport and Durham University has added value and made an impact locally alongside adding to empirical understandings.

This was supported by the fact that the project was selected to display as a poster (See appendix, 7) for the Knowledge Exchange in Higher Education: implications for teaching and research' conference at Plymouth Marjon University. I now go on to reflect on some areas that were useful for successful partnership working.

Reflections on Key Considerations for Successful Partnership Working

1. Identifying a research area of mutual interest

It was useful to find out how a research area might be of interest to all parties involved in the potential research. Personally, I was interested in how weather affected, physical activity specifically in winter. My supervisor had an interest and expertise in ageing, active mobilities, everyday ageism, weather and wellbeing, coastal blue space, health and wellbeing. Furthermore, County Durham Sport, were keen to promote healthy, active lifestyles at all ages by influencing other local stakeholders (such as community groups and the council). Therefore, there was a mutual interest amongst all participants and the potential to deliver a project together. I presented two project ideas to County Durham Sport, who chose Winter Wonderland as the most useful to them at the time.

2. Building and maintaining relationships

This project undoubtedly benefited from the relationship between Durham University's Department of Sport and Exercise Sciences and County Durham Sport. Recently, County Durham sports managing director Maxine Rhoades was honoured with the title of professor in practice within Durham University's Department of Sport and Exercise Sciences (County Durham Sport, 2021c). County Durham Sport have offered financial support and local expertise across a range of projects that staff, and students are doing or applying for funding for. This has facilitated for County Durham's system thinking around physical activity to be revitalised.

Due such a relationship it was useful to establish someone within County Durham Sport as a sole contact point for this research project. In my project this person had a research background and experience/understanding of university, which was useful. Placing monthly recurring meetings that were seen as a "catch up" and a place to provide updates worked well. It was important that no party took over these meetings with one reporting to another and one-on-one meetings or phone calls could be made as frequent as needed.

It was important to utilise each other's strengths, as something difficult for one party was relatively easy for another and saved a lot of time. For example, County Durham Sport have strong local connections which assisted with finding participants for studies. Furthermore, County Durham Sports local connections, coupled with their knowledge of areas led to research being able to be promoted in areas, which alone I may not have been able to (See appendix, 8). Research was then completed utilising the strengths of researchers at Durham University such as excellent insights into creating interview questions that facilitate in-depth answers from participants.

We also used monthly reflection blog (See, appendix, 9) that centred around four questions:

- What's going well

- What's not going so well
- What have we learned from this
- Based on this learning what should we do in the future?

This was relatively short and took over no more than thirty minutes to complete. The blogs were useful for capturing insight into a research project, even any failings or learnings. It was hoped that when County Durham Sport supported Master's by Research students in the future they could read the reflection blogs and inform their procedures appropriately. For example, whilst doing data collection in the study I found it was useful to do rapport building techniques such as joining participants in a walking group for a coffee or tea after completing data collection with them. This helped the group to get used to me and more participants came forward to do interviews. This insight was captured in the reflection blogs and could be used in future studies funded by County Durham Sport.

3. Tailoring Communications about the Research for Different Audiences

Communicating ethics documents to potential participants was via a poster, a visual pack and face-to-face or phone-call conversations to make sure their questions are answered. It was important that ethics documents had to be easily deciphered by potential participants. This supports perhaps a bigger point around the importance of tone. It was important to be able to develop the skill of changing tone, throughout the project. Anything created for County Durham Sport and that was public facing had to be absent of academic jargon, concise, and user friendly. This was so that it was as easy for the readers.

However, the thesis produced for Durham University was more formal and able to go into significantly more depth. This was due to the understanding that other academics and researchers were likely to read to work and from that research and theory can develop. Such research and theory then help to explain why things happen the way they do. In the instance

of this project that was understanding the role the weather had for older adults' winter walking practices. This undoubtedly will also help future researchers to identify what is not currently known about a topic and ensure the steady progression of knowledge.

Both public facing documents, and academic work played a vital role in developing knowledge, with no one side being more important than the other. The fact that this project was able to contribute to both simultaneously was a true strength of the project.

4. Sharing knowledge and findings

Identifying who will benefit from this research, and how could it be best communicated to them. In the project this has included presentations, posters, reports, and discussions.

Different stakeholders will take different learnings from the project. Some stakeholders are interested directly in the value of walking in winter for older adults. Others are interested in the surrounding solutions, that could make this a reality. For example, which areas to grit which might help engagement of walking.

This is perhaps being shown currently through the use of creating the booklet for people who support older adults in winter. A key part of the role has been to communicate with a range of stakeholders in various forms of communication. Some partners will want online and digital copies, other will want physical copies. I will also be involved in dispersing some of the booklets to walk leaders and volunteers by attending walking groups and explaining what the booklet entails.

Overall, the project strived to make an applied and empirical contribution through partnership working. This was undoubtedly helped by how willing Durham University's Department of Sport and Exercise Sciences, County Durham Sport, and myself were to creating meaningful difference in the community. Two of County Durham Sport objectives were to be collaborative, and curious. The former regarding working effectively with partners to

challenge barriers to an active lifestyle. The latter regards to creating a learning organisation that is responsible to local need and works with local communities. This is underpinned by their evidence based approach to ensure that a healthy lifestyle is an option for all.

Durham University's Department for Sport and Exercise Sciences has similar values through leading research that helps to reduce inequalities and ensure better health and wellbeing within and through sport, exercise and physical activity. They do so, through combining research from numerous disciplines and working with local communities. This helps to transform people's lives, regionally, nationally, and globally.

Utilising the expertise in research at Durham University and the incredible local influence of County Durham Sport, I believe this project has made a meaningful and lasting impact, both academically and in a practical sense.

Methodological Contribution

This study also contributed to methodological understandings of how to use creative and innovative methodologies to generate insight into the intricacies of weather-ways (Bell et al., 2015; De Vet, 2013, 2017).

The creative workshop was a useful and valuable method that complimented the interviews conducted. The maps drew conveyed emotion through a mixture of people drawing their experiences of place (Giesecking, 2013). This was a valuable way to get participants involved in talking about their winter walking practices. This method recognised that some people felt more comfortable expressing themselves through art than through typical forms of communication. This in mind this method allowed some who may not otherwise have to contribute to the study. Furthermore, the group session provided an opportunity for participants to meet one another, many people spoke to or recognised each other through mutual friends. The session also allowed participants to understand fellow participants walking practices and

understand what was meaningful to them. Finally, the fact that the maps were produced by multiple participants in the group was a strength of the methodology. This is because what was included on the map was mostly agreed upon by the participants and therefore provided an overall feel for what was important to the participants and for walking in winter.

Concluding Comments

To conclude, this study has recognised the inherent complexity in how the weather, person, and place interacts which effect how participants were physically active with a place. It is hoped that this study has furthered knowledge surrounding older adults walking practices and the embodied experiences of walking in winter weather. It is also hoped that through the non-academic facing report and further work that this project can have a lasting impact at improving older adults walking practices both regionally, and nationally making walking more accessible all year round.

As the study was set up to understand the role of the weather for older adults walking practices this meant that we got more of a response from participants who already walked in winter. This was incredibly useful for being able to understand the role of the weather for participants and how it affected them whilst walking. However, this also meant that the barriers to why people weren't physically active in winter was discussed less. Future research would do well to focus specifically on the reasoning behind why people tend to be less active in winter. This may include marketing the project completely away from titles containing "walking" and perhaps more toward simply talking about their feelings for the weather in winter.

References:

AccuWeather, (2022). *How AccuWeather became a trusted brand for superior accuracy*. Available at: <https://www.accuweather.com/en/weather-news/accuweather-celebrates-60-years-of-superior-forecasting/1243866#:~:text=AccuWeather%20serves%20more%20than%2045,thousands%20of%20websites%20and%20apps>. (Accessed 25 April 2022).

Active Lives Adult Survey, (2021). *Active Lives Adults Survey November 2020-2021 Report*. Available at: https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/2022-04/Active%20Lives%20Adult%20Survey%20November%2020-21%20Report.pdf?VersionId=nPU_v3jFjwG8o_xnv62FcK0dEiVmRWcb (Accessed 31 January, 2022).

Adams, R.J., Appleton, S.L., Taylor, A.W., Gill, T.K., Lang, C., McEvoy, R.D. and Antic, N.A., (2017). Sleep health of Australian adults in 2016: results of the 2016 Sleep Health Foundation national survey. *Sleep health*, 3(1), pp.35-42.

Adams-Hutcheson, G., 2020. Dwelling and weather: Farming in a mobilised climate. In *Weather: Spaces, Mobilities and Affects* (pp. 222-235). Routledge.

Adey, D., Bissell, K., Hannam, P., Merriman, Sheller, M., (2013). *The Routledge Handbook of Mobilities*. Routledge, London. (Accessed 29 May 2021).

Age UK, (2021) Impact of Covid-19 on older people's mental and physical health: one year on. Available at: [impact-of-covid-19-on-older-peoples-health_one-year-on_July_2021.pdf](https://www.ageuk.org.uk/information-advice/health-wellbeing/exercise/walking-tips-advice/) (Accessed 5 January 2022).

Age UK, 2022, *Walking tips and advice for older people*. Available at: <https://www.ageuk.org.uk/information-advice/health-wellbeing/exercise/walking-tips-advice/>

Albert, S. and Kessler, S., 1978. Ending social encounters. *Journal of experimental social psychology*, 14(6), pp.541-553.

Allen-Collinson, J., (2018). 'Weather work': embodiment and weather learning in a national outdoor exercise programme. *Qualitative Research in Sport, Exercise and Health*, 10(1), pp.63-74. (Accessed 7 June, 2021).

Allen-Collinson, J., Jennings, G., Vaittinen, A. and Owton, H., 2019. Weather-wise? Sporting embodiment, weather work and weather learning in running and triathlon. *International Review for the Sociology of Sport*, 54(7), pp.777-792.

Anderson, J and Peters, K (2014). 'A perfect and absolute blank': human geographies of water worlds. In: Anderson, J and Peters, K (Eds.), *Water Worlds: Human Geographies of the Ocean* (pp. 3-19). Ashgate, Farnham, Burlington.

Anderson, J. and Jones, K., 2009. The difference that place makes to methodology: Uncovering the 'lived space' of young people's spatial practices. *Children's Geographies*, 7(3), pp.291-303.

- Arthur, S. and Nazroo, J., 2003. Designing fieldwork strategies and materials. *Qualitative research practice: A guide for social science students and researchers*, 1, pp.109-137.
- Asthma And Allergy Foundation of America, (2022). Weather Can Trigger Asthma. Available at: <https://www.aafa.org/weather-triggers-asthma/#:~:text=Heat%20and%20Humidity,the%20air%20irritate%20sensitive%20airways.>
- Ball, K., Abbott, G., Wilson, M., Chisholm, M. and Sahlqvist, S., 2017. How to get a nation walking: reach, retention, participant characteristics and program implications of Heart Foundation Walking, a nationwide Australian community-based walking program. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1), pp.1-10.
- Bank My Cell. (2022) HOW MANY SMARTPHONES ARE IN THE WORLD? June 2022 Mobile User Statistics: Discover the Number of Phones in The World & Smartphone Penetration by Country or Region. Available at: <https://www.bankmycell.com/blog/how-many-phones-are-in-the-world> (Accessed 8 June 2022).
- Barnett, C., 2016. *Rain: A natural and cultural history*. Crown.
- Barnett, I., van Sluijs, E.M. and Ogilvie, D., 2012. Physical activity and transitioning to retirement: a systematic review. *American journal of preventive medicine*, 43(3), pp.329-336.
- Barnett, K., Mercer, S., Norbury, M., Watt, G., Wyke, S., and Guthrie, B. (2012) “Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study”. *The Lancet*. Volume 380, Issue 9836. pp. 37-43. (Accessed 29 January 2022).
- BBC. (2022) BBC, News. Available at: <https://www.bbc.co.uk/news/uk-england-tyne-62077981>
- Beauchet, O., Annweiler, C., Dubost, V., Allali, G., Kressig, R.W., Bridenbaugh, S., Berrut, G., Assal, F. and Herrmann, F.R., 2009. Stops walking when talking: a predictor of falls in older adults?. *European journal of neurology*, 16(7), pp.786-795.
- Beecher, M.E., Eggett, D., Erekson, D., Rees, L.B., Bingham, J., Klundt, J., Bailey, R.J., Ripplinger, C., Kirchhoefer, J., Gibson, R. and Griner, D., 2016. Sunshine on my shoulders: Weather, pollution, and emotional distress. *Journal of affective disorders*, 205, pp.234-238.
- Bell, S, Leyshon, C and Phoenix, C (2019). Negotiating nature’s weather worlds in the context of life with sight impairment. *Transactions of the Institute of British Geographers*, 44(2): 270–283.
- Bell, S. L., Phoenix, C., Lovell, R., & Wheeler, B. W. (2015). Using GPS and geo-narratives: a methodological approach for understanding and situating everyday green space encounters. *Area*, 47, pp.88– 96. (Accessed 1 June 2021).
- Benloucif, S., Orbeta, L., Ortiz, R., Janssen, I., Finkel, S.I., Bleiberg, J. and Zee, P.C., (2004). Morning or evening activity improves neuropsychological performance and subjective sleep quality in older adults. *Sleep*, 27(8), pp.1542-1551.
- Bergen, G., Stevens, M.R. and Burns, E.R., 2016. Falls and fall injuries among adults aged ≥ 65 years—United States, 2014. *Morbidity and Mortality Weekly Report*, 65(37), pp.993-998.

- Berger, R., 2015. Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative research*, 15(2), pp.219-234.
- Bianchi, C. and Smith, A.D., 2019. Localized Actual Meteorological Year File Creator (LAF): A tool for using locally observed weather data in building energy simulations. *SoftwareX*, 10, p.2
- Blandford, A.E., 2013. Semi-structured qualitative studies. *Interaction Design Foundation*.
- Blondell, S.J., Hammersley-Mather, R. and Veerman, J.L., (2014). Does physical activity prevent cognitive decline and dementia?: A systematic review and meta-analysis of longitudinal studies. *BMC public health*, 14(1), pp.1-12.
- Borovnik, M., 2020. Seafarers and weather. In *Weather: Spaces, Mobilities and Affects* (pp. 95-110). Routledge.
- Boyd, F., White, M.P., Bell, S.L. and Burt, J., 2018. Who doesn't visit natural environments for recreation and why: A population representative analysis of spatial, individual and temporal factors among adults in England. *Landscape and Urban Planning*, 175, pp.102-113.
- Bracken, S., (2010). Discussing the Importance of Ontology and Epistemology Awareness in Practitioner Research. *Worcester Journal of learning and teaching*, (4).
- Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), pp.77-101.
- Braun, V. and Clarke, V., 2013. *Successful qualitative research: A practical guide for beginners*. sage.
- Braun, V. and Clarke, V., 2021. One size fits all? What counts as quality practice in (reflexive) thematic analysis?. *Qualitative research in psychology*, 18(3), pp.328-352.
- Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2019). Thematic analysis. In P. Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences* (pp. 843-860). Springer.
- Braun, V., Clarke, V., Weate, P. (2016). "Using thematic analysis in sport and exercise research." In London: Sage. *Routledge Handbook of Qualitative Research in Sport and Exercise*, edited by Brett Smith, and Andrew C. Sparkes, Taylor & Francis Group, 2016. *ProQuest Ebook Central*. (Accessed 1 May 2021).
- Brinkmann, S., 2013. *Qualitative interviewing*. Oxford university press.
- Brosse A, Sheets E, Lett H, Blumenthal J. (2002) Exercise and the treatment of clinical depression in adults: recent findings and future directions. *Sports Med*. 32(12). pp. 741–60
- Brown S (2013) Sitting is the problem, not just lack of exercise. *Menopause International* 19(2): 56– 57.
- Burke, S. (2016). "Rethinking 'validity' and 'trustworthiness' in qualitative inquiry: How might we judge the quality of qualitative research in sport and exercise sciences?" In B. Smith & A. C. Sparkes (Eds.), *Routledge handbook of qualitative research in sport and exercise* (pp. 330–339). London: Routledge.

Burnes, D., Sheppard, C., Henderson Jr, C.R., Wassel, M., Cope, R., Barber, C. and Pillemer, K., 2019. Interventions to reduce ageism against older adults: A systematic review and meta-analysis. *American Journal of Public Health*, 109(8), pp.e1-e9.

Bustamante, G., Guzman, V., Kobayashi, L.C. and Finlay, J., 2022. Mental health and well-being in times of COVID-19: A mixed-methods study of the role of neighborhood parks, outdoor spaces, and nature among US older adults. *Health & Place*, 76, p.102813.

Callow, D.D., Arnold-Nedimala, N.A., Jordan, L.S., Pena, G.S., Won, J., Woodard, J.L. and Smith, J.C., 2020. The mental health benefits of physical activity in older adults survive the COVID-19 pandemic. *The American Journal of Geriatric Psychiatry*, 28(10), pp.1046-1057.

Cambridge English Dictionary, (2022). *Meaning of weather in English*. Available at: <https://dictionary.cambridge.org/dictionary/english/weather> (Accessed, 20 April, 2022).

Carpiano, R.M., 2009. Come take a walk with me: The “Go-Along” interview as a novel method for studying the implications of place for health and well-being. *Health & place*, 15(1), pp.263-272.

Caspersen, C. J., Powell, K. E., and Christenson, G. M. (1985). Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. *Public Health Rep.* 100, pp.126–13. (Accessed 7 June 2021).

Centres for Disease Control and Prevention (CDC) (2022) *COVID-19 Recommendations for Older Adults*. Available at: [Alzheimer's Disease and Healthy Aging](#). (Accessed 4 January 2022).

Chambers, L.E., Plotz, R.D., Dossis, T., Hiriasia, D.H., Malsale, P., Martin, D.J., Mitiepo, R., Tahera, K. and Tofaeono, T.I., 2017. A database for traditional knowledge of weather and climate in the Pacific. *Meteorological Applications*, 24(3), pp.491-502.

Chang, E.S., Kanno, S., Levy, S., Wang, S.Y., Lee, J.E. and Levy, B.R., 2020. Global reach of ageism on older persons' health: A systematic review. *PloS one*, 15(1), p.e0220857.

Chippendale, T. and Lee, C.D., 2018. Characteristics and fall experiences of older adults with and without fear of falling outdoors. *Aging & Mental Health*, 22(6), pp.849-855.

Clarke, P.J., Yan, T., Keusch, F. and Gallagher, N.A., 2015. The impact of weather on mobility and participation in older US adults. *American Journal of Public Health*, 105(7), pp.1489-1494.

Clayton, S., 2020. The insidious impacts of climate change: Mood, mental health, and psychosocial well-being. *One Earth*, 2(6), pp.530-531.

Clemet, S. (2020) Walking with the rain. Sensing mobility on-foot. In Barry, K., Borovnik, M., & Edensor, T. (ed.) *Weather : Spaces, mobilities and affects*. pp.66-72. (Accessed 21 may 2021).

Coen, S.E., Tillmann, S., Ergler, C.R., McGuire, C. and Gilliland, J.A., 2018. Playing with poetry: Poetic representation of research in children's geographies of nature and adventurous play. *GeoHumanities*, 4(2), pp.557-575.

Collieries, (2022). Available at: <https://co-curate.ncl.ac.uk/collieries/>

- Connolly, M., 2013. Some like it mild and not too wet: The influence of weather on subjective well-being. *Journal of Happiness Studies*, 14(2), pp.457-473.
- Corazon, S.S., Gramkov, M.C., Poulsen, D.V., Lygum, V.L., Zhang, G. and Stigsdotter, U.K., 2019. I would really like to visit the forest, but it is just too difficult: A qualitative study on mobility disability and green spaces. *Scandinavian Journal of Disability Research*, 21(1).
- County Durham Sport, (2021a) *About us*. Available at: <https://www.countydurhamsport.com/about-us/> (Accessed 27 May 2021).
- County Durham Sport, (2021b) *Understanding inequalities*. Available at: [Understanding County Durham \(arcgis.com\)](https://www.countydurhamsport.com/arcgis.com) (Accessed 27 May 2021).
- County Durham Sport, (2021c) *County Durham Sport Managing Director honoured with Professor in Practice*. Available at: <https://countydurhamsport.com/news/cds-managing-director-honoured-with-pip/> (Accessed 1 December 2022).
- Cunningham, C., O'Sullivan, R., Caserotti, P. and Tully, M.A., 2020. Consequences of physical inactivity in older adults: A systematic review of reviews and meta-analyses. *Scandinavian journal of medicine & science in sports*, 30(5), pp.816-827.
- Curl, A., Tilley, S. and Van Cauwenberg, J., 2018. Walking with older adults as a geographical method. In *Geographies of transport and ageing* (pp. 171-195). Palgrave Macmillan, Cham.
- Curry, D., (2022). Strava Revenue and Usage Statistics (2022). *Business of Apps*. Available at: <https://www.businessofapps.com/data/strava-statistics/>
- Das P and Horton R (2012) Rethinking our approach to physical activity. *The Lancet* 380(9838): 189– 190.
- De Biase, S., Cook, L., Skelton, D.A., Witham, M. and Ten Hove, R., 2020. The COVID-19 rehabilitation pandemic. *Age and ageing*, 49(5), pp.696-700.
- De Sario, M., Katsouyanni, K. and Michelozzi, P., 2013. Climate change, extreme weather events, air pollution and respiratory health in Europe. *European Respiratory Journal*, 42(3), pp.826-843.
- De Vet, E., (2013). Exploring weather-related experiences and practices: examining methodological approaches. *Area*, 45(2), pp.198-206. (Accessed 10 June 2021).
- De Vet, E., 2017. Experiencing and responding to everyday weather in Darwin, Australia: The important role of tolerance. *Weather, Climate, and Society*, 9(2), pp.141-154.
- Denzin, N. and Lincoln, Y., 2005. *The Sagen Handbook of Qualitative Research*.
- Denzin, N.K., 2017. Critical qualitative inquiry. *Qualitative inquiry*, 23(1), pp.8-16.
- Dixon, B.J., Sherlock, J.M., Cornwell, W.K. and Kasumovic, M.M., 2018. Contest competition and men's facial hair: beards may not provide advantages in combat. *Evolution and Human Behavior*, 39(2), pp.147-153.

- Do Nascimento, A., 2019. "Rain, Rain, Go Away!" Engaging Rain Pedagogies in Practices With Children: From Water Politics to Environmental Education. *Journal of childhood studies*, pp.42-55.
- Dodgson, J.E., 2019. Reflexivity in qualitative research. *Journal of Human Lactation*, 35(2), pp.220-222.
- Dunn, R.A., Shaw, W.D. and Trousdale, M.A., 2012. The effect of weather on walking behavior in older adults. *Journal of Aging and Physical Activity*, 20(1), pp.80-92.
- Durham University, (2022) Durham Weather. Available at: <https://durhamweather.webspace.durham.ac.uk/>
- Ebi, K.L., Vanos, J., Baldwin, J.W., Bell, J.E., Hondula, D.M., Errett, N.A., Hayes, K., Reid, C.E., Saha, S., Spector, J. and Berry, P., 2021. Extreme weather and climate change: Population health and health system implications. *Annual review of public health*, 42, pp.293-315.
- Eden, P. 1995. *Weatherwise*. London: Macmillan.
- Edensor, T., 2020. Seeing with Australian light: Representations and landscapes. In *Weather: Spaces, Mobilities and Affects* (pp. 145-158). Routledge.
- Edensor, T., Barry, K., and Borovnik, M. (2021) "Introduction. Placing weather". In Barry, K., Borovnik, M., & Edensor, T. (ed.) *Weather : Spaces, mobilities and affects*. pp.16. (Accessed 21 May 2021).
- Edwards, J. (2022) *East Durham Physical Activity and Wellbeing Mapping*. Lucidity Solutions Project Report 2022. Available at: [EastDurhamMapping_FullReport.pdf](#) (Accessed 5 January 2022).
- Ellmers, T.J., Wilson, M.R., Norris, M. and Young, W.R., 2022. Protective or harmful? A qualitative exploration of older people's perceptions of worries about falling. *Age and ageing*, 51(4), p.afac067.
- Elwood, S.A. and Martin, D.G., 2000. "Placing" interviews: location and scales of power in qualitative research. *The professional geographer*, 52(4), pp.649-657.
- Endfield, G., 2011. Reculturing and particularizing climate discourses: weather, identity, and the work of Gordon Manley. *Osiris*, 26(1), pp.142-162.
- Engberg, E., Alen, M., Kukkonen-Harjula, K., Peltonen, J.E., Tikkanen, H.O. and Pekkarinen, H., 2012. Life events and change in leisure time physical activity. *Sports medicine*, 42(5), pp.433-447.
- Ettema, D., Friman, M., Olsson, L.E. and Gärling, T., 2017. Season and weather effects on travel-related mood and travel satisfaction. *Frontiers in psychology*, 8, p.140.
- Evans, A.B., Barker-Ruchti, N., Blackwell, J., Clay, G., Dowling, F., Frydendal, S., Gliemann Hybholt, M., Hausken-Sutter, S.E., Lenneis, V., Malcolm, D. and Phoenix, C., 2021. Qualitative research in sports studies: challenges, possibilities and the current state of play. *European Journal for Sport and Society*, 18(1), pp.1-17.

- Evans, J. and Jones, P., 2011. The walking interview: Methodology, mobility and place. *Applied geography*, 31(2), pp.849-858.
- Finlay, J.M. and Bowman, J.A., 2017. Geographies on the move: A practical and theoretical approach to the mobile interview. *The Professional Geographer*, 69(2), pp.263-274.
- Foley, R., Bell, S.L., Gittins, H., Grove, H., Kaley, A., McLauchlan, A., Osborne, T., Power, A., Roberts, E. and Thomas, M., 2020. “Disciplined research in undisciplined settings”: Critical explorations of in situ and mobile methodologies in geographies of health and wellbeing. *Area*, 52(3), pp.514-522.
- Fox, K., 2014. *Watching the English: the hidden rules of English behavior revised and updated*. Nicholas Brealey.
- Freburger, J.K., Callahan, L.F., Shreffler, J.H. and Mielenz, T.J., (2010). The effects of a physical activity program on sleep-and health-related quality of life in older persons with arthritis. *Journal of applied gerontology*, 29(4), pp.395-414.
- Gallagher, N.A., Gretebeck, K.A., Robinson, J.C., Torres, E.R., Murphy, S.L. and Martyn, K.K., (2010). Neighborhood factors relevant for walking in older, urban, African American adults. *Journal of aging and physical activity*, 18(1), pp.99-115. (Accessed 28 May 2021).
- García, B., Welford, J. and Smith, B., 2016. Using a smartphone app in qualitative research: The good, the bad and the ugly. *Qualitative Research*, 16(5), pp.508-525.
- Gazibara, T., Kurtagic, I., Kistic-Tepavcevic, D., Nurkovic, S., Kovacevic, N., Gazibara, T. and Pekmezovic, T., 2017. Falls, risk factors and fear of falling among persons older than 65 years of age. *Psychogeriatrics*, 17(4), pp.215-223.
- Giesecking, J.J., 2013. Where we go from here: The mental sketch mapping method and its analytic components. *Qualitative Inquiry*, 19(9), pp.712-724.
- Gill, D.L., 2011. Beyond the qualitative–quantitative dichotomy: notes from a non-qualitative researcher. *Qualitative research in sport, exercise and health*, 3(3), pp.305-312.
- Gössling, S., Abegg, B. and Steiger, R., 2016. “It was raining all the time!”: ex post tourist weather perceptions. *Atmosphere*, 7(1), p.10.
- Granderson, A.A., 2017. The role of traditional knowledge in building adaptive capacity for climate change: Perspectives from Vanuatu. *Weather, Climate, and Society*, 9(3), pp.545-561.
- Grant, G., Machaczek, K., Pollard, N. and Allmark, P., 2017. Walking, sustainability and health: findings from a study of a walking for health group. *Health & social care in the community*, 25(3), pp.1218-1226.
- Grove, J., 2017. Researching a marginalised group: Reflections on being an outsider. *Counselling and Psychotherapy Research*, 17(3), pp.176-180.
- Guure, C.B., Ibrahim, N.A., Adam, M.B. and Said, S.M., (2017). Impact of physical activity on cognitive decline, dementia, and its subtypes: meta-analysis of prospective studies. *BioMed research international*, 2017. pp.1-13.

- Hall, C.M., 2014. Will climate change kill Santa Claus? Climate change and high-latitude Christmas place branding. *Scandinavian Journal of Hospitality and Tourism*, 14(1), pp.23-40.
- Hand, C.L., Rudman, D.L., Huot, S., Gilliland, J.A. and Pack, R.L., 2018. Toward understanding person–place transactions in neighborhoods: a qualitative-participatory geospatial approach. *The Gerontologist*, 58(1), pp.89-100.
- Hanson, S., Guell, C. and Jones, A., 2016. Walking groups in socioeconomically deprived communities: A qualitative study using photo elicitation. *Health & Place*, 39, pp.26-33.
- Harley, T.A., 2003. Nice weather for the time of year: the British obsession with the weather. *Weather, climate, culture*, pp.103-118.
- Harris, J., 2016. Utilizing the walking interview to explore campus climate for students of color. *Journal of Student Affairs Research and Practice*, 53(4), pp.365-377.
- Higgs, P. and Gilleard, C., 2015. Fitness and consumerism in later life. In *Physical activity and sport in later life* (pp. 32-42). Palgrave Macmillan, London.
- Horn, R., 2007. *Weather reports you*. Steidl. pp.9.
- Hoskins, G., 2020. 9 Making the Santa Ana wind legible. *Weather: Spaces, Mobilities and Affects*.
- Hughes, A. (2021). “BLEAK MIDWINTER Millions of adults ‘dreading’ winter as their physical activity will reduce, study finds”. *The Sun*. Available at: <https://www.thesun.co.uk/health/16731541/millions-of-adults-dreading-winter/>
- Hulme, M., 2008. Geographical work at the boundaries of climate change. *Transactions of the Institute of British Geographers*, 33(1), pp.5-11.
- Hulme, M (2017). *Weathered: Cultures of Climate*. London: Sage. pp.3. (Accessed 1 June 2021).
- Hunter, R.F., De Silva, D., Reynolds, V., Bird, W. and Fox, K.R., 2015. International inter-school competition to encourage children to walk to school: a mixed methods feasibility study. *BMC Research Notes*, 8(1), pp.1-11.
- Hunter, D. and Perkins, N., 2012. Partnership working in public health: the implications for governance of a systems approach. *Journal of health services research & policy*, 17(2_suppl), pp.45-52.
- iNews, (2018) 10 funny tweets that prove northerners are nailing snowmageddon. Available at: <https://inews.co.uk/light-relief/jokes/northerners-tweets-snowmageddon-130846>
- Ingold, T (2005). The eye of the storm: visual perception and the weather. *Visual Studies*, 20(1): 97–104.
- Ingold, T (2007). Earth, sky, wind, and weather. *Journal of the Royal Anthropological Institute*, N.S.13(1): S19–S38.
- Ingold, T. (2011) *Being alive: essays on movement, knowledge and description*. London ; New York: Routledge.

- Jensen, M.T. and Gyimóthy, S., 2020. Snow matters: From romantic background to creative playground in alpine tourist practices. In *Weather: Spaces, Mobilities and Affects* (pp. 111-129). Routledge.
- Jones, P.I., 2014. Performing sustainable transport: an artistic RIDE across the city. *cultural geographies*, 21(2), pp.287-292.
- Kämpfer, S. and Mutz, M., 2013. On the sunny side of life: Sunshine effects on life satisfaction. *Social Indicators Research*, 110(2), pp.579-595.
- Kassavou, A., Turner, A. and French, D.P., 2015. The role of walkers' needs and expectations in supporting maintenance of attendance at walking groups: a longitudinal multi-perspective study of walkers and walk group leaders. *PLoS One*, 10(3), p.e0118754.
- Kelly, M. (2015) ChronicleLive. Available at: <https://www.chroniclive.co.uk/news/history/north-east-lost-railway-stations-8941567>
- Kelly, P., Baker, G., Niven, A., Cooper, J., Hart, N., Martin, J., Strain, T. and Mutrie, N., 2019. Barriers and Facilitators to Recreational Walking: An Evidence Review.
- Kelly, P., Murphy, M. and Mutrie, N., 2017. The health benefits of walking. In *Walking*. Emerald Publishing Limited.
- Kettle, H. (2019) *The Travel*. Available at: <https://www.thetravel.com/england-north-south-differences-surprise-americans-visitors/> (Accessed 1 September 2022).
- Kimura, T., Kobayashi, H., Nakayama, E. and Kakihana, W., 2015. Seasonality in physical activity and walking of healthy older adults. *Journal of physiological anthropology*, 34(1), pp.1-6.
- Klimstra, T.A., Frijns, T., Keijsers, L., Denissen, J.J., Raaijmakers, Q.A., Van Aken, M.A., Koot, H.M., Van Lier, P.A. and Meeus, W.H., 2011. Come rain or come shine: individual differences in how weather affects mood. *Emotion*, 11(6), p.1495.
- Knopman, D.S., DeKosky, S.T., Cummings, J.L., Chui, H., Corey-Bloom, J., Relkin, N., Small, G.W., Miller, B. and Stevens, J.C., (2001). Practice parameter: diagnosis of dementia (an evidence-based review): report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology*, 56(9), pp.1143-1153.
- Kööts, L., Realo, A. and Allik, J., 2011. The influence of the weather on affective experience. *Journal of individual differences*.
- Krekel, C. and MacKerron, G., 2020. How environmental quality affects our happiness. *World happiness report*, pp.95-112.
- Kritz, M., Thøgersen-Ntoumani, C., Mullan, B., Stathi, A. and Ntoumanis, N., 2020. "It's better together": A nested longitudinal study examining the benefits of walking regularly with peers versus primarily alone in older adults. *Journal of aging and physical activity*, 29(3), pp.455-465.
- Kusenbach, M., 2003. Street phenomenology: The go-along as ethnographic research tool. *Ethnography*, 4(3), pp.455-485.

Legard, R., Keegan, J., and Ward, K. (2003). In depth interviews. In Ritchie, J., Lewis, J., Nicholls, C.M. and Ormston, R. eds., 2013. *Qualitative research practice: A guide for social science students and researchers*. sage.

Leung, K.M., Ou, K.L., Chung, P.K. and Thøgersen-Ntoumani, C., 2021. Older adults' perceptions toward walking: A qualitative study using a social-ecological model. *International Journal of Environmental Research and Public Health*, 18(14), p.7686.

Levers, M.J.D., 2013. Philosophical paradigms, grounded theory, and perspectives on emergence. *Sage Open*, 3(4), pp. 2.

Levy, B.R. and Leifheit-Limson, E., 2009. The stereotype-matching effect: greater influence on functioning when age stereotypes correspond to outcomes. *Psychology and aging*, 24(1), p.230.

Li, Y., Hsu, J.A. and Fernie, G., (2013). Aging and the use of pedestrian facilities in winter—the need for improved design and better technology. *Journal of urban health*, 90(4), pp.602-617. (Accessed 28 May 2021).

Live Longer Better (2022). *Home*. Available at: <https://www.livelongerbetter.uk/> (Accessed 14 April, 2022).

Livingston, G., Huntley, J., Sommerlad, A., Ames, D., Ballard, C., Banerjee, S., Brayne, C., Burns, A., Cohen-Mansfield, J., Cooper, C. and Costafreda, S.G., (2020). Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *The Lancet*, 396(10248), pp.413-446.

Lü, J., Fu, W. and Liu, Y., 2016. Physical activity and cognitive function among older adults in China: a systematic review. *Journal of sport and health science*, 5(3), pp.287-296.

Lucas, R.E. and Lawless, N.M., 2013. Does life seem better on a sunny day? Examining the association between daily weather conditions and life satisfaction judgments. *Journal of personality and social psychology*, 104(5), p.872.

Lunceford, B., 2010. Clothes make the person? Performing gender through fashion. *Communication Teacher*, 24(2), pp.63-68.

Ma, X., 2021. Ending on a high note: The “hockey stick” graph of managerial tone within earnings conference calls. Temple University.

Madureira, M.M., Takayama, L., Gallinaro, A.L., Caparbo, V.F., Costa, R.A. and Pereira, R.M., 2007. Balance training program is highly effective in improving functional status and reducing the risk of falls in elderly women with osteoporosis: a randomized controlled trial. *Osteoporosis international*, 18(4), pp.419-425.

Maloney, A., 2017. *And Now, The Weather...: A celebration of our national obsession*. Random House.

Martin, L., White, M.P., Hunt, A., Richardson, M., Pahl, S. and Burt, J., 2020. Nature contact, nature connectedness and associations with health, wellbeing and pro-environmental behaviours. *Journal of Environmental Psychology*, 68, p.101389.

- Mason, J. and Davies, K., 2009. Coming to our senses? A critical approach to sensory methodology. *Qualitative research*, 9(5), pp.587-603.
- Massie, A.S. and Meisner, B.A., 2019. Perceptions of aging and experiences of ageism as constraining factors of moderate to vigorous leisure-time physical activity in later life. *Loisir et Société/Society and Leisure*, 42(1), pp.24-42.
- May, V. and Lewis, C., 2020. Researching embodied relationships with place: rehabilitating the sit-down interview. *Qualitative Research*, 20(2), pp.127-142.
- McPhee, J.S., French, D.P., Jackson, D., Nazroo, J., Pendleton, N., and Degens, H. (2016) Physical activity in older age: perspectives for healthy ageing and frailty. *Biogerontology* 17, pp. 567–580. (Accessed 4 January 2022).
- Menkin, J.A., Smith, J.L. and Bihary, J.G., 2022. Brief anti-ageism messaging effects on physical activity motivation among older adults. *Journal of Applied Gerontology*, 41(2), pp.478-485.
- Merchant, S., 2017. The promise of creative/participatory mapping practices for sport and leisure research. *Leisure Studies*, 36(2), pp.182-191.
- Met Office, (2015). *How valuable is the Met Office?* Available at: <https://www.metoffice.gov.uk/about-us/what/pws/value> (Accessed 25 April 2022)
- Met Office. (2022a). Looking after your mental health through the winter. Available at: <https://www.metoffice.gov.uk/weather/warnings-and-advice/seasonal-advice/health-wellbeing/winter-and-mental-health>
- Met Office, (2022b). UK storm centre. Available at: <https://www.metoffice.gov.uk/weather/warnings-and-advice/uk-storm-centre/index> (Accessed 30 May 2022).
- Met Office, (2022c). Storms Dudley, Eunice, and Franklin, February 2022. Available at: https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/weather/learn-about/uk-past-events/interesting/2022/2022_02_storms_dudley_eunice_franklin.pdf (Accessed 30 May 2022).
- Met Office, (2022d) Our Seasons. Available at: <https://www.metoffice.gov.uk/weather/learn-about/met-office-for-schools/other-content/other-resources/our-seasons>
- Met Office, (2022e) What are the windiest parts of the UK. Available at: <https://www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/wind/windiest-place-in-uk>
- Met Office, (2022f) UK regional climates. Available at: <https://www.metoffice.gov.uk/research/climate/maps-and-data/regional-climates/index> (Accessed 1 September 2022).
- Met Office, (2022g) Mountain Safety. Available at: <https://www.metoffice.gov.uk/weather/guides/mountain/video>
- Middelkoop, H.A., Smilde-van den Doel, D.A., Neven, A.K., Kamphuisen, H.A. and Springer, C.P., (1996). Subjective sleep characteristics of 1,485 males and females aged 50–

93: effects of sex and age, and factors related to self-evaluated quality of sleep. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 51(3), pp.M108-M115.

Middleton, J., Cunsolo, A., Jones-Bitton, A., Shiwak, I., Wood, M., Pollock, N., Flowers, C. and Harper, S.L., 2020. "We're people of the snow:" Weather, climate change, and Inuit mental wellness. *Social Science & Medicine*, 262, p.113137.

Mikton, C., de la Fuente-Núñez, V., Officer, A. and Krug, E., 2021. Ageism: a social determinant of health that has come of age. *The Lancet*, 397(10282), pp.1333-1334.

Ministry of Housing, Communities, and Local Government, (IMD) (2019). The English Indices of Deprivation. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/833959/IOD2019_Infographic.pdf

Miranda-Moreno, L.F. and Nosal, T., 2011. Weather or not to cycle: Temporal trends and impact of weather on cycling in an urban environment. *Transportation research record*, 2247(1), pp.42-52.

Moran, M., Van Cauwenberg, J., Hercky-Linnewiel, R., Cerin, E., Deforche, B. and Plaut, P., 2014. Understanding the relationships between the physical environment and physical activity in older adults: a systematic review of qualitative studies. *International journal of behavioral nutrition and physical activity*, 11(1), pp.1-12.

Morency, P., Voyer, C., Burrows, S. and Goudreau, S., 2012. Outdoor falls in an urban context: winter weather impacts and geographical variations. *Canadian journal of public health*, 103(3), pp.218-222.

Morris, S., Guell, C. and Pollard, T.M., 2019. Group walking as a "lifeline": Understanding the place of outdoor walking groups in women's lives. *Social Science & Medicine*, 238, p.112489.

Morton and Lee, (2022) "Storm Eunice heads for UK and prompts danger to life warning". *BBC News*. Available at: <https://www.bbc.co.uk/news/uk-60417263> (Accessed 30 May 2022).

Muggelton, R, (2017). *Cage*. Available at:

<https://www.flickr.com/photos/muggers/40049941392> (Accessed 30 May 2022).

Nadeau, C.P., Urban, M.C. and Bridle, J.R., 2017. Climates past, present, and yet-to-come shape climate change vulnerabilities. *Trends in Ecology & Evolution*, 32(10), pp.786-800.

Nalau, J., Becken, S., Schliephack, J., Parsons, M., Brown, C. and Mackey, B., 2018. The role of indigenous and traditional knowledge in ecosystem-based adaptation: A review of the literature and case studies from the Pacific Islands. *Weather, Climate, and Society*, 10(4), pp.851-865.

Do Nascimento, A., 2019. "Rain, Rain, Go Away!" Engaging Rain Pedagogies in Practices With Children: From Water Politics to Environmental Education. *Journal of childhood studies*, pp.42-55.

- National Health Service, (2021) *Benefits of Exercise*. Available at: <https://www.nhs.uk/live-well/exercise/exercise-health-benefits/> (Accessed 31 January 2022)
- National Health Service, (2022) *Overview - Seasonal affective disorder (SAD)*. Available at: <https://www.nhs.uk/mental-health/conditions/seasonal-affective-disorder-sad/overview/> (Accessed 11 May 2022).
- National Trust, 2021, *Nature and me. Five ways to strengthen the relationship between people and nature*. Available at: <http://ncxrg.wp.derby.ac.uk/wp-content/uploads/sites/28/2021/04/NatureMe-Booklet-2021.pdf>
- Neely, B. and Samura, M., 2011. Social geographies of race: Connecting race and space. *Ethnic and racial studies*, 34(11), pp.1933-1952.
- Neimanis, A. and Walker, R.L., 2014. Weathering: Climate change and the “thick time” of transcorporeality. *Hypatia*, 29(3), pp.558-575.
- Noelke, C., McGovern, M., Corsi, D.J., Jimenez, M.P., Stern, A., Wing, I.S. and Berkman, L., 2016. Increasing ambient temperature reduces emotional well-being. *Environmental research*, 151, pp.124-129.
- Obordo, R and Otte, J. (2021) 'I stick to well-lit and busy areas': women share their fears of walking alone at night. *The Guardian*. (UK edition) 11, March. Available at: <https://www.theguardian.com/lifeandstyle/2021/mar/11/i-stick-to-well-lit-and-busy-areas-five-women-share-their-fears-on-walking-alone-at-night> (Accessed 1 September 2022).
- Okubo, Y., Osuka, Y., Jung, S., Figueroa, R., Tsujimoto, T., Aiba, T., Kim, T. and Tanaka, K., 2014. Effects of walking on physical and psychological fall-related factors in community-dwelling older adults: Walking versus balance program. *The Journal of Physical Fitness and Sports Medicine*, 3(5), pp.515-524.
- Okubo, Y., Seino, S., Yabushita, N., Matsuo, T., Osuka, Y., Kim, M.J., Jung, S., Nemoto, M., Otsuki, N. and Tanaka, K., 2011. Association between habitual walking and multiple or injurious falls among community-dwelling older adults~ difference by risk of falling~. *Japanese Journal of Physical Fitness and Sports Medicine*, pp.239-248.
- Olafsdottir, G., Cloke, P., Schulz, A., Van Dyck, Z., Eysteinnsson, T., Thorleifsdottir, B. and Vögele, C., 2020. Health benefits of walking in nature: A randomized controlled study under conditions of real-life stress. *Environment and Behavior*, 52(3), pp.248-274.
- Office for National Statistics. (2018). Living longer - Office for National Statistics. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/livinglongerhowourpopulationischangingandwhyitmatters/2018-08-13>
- Opdenakker, R., 2006, September. Advantages and disadvantages of four interview techniques in qualitative research. In *Forum qualitative sozialforschung/forum: Qualitative social research* (Vol. 7, No. 4).
- Oswald, A.J. and Wu, S., 2010. Objective confirmation of subjective measures of human well-being: Evidence from the USA. *Science*, 327(5965), pp.576-579.

- Palaganas, E.C., Sanchez, M.C., Molintas, V.P. and Caricativo, R.D., 2017. Reflexivity in qualitative research: A journey of learning. *Qualitative Report*, 22(2).
- Parker, C., Scott, S. and Geddes, A., 2019. Snowball sampling. *SAGE research methods foundations*.
- Parker, I., 2004. *Qualitative psychology: Introducing radical research*. McGraw-Hill Education (UK).
- Patel, V., Nowostawski, M., Thomson, G., Wilson, N. and Medlin, H., 2013. Developing a smartphone ‘app’ for public health research: the example of measuring observed smoking in vehicles. *J Epidemiol Community Health*, 67(5), pp.446-452.
- Pettinger, T. (2016). Economics Help. Available at: <https://www.economicshelp.org/blog/6498/uncategorized/the-decline-of-the-uk-coal-industry/>
- Phillips, R., Knox, A. and Langley, E., 2011. Walking for Health: ‘Inactive’ walkers—barriers to participation, and activity substitution. *Sheffield: Natural England*.
- Phoenix, C. and Tulle, E., 2017. Physical activity and ageing. *The Routledge handbook of physical activity policy and practice*, pp.264-274.
- Phoenix, C. and Bell, S.L., 2019. Beyond “move more”: feeling the rhythms of physical activity in mid and later-life. *Social Science & Medicine*, 231, pp.47-54.
- Phoenix, C., Bell, S.L. and Hollenbeck, J., 2021. Segregation and the Sea: Toward a Critical Understanding of Race and Coastal Blue Space in Greater Miami. *Journal of Sport and Social Issues*, 45(2), pp.115-137.
- Phoenix, C., Orr, N., (2014). Pleasure: A forgotten dimension of ageing and physical activity. *Soc. Sci. Med.* 115, 94–102. (Accessed 28 May 2021).
- Piggin, J., (2020). What is physical activity? A holistic definition for teachers, researchers and policy makers. *Frontiers in Sports and Active Living*, 2. pp. 1-5. (Accessed, 7 June 2021).
- Pike, E., 2011a. The active aging agenda, old folk devils and a new moral panic. *Sociology of Sport Journal*, 28(2), pp.209-225.
- Pike, E.C., 2011b. Growing Old (Dis) Gracefully. *Women and exercise: The body, health and consumerism*, 180.
- Pike, E.C., 2015. Physical activity and narratives of successful ageing. In *Physical Activity and Sport in Later Life* (pp. 21-31). Palgrave Macmillan, London.
- Pink, S. (2009). *Doing Sensory Ethnography*. London: SAGE Publications Ltd.
- Pollard, T.M. and Wagnild, J.M., 2017. Gender differences in walking (for leisure, transport and in total) across adult life: a systematic review. *BMC public health*, 17(1), pp.1-11.
- Poole, J.A., Barnes, C.S., Demain, J.G., Bernstein, J.A., Padukudru, M.A., Sheehan, W.J., Fogelbach, G.G., Wedner, J., Codina, R., Levetin, E. and Cohn, J.R., 2019. Impact of weather and climate change with indoor and outdoor air quality in asthma: A Work Group Report of

the AAAAI Environmental Exposure and Respiratory Health Committee. *Journal of Allergy and Clinical Immunology*, 143(5), pp.1702-1710.

Pooley, C., Tight, M., Jones, T., Horton, D., Scheldeman, G., Jopson, A., Mullen, C., Chisholm, A., Strano, E. and Constantine, S., (2011). *Understanding walking and cycling: Summary of key findings and recommendations*. Available at: https://eprints.lancs.ac.uk/id/eprint/50409/1/Understanding_Walking_Cycling_Report.pdf (Accessed 21 May 2021).

Pooley, C.G., Horton, D., Scheldeman, G., Mullen, C., Jones, T. and Tight, M., (2014). “You feel unusual walking”: The invisible presence of walking in four English cities. *Journal of Transport & Health*, 1(4), pp.260-266. (Accessed 21 May 2021).

Powell, K., 2010. Making sense of place: Mapping as a multisensory research method. *Qualitative Inquiry*, 16(7), pp.539-555.

Prins, R.G. and Van Lenthe, F.J., 2015. The hour-to-hour influence of weather conditions on walking and cycling among Dutch older adults. *Age and ageing*, 44(5), pp.886-890.

Qu, S., Wang, Z. and Liu, W., 2021. Clothing adjustment in outdoor environment: A new clothing model based on temperature change. *Building and Environment*, 206, p.108395.

Reid, H., Ridout, A.J., Tomaz, S.A., Kelly, P., Jones, N. (2021) Benefits outweigh the risks: a consensus statement on the risks of physical activity for people living with long-term conditions. *British Journal of Sports Medicine*. pp. 1-5. (Accessed 13 January 2022).

Rigby, B.P., Dodd-Reynolds, C.J. and Oliver, E.J., 2020. Inequities and inequalities in outdoor walking groups: a scoping review. *Public health reviews*, 41(1), pp.1-24.

Robertson, S., Zwolinsky, S., Pringle, A., McKenna, J., Daly-Smith, A. and White, A., 2013. ‘It is fun, fitness and football really’: a process evaluation of a football-based health intervention for men. *Qualitative Research in Sport, Exercise and Health*, 5(3), pp.419-439.

Robinovitch, S.N., Feldman, F., Yang, Y., Schonnop, R., Leung, P.M., Sarraf, T., Sims-Gould, J. and Loughin, M., 2013. Video capture of the circumstances of falls in elderly people residing in long-term care: an observational study. *The Lancet*, 381(9860), pp.47-54.

Rooney, T., 2018. Weather worlding: learning with the elements in early childhood. *Environmental Education Research*, 24(1), pp.2.

Rovio, S., Kåreholt, I., Helkala, E.L., Viitanen, M., Winblad, B., Tuomilehto, J., Soininen, H., Nissinen, A. and Kivipelto, M., 2005. Leisure-time physical activity at midlife and the risk of dementia and Alzheimer's disease. *The Lancet Neurology*, 4(11), pp.705-711.

Santos-Lozano, A., Pareja-Galeano, H., Sanchis-Gomar, F., Quindós-Rubial, M., Fiuza-Luces, C., Cristi-Montero, C., Emanuele, E., Garatachea, N. and Lucia, A., 2016, August. Physical activity and Alzheimer disease: a protective association. In *Mayo Clinic Proceedings* (Vol. 91, No. 8). Elsevier. pp. 999-1020.

Schoene, D., Heller, C., Aung, Y.N., Sieber, C.C., Kemmler, W. and Freiberger, E., 2019. A systematic review on the influence of fear of falling on quality of life in older people: is there a role for falls?. *Clinical interventions in aging*, 14, p.701.

- Schuch, F.B., Bulzing, R.A., Meyer, J., Vancampfort, D., Firth, J., Stubbs, B., Grabovac, I., Willeit, P., Tavares, V.D.O., Calegari, V.C. and Deenik, J., 2020. Associations of moderate to vigorous physical activity and sedentary behavior with depressive and anxiety symptoms in self-isolating people during the COVID-19 pandemic: A cross-sectional survey in Brazil. *Psychiatry research*, 292, p.113339.
- Scott, A.J., (2021). The longevity society. *The Lancet Healthy Longevity*, 2(12), pp. e820-e827.
- Sheldrick, T. (2018) ITV, News. available at: <https://www.itv.com/news/tyne-tees/2018-05-08/25-years-on-pit-villages-worst-fears-realised>
- Sherratt, T., 2005. Human elements. In *A change in the weather: Climate and culture in Australia*. National Museum of Australia Press.
- Siambombe, A., Mutale, Q. and Muzingili, T., 2018. Indigenous knowledge systems: a synthesis of Batonga people's traditional knowledge on weather dynamism. *African Journal of Social Work*, 8(2), pp.46.
- Simpson, P., (2019). Elemental mobilities: atmospheres, matter and cycling amid the weather-world. *Social and Cultural Geography*, 20(8): 1050–1069.
- Smith, B. & Sparkes, A. C., (2016). “Interviews, Qualitative interviewing in the sport and exercise sciences”. *Routledge handbook of qualitative research in sport and exercise*. (Accessed 21 May 2021).
- Smith, B. and McGannon, K.R., 2018. Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International review of sport and exercise psychology*, 11(1), pp.101-121.
- Smith, B. and Sparkes, A.C. eds., 2016. *Routledge handbook of qualitative research in sport and exercise* (pp. 1-518). London: Routledge.
- Smith, B. and Sparkes, A.C., 2020. Qualitative research. *Handbook of sport psychology*, pp.999-1019.
- Smith, J.K. and Hodkinson, P., 2009. Challenging neorealism: A response to Hammersley. *Qualitative inquiry*, 15(1), pp.30-39.
- Sparkes, A., Smith, B. (2014). “What is qualitative research”. *Routledge Handbook of Qualitative Research in Sport and Exercise*. pp.12. (Accessed 1 June 2021).
- Sparkes, A.C. and Smith, B., 2013. *Qualitative research methods in sport, exercise and health: From process to product*. Routledge.
- Spinney, J., 2015. Close encounters? Mobile methods, (post) phenomenology and affect. *Cultural geographies*, 22(2), pp.231-246.
- Sport England, (2015). *Active Lives Survey 2015-2016, Year 1*. Available at: <https://www.sportengland.org/media/11498/active-lives-survey-yr-1-report.pdf> (Accessed 25 May 2021).

- Sport England, (2020). *Surge in appreciation of exercise and activity during lockdown*. Available at: <https://www.sportengland.org/news/surge-appreciation-exercise-and-activity-during-lockdown> (Accessed 22 May 2021).
- Sport England, (2021a) *Uniting the Movement*, Full. Available at: [Sport England - Uniting the Movement \(sportengland-production-files.s3.eu-west-2.amazonaws.com\)](https://www.sportengland.org/news/uniting-the-movement). (Accessed 2 February 2021).
- Sport England, (2021b). *Physical activity benefits outweigh risks for people with long-term health conditions*. Available at: <https://www.sportengland.org/news/physical-activity-benefits-outweigh-risks-people-long-term-health-conditions>
- Sport England, (2022) *Implementation Plan: Years 2-4 (2022-25)*. Available at: <https://www.sportengland.org/why-were-here/uniting-movement/implementation-plan-years-2-4-2022-25> (Accessed 11 January 2022).
- Stevenson, N. and Farrell, H., 2018. Taking a hike: Exploring leisure walkers embodied experiences. *Social & Cultural Geography*, 19(4), pp.429-447.
- Storey, A., (2018). Living longer—How Our Population is Changing and Why It Matters. *Office for National Statistics: Newport, UK*. pp.1. (Accessed 2 February 2021).
- Strava, 2022. What's New. Available at: <https://www.strava.com/whats-new> (Accessed 8 June 2022).
- Stubbs, B., Patchay, S., Soundy, A. and Schofield, P., 2014. The avoidance of activities due to fear of falling contributes to sedentary behavior among community-dwelling older adults with chronic musculoskeletal pain: a multisite observational study. *Pain medicine*, 15(11), pp.1861-1871.
- Sun, F., Norman, I.J., and While, A.E. (2013) Physical activity in older people: a systematic review. *BMC Public Health* 13, pp. 449. (Accessed 4 January 2022).
- Tadaki, M., Brierley, G. and Cullum, C., 2014. River classification: theory, practice, politics. *Wiley Interdisciplinary Reviews: Water*, 1(4), pp.349-367.
- Tanyanyiwa, V.I., 2018. Weather forecasting using local traditional knowledge (LTK) in the midst of climate change in Domboshawa, Zimbabwe. In *Handbook of Climate Change Communication: Vol. 2* (pp. 1-20). Springer, Cham.
- Teh, Y.Y. and Lek, E., 2018. Culture and reflexivity: Systemic journeys with a British Chinese family. *Journal of Family Therapy*, 40(4), pp.520-536.
- This Girl Can, (2022). About Us. Available at: <https://www.thisgirlcan.co.uk/about-us/>
- This is Durham, (2019). Hunting for Seaham Sea Glass. Available at: <https://www.thisisdurham.com/blog/read/2019/04/hunting-for-seaham-sea-glass-b204>
- Thompson-Miller, R., Feagin, J.R. and Picca, L.H., 2015. *Jim Crow's legacy: The lasting impact of segregation*. Rowman & Littlefield.
- Thoudam, J., 2021. *Bleeding rain: an escape to nature's flow*. Notion press; 1st edition. pp.1.

Tischer, U., Hartmann-Tews, I. and Combrink, C., 2011. Sport participation of the elderly—the role of gender, age, and social class. *European Review of Aging and Physical Activity*, 8(2), pp.83-91.

Van Tilburg, W.A., Sedikides, C. and Wildschut, T., 2018. Adverse weather evokes nostalgia. *Personality and Social Psychology Bulletin*, 44(7), pp.984-995.

Tsutsui, Y., 2013. Weather and individual happiness. *Weather, Climate, and Society*, 5(1), pp.70-82.

Tulle, E., & Phoenix, C. (2015) *Physical activity and sport in later life: Critical perspectives*. Palgrave Macmillan UK.

Twohig-Bennett, C. and Jones, A., 2018. The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. *Environmental research*, 166, pp.628-637.

UK Government 2022. *Falls: applying All Our Health*. Available at: <https://www.gov.uk/government/publications/falls-applying-all-our-health/falls-applying-all-our-health>

UK Government, (2019) *UK Chief Medical Officers' Physical Activity Guidelines*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/832868/uk-chief-medical-officers-physical-activity-guidelines.pdf (Accessed 5 January 2022).

UK Government, (2019b). *English Indices of Deprivation 2019*. Available at: [English indices of deprivation 2019 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/english-indices-of-deprivation-2019) (Accessed 5 January 2022).

UK Government, (2021) *Wider impacts of COVID-19 on physical activity and falls in older adults*. Available at: [Wider impacts of COVID-19 on physical activity, deconditioning and falls in OAs_PHE Aug 21.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/978218/Wider_impacts_of_COVID-19_on_physical_activity_deconditioning_and_falls_in_OAs_PHE_Aug_21.pdf) (Accessed 5 January 2022).

Van Cauwenberg, J., Van Holle, V., Simons, D., Deridder, R., Clarys, P., Goubert, L., Nasar, J., Salmon, J., De Bourdeaudhuij, I. and Deforche, B., 2012. Environmental factors influencing older adults' walking for transportation: a study using walk-along interviews. *International journal of behavioral nutrition and physical activity*, 9(1), pp.1-11.

Vannini, P and Austin, B (2020). Weather and place. In Edensor, T, Kalindides, A and Kothari, U (eds.), *The Routledge Handbook of Place*. London: Routledge

Vannini, P and Taggart, J (2014). The day we drove on the ocean (and lived to tell the tale about it); of deltas, ice roads, waterscapes and other meshworks. In: Anderson, J and Peters, K (Eds.), *Water Worlds: Human Geographies of the Ocean* (pp. 89–102). Ashgate, Farnham, Burlington

Vannini, P, Vannini, A (2017) Wild walking: a twofold critique of the walk-along method. In: Bates, C, Rhys-Taylor, A (eds) *Walking Through Social Research*. London: Routledge, pp. 179–196.

Vannini, P., and Vannini, A. (2020) "Research in weather, notes on climate, seasons, weather and field work mobilities". In Barry, K., Borovnik, M., & Edensor, T. (ed.) *Weather: Spaces, mobilities and affects*. pp.16-23. (Accessed 7 June 2021).

Vannini, P., Waskul, D., Gottschalk, S. and Ellis-Newstead, T., (2012). Making sense of the weather: Dwelling and weathering on Canada's rain coast. *Space and Culture*, 15(4), pp.361-380.

Wagner, A.L., Keusch, F., Yan, T. and Clarke, P.J., (2019). The impact of weather on summer and winter exercise behaviors. *Journal of sport and health science*, 8(1), pp.39-45.

Waite, G. and Stanes, E., 2015. Sweating bodies: Men, masculinities, affect, emotion. *Geoforum*, 59, pp.30-38.

Wang, J., Obradovich, N. and Zheng, S., 2020. A 43-million-person investigation into weather and expressed sentiment in a changing climate. *One Earth*, 2(6), pp.568-577.

Weather Sparkes, (2021). *Average weather in Durham*. Available at: <https://weatherspark.com/y/42234/Average-Weather-in-Durham-United-Kingdom-Year-Round> (Accessed 7 June 2021).

Wheaton, B., 2013. *The cultural politics of lifestyle sports*. Routledge. pp. 148.

Wheeler, N., 2021. " *It's Such a Hard and Lonely Journey*": *Women's Experiences of Perinatal Loss and the Subsequent Pregnancy* (Doctoral dissertation, University of the West of England). pp. 36.

Willis, M.L., Palermo, R. and Burke, D., 2011. Judging approachability on the face of it: the influence of face and body expressions on the perception of approachability. *Emotion*, 11(3), p.514.

Wilmot, E.G., Edwardson, C.L., Achana, F.A., Davies, M.J., Gorely, T., Gray, L.J., Khunti, K., Yates, T. and Biddle, S.J., 2012. Sedentary time in adults and the association with diabetes, cardiovascular disease and death: systematic review and meta-analysis. *Diabetologia*, 55(11), pp.2895-2905.

Winthorst, W.H., Bos, E.H., Roest, A.M. and de Jonge, P., 2020. Seasonality of mood and affect in a large general population sample. *Plos one*, 15(9), p.e0239033.

Witham, M.D., Donnan, P.T., Vadiveloo, T., Sniehotta, F.F., Crombie, I.K., Feng, Z. and McMurdo, M.E., 2014. Association of day length and weather conditions with physical activity levels in older community dwelling people. *PloS one*, 9(1), p.e85331.

World Health Organisation (WHO), (2021) *Ageing: Ageism*. Available at: <https://www.who.int/news-room/questions-and-answers/item/ageing-ageism> (Accessed 7 January 2022)

Wurm, S., Tomasik, M.J. and Tesch-Römer, C., 2010. On the importance of a positive view on ageing for physical exercise among middle-aged and older adults: Cross-sectional and longitudinal findings. *Psychology and Health*, 25(1), pp.25-42.

Yang, L., Sahlqvist, S., McMinn, A., Griffin, S.J. and Ogilvie, D., 2010. Interventions to promote cycling: systematic review. *Bmj*, 341.

Zurawik, M., 2020. Moving through spaces—leisure walking and its psychosocial benefits for well-being: a narrative review. *Human Movement*, 21(2), pp.1-8.

Appendices

Appendix 1: Participant Information Pack

Walking in a Winter Wonderland

£

Chance to earn a **£15 voucher!**



Live in East Durham?

Aged 65+?

We want to hear from you!

We want to support people **aged 65+** in County Durham to be active all year round.

How does the winter weather affect you and your walking?

Take part in:

- Walking interviews
- Creative Group Workshops
- And get your voice heard!

Have your say and help us understand how County Durham could be made safer and more accessible for walking.




To find out more, contact Miles Lowson:

miles.a.lowson@durham.ac.uk





Walking in a Winter Wonderland

What is the project about?

We want to understand how winter weather affects your experience of walking in East Durham.

We are not just interested in people who are “walkers” (i.e. people in walking groups, or frequent walkers). We are interested in speaking to people of all abilities and backgrounds.

Why have I been invited to take part?

You have been invited to take part because you are aged 65 + and live in East Durham.

This project is funded by County Durham Sport, who are keen to understand how the winter affects physical activity for people in your age group.

This research can help us find better ways to support people of all ages to remain active all year round. This research might also help to influence the planning and design of active environments (making our local places more accessible by walking).

Do I have to take part?

You do not have to take part. The decision to take part is completely up to you.

If you decide to take part, you are free to withdraw at any time without providing a reason. You can withdraw from the project at any time by speaking to Miles Lowson.

You are invited to take part in a research project.

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Before you decide if you would like to take part, please read this information sheet carefully.

To find out more, contact Miles Lowson:

miles.a.lowson@durham.ac.uk





Walking in a Winter Wonderland

You are invited to take part in a research project.



Before you decide if you would like to take part, please read this information sheet carefully.

What will be involved if I decide to take part?

You will take part in an interview or, a walking interview or, a creative group workshop...or a combination of all three! The choice is yours. Here are some more details about what these activities involve:

Interview	Walking Interview	Creative Workshop
<p>WHAT? The researcher will ask you about your feelings and experiences related to winter weather and walking.</p> <p>WHERE? At a place which is comfortable and convenient for you (e.g. in a café or community centre).</p> <p>WHEN? At a time agreed with the researcher.</p>	<p>WHAT? You will take the researcher on a walk (any distance/route). During the walk, the researcher will ask you about your feelings and experiences related to winter weather and walking.</p> <p>WHERE? At a place which is comfortable and convenient for you (e.g. a route you usually walk).</p> <p>WHEN? At a time agreed with the researcher.</p>	<p>WHAT? Workshops will be centred around your feelings and experiences related to winter weather and walking. Activities might include discussing photos of winter weather, or annotating maps of popular walking routes.</p> <p>WHERE? At a local venue such as a community centre.</p> <p>WHEN? At a time agreed with the researcher.</p>

To find out more, contact Miles Lowson:

miles.a.lowson@durham.ac.uk



Walking in a Winter Wonderland

You are invited to take part in a research project.



Before you decide if you would like to take part, please read this information sheet carefully.

What will be involved if I decide to take part?

-  All interviews will be audio recorded. Recordings will only include sound. The workshops will not be recorded, but, lead researcher Miles Lowson will make notes throughout the session.
-  For walking interviews, the walking route will be recorded by the researcher using the app STRAVA. But you yourself do not need to have a smartphone or any apps to take part.
-  We may take photographs during walking interviews. Any photographs that we do take will only include people if they cannot be identified e.g. back of person in far distance.
-  We expect an interview or workshop to take up to 2 hours. However, for walking interviews, this may vary according to the length of the walk.
-  You will receive a £15 gift voucher for your involvement in the project and free refreshments will be available at workshops.

To find out more, contact Miles Lowson:

miles.a.lowson@durham.ac.uk



Walking in a Winter Wonderland

You are invited to take part in a research project.

Before you decide if you would like to take part, please read this information sheet carefully.



What are the risks and benefits of taking part?

We have carefully planned the activities to make them as safe as possible. However, there are always some risks. We have conducted a detailed risk assessment, which includes (but is not limited to) how we will manage safety surrounding COVID-19.



Risks

Walking interviews will involve walking during the winter. This could be hazardous (risk of slipping, or getting cold).

We will not ask you to do anything out of your ordinary routine. You would not be expected to walk in weather conditions that you wouldn't normally, nor along routes that you wouldn't usually walk.

To manage the risk of COVID-19, the researchers will be LFT tested on the day of every interview or workshop. Sufficient PPE and hand sanitizer will be available and used to ensure safety.

For more information please consult the Risk Assessments.

Benefits



Your experiences and feelings about walking in winter weather will help us understand how we can support people of all ages to be active all year round.

This is a chance to have your voice heard.

This research may be used to inform local policy makers about what needs to be done to make sure our local area is safer and more appropriate for winter walking.

You will receive a £15 voucher for taking part.

To find out more, contact Miles Lowson:

miles.a.lowson@durham.ac.uk



Walking in a Winter Wonderland

You are invited to take part in a research project.

Before you decide if you would like to take part, please read this information sheet carefully.



Will my information be kept confidential?



What will happen to the results of this project?



When we write notes during interviews and creative workshops, we will not use your real name.

We will give each person a new 'made up' name to be included in our notes.

Any data collected (e.g. interview transcripts, photographs) will be stored on a password-protected on a secure computer file.

Personal data will only be shared between the lead researcher (Miles Lowson, Durham University) and supervisor (Dr Cassie Phoenix, Durham University).

Anonymised summaries of the information we gather may be turned into reports, presentations, posters, and flyers. These will be shared with other organisations.

Please refer to the privacy notice for more information.

Information from the interviews and workshops will be analysed and written into a report for Miles Lowson's Masters level qualification (Durham University).

A report outlining the key findings will also be produced for County Durham Sport.

This research might also be included in academic journals and shared with other organisations, such as Public Health, Durham County Council, the Physical Activity Strategy Committee, and with the Live Longer Better network.

To find out more, contact Miles Lowson:

miles.a.lowson@durham.ac.uk



Walking in a Winter Wonderland

You are invited to take part in a research project.



Before you decide if you would like to take part, please read this information sheet carefully.

If you have any questions related to the project, please contact the lead researcher:



Miles Lawson

miles.a.lowson@durham.ac.uk



Supervisor name: Prof. Cassandra Phoenix

Address: 42 Old Elvet, DH1 3JF

cassandra.phoenix@durham.ac.uk

To find out more, contact Miles Lawson:

miles.a.lowson@durham.ac.uk



If you would like to take part and are happy with the answers to any questions you may have, please complete and sign the enclosed Informed Consent Form.



Privacy Notice

You are invited to take part in a research project.



Before you decide if you would like to take part, please read this privacy notice carefully.

Privacy Notice

You have been given this privacy notice because you have expressed an interest in taking part in our research project 'Walking in a Winter Wonderland? The role of weather for older adults' winter walking practices in County Durham'. The research is being conducted by Miles Lawson at Durham University, under the supervision of Dr Cassandra Phoenix. County Durham Sport are partners in this research project.

This document provides you with the information that you need to know before you provide personal data for the particular purpose(s) stated above. Additional information about the University's responsibilities for data protection and your rights in relation to personal data can be found in the University's generic privacy notice, available at <https://www.dur.ac.uk/research/innovation/governance/privacynotice/generic/>. The University's core purpose includes undertaking research in the public interest. Processing of your data is carried out as part of this core purpose.

Please read this document carefully and discuss any questions you might have with the lead researcher (Miles Lawson).

Title of Project: *Walking in a winter wonderland? The role of weather for older adults' winter walking practices in County Durham.*

To find out more, contact Miles Lawson:

miles.a.lowson@durham.ac.uk



Privacy Notice Cont.



You are invited to take part in a research project.

Before you decide if you would like to take part, please read this privacy notice carefully.



What data will the researcher collect?:

We will be collecting your name, address, age, and signed consent form. You will also be invited to provide us with your telephone number (optional). We are calling this your *personal data*. We need to know your age to ensure that we include a spread of ages (65 years and above) within our project. We need to know your address so that we can include people who live in a range of different places within East Durham within in our research. By providing us with your name, address and if you choose, your telephone number, we will be able to contact you to arrange interviews and share with you a summary of the final findings from the project. We need your signed consent through a "consent form" to be able to ensure you understand the project. The form can be signed online or in person. If you choose to participate in the project and provide us with your signature on the consent form, we will be able to confirm you have understood the project.

Your personal data will only be kept by the research team at Durham University. It will not be shared with any third parties (including County Durham Sport). It will be destroyed 3 months after this project has been completed. This will be in December 2022.

In addition to your personal data, we will collect data that is specific to the project. It will help us to understand answers to the questions that we are asking in this project. We are calling this *research data*. Details of what this includes are explained below:

If you take part in an interview, we will collect information about your experiences of winter weather in County Durham by audio recording conversations that we have during an interview. From these recordings, written scripts (called "transcripts") will be made to ensure we don't miss any of the information that you tell us.

If you take part in a walking interview, we will collect an audio recording of the interview that takes place during our walk. We will also record a map of the route we walk using an app on the researcher's mobile phone called "STRAVA". This will help us to learn about the routes that people use and might not use during winter weather (and the reasons why this might be the case). We might also take some photographs of our route for the same reason. But we will not take photographs of you.

If you take part in a creative group workshop, the data we collect will take the form of what gets created from a range of creative activities (typically led by the preferences of the participants). These might include drawings, pieces of writing, annotating maps. We might also make notes about conversations that have taken place about, or while creating these things.

To find out more, contact Miles Lowson:

miles.a.lowson@durham.ac.uk



Privacy Notice Cont.



You are invited to take part in a research project.

Before you decide if you would like to take part, please read this privacy notice carefully.



How will confidentiality be ensured?

When the audio-recordings of the interviews are transcribed, you will be assigned a "made up" name. We will also remove any details from the transcript from which you could be identified (e.g. specific names of organisations you are associated with, names of family members etc.). Once transcribed (typically within 36 hours) data relating to some demographic categories (e.g. "age 70 years") or names of public places will remain in the transcript, this will be done in a way that does not reveal participants' identities. These steps will ensure confidentiality if we ever quote or discuss material from your interview when we come to talk about and write up the findings of the research.

The lead researcher (Miles Lowson) will keep a list of all participants assigned "made up" names. This is in case he needs to contact you for clarification on something that you might have said during the interview. Similarly, should you decide that you wanted to withdraw from the project (and you did not want your data to be included in the final reports), this list would enable Miles to identify your data and remove it. This list (often called a "participant key") will be stored on a password protected computer in a separate storage place (or "folder"). Physical consent forms will be kept in a locked filing cabinet inside a locked staff office on the University premises. Digital consent forms will be kept with the "participant key" in a password protected computer.

Personal data will not be stored in the same folder as research data. Only Miles Lowson and Cassandra Phoenix will have access to the personal data.

If you take part in a walking interview, we will wait until we are part way into the walk before we start recording the route. That way, the final map that is produced will not include start and finish locations (which might be your home). Any photographs that are taken of the route will only include people if they cannot be identified (e.g. the back of person far in the distance, some feet walking through a puddle). Nor will they include other identifiable features of personal property such as house names. Any time stamps that appear on the map or photographs will also be removed.

If you grant permission, your map and / or photographs produced during your walking interview might be used during the creative group workshops. In this scenario, maps will remain anonymous and workshop attendees will not be told whose walking route they show. In addition, rather than using maps of entire routes, we will re-produce only specific sections of routes for use during the workshop activities.

To find out more, contact Miles Lowson:

miles.a.lowson@durham.ac.uk



Privacy Notice Cont.



If you take part in a creative group workshop, it will not be possible to conceal your identity from other participants involved in the workshop. The research team will spend time at the beginning of the workshop explaining the ground rules of the group, which will include not sharing information about fellow participants outside of the workshop. The research team will take notes of what types of things were discussed during the workshop. These notes will not contain details that would compromise your identity. We might also take photographs of the creative outputs of these workshops to be included when we write or talk about the findings of the project to other people. If specific items are linked individuals, their assigned "made up" name, rather than real name will be used.

How will data be stored?

All personal (digital consent forms, names, age, address, telephone number, participant key) and research data (interview transcripts, maps, photographs, notes from the creative group workshops) will be stored on a password protected computer. To ensure that the data is safe, it will be stored on the University networked drive. This means that, unlike if it was stored on a memory stick / external drive (or printed off and kept only as a hard copy), it cannot ever be misplaced. Only the research team at Durham University (Miles Lowson and Cassandra Phoenix) will have access to this data. Only Miles Lowson will have access to the participant key, which will be stored in a separate section of the networked drive. Audio files of the interviews will not be stored anywhere because they will be erased as soon as a transcript of the interview has been produced (typically within 36 hours of the interview taking place). Physical consent forms will be kept in a locked filing cabinet inside a locked staff office on the University premises.



You are invited to take part in a research project.

Before you decide if you would like to take part, please read this privacy notice carefully.



To find out more, contact Miles Lowson:

miles.a.lowson@durham.ac.uk



Privacy Notice Cont.



Who will my data be shared with?

Interview transcripts and individual route maps (in their entirety) from the walking interviews will only be shared between the research team at Durham University (Miles Lowson and Cassandra Phoenix). Once the data has been analysed, the findings from this research will be shared with different audiences using a variety of formats (e.g. reports, posters, presentations, academic publications). This will include County Durham Sport, the research participants, academics who might be working in similar areas, students, and other relevant organisations (e.g. Sport organisations, Public Health organisations, Durham County Council). These documents will contain examples of data collected during the research. This might include direct quotes from the interviews, photographs that have been taken of walking routes, particular sections of certain route maps, and material produced during the creative group workshops. As outlined in the earlier section, this data will be used and shared with others in such a way that it does not compromise your privacy or identity.

Alongside the final report, an additional collection of photographs and anonymised sub-set of maps produced during the project will be shared with County Durham Sport for their use in subsequent presentations and communication about older adults' experiences of walking in winter weather within County Durham.

How long is data held for?

- Audio recordings of interviews will be kept for up to 48 hours after the interview has taken place. It will then be erased from the recording device and any computers it has been transferred onto for processing.
- All personal data (consent forms (Digital and Physical), name, age, address, telephone number, participant key) will be held until December 2022. That is, 3 months after the end of the project.
- Research data (interview transcripts, maps, photographs, material from creative group workshops) will be held by Durham University until September 2032. That is 10 years after the project has ended. This is in accordance with Durham University's policy on data collection and storage.

What if I want to withdraw my data from this project?

Participants will be able to request withdrawal of their data at any point until the overall research findings are being written up ready to be shared. This process will commence in April 2022. Please contact the researchers at Durham University by April 1st 2022 if you wish to have your data withdrawn. You do not have to provide any reason for why you wish to do this. Nor will you experience any negative impact either from Durham University or County Durham Sports if you choose to do this.



You are invited to take part in a research project.

Before you decide if you would like to take part, please read this privacy notice carefully.



To find out more, contact Miles Lowson:

miles.a.lowson@durham.ac.uk
07392470327



Privacy Notice



You are invited to take part in a research project.



Before you decide if you would like to take part, please read this privacy notice carefully.

If you have any questions related to the privacy notice, please contact the lead researcher:



Miles Lawson

miles.a.lowson@durham.ac.uk

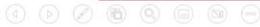


Supervisor name: Prof. Cassandra Phoenix

Address: 42 Old Elvet, DH1 3JF

cassandra.phoenix@durham.ac.uk

If you would like to take part and are happy with the answers to any questions you may have, please complete and sign the enclosed Informed Consent Form.



To find out more, contact Miles Lawson:

miles.a.lowson@durham.ac.uk
07392470327



Appendix, 2: Mobile Interview Guide

Mobile interview guide

Ice breakers

1. When you woke up this morning what did you think of the weather
2. What have you thought of the weather this winter?
3. How have you found the storms (ARWEN)
4. Were there any damages to your house?
5. What did you think of the weather at that time?
6. How did it affect your physical activity?

Lifestyle and identity

1. Could you tell me a memory you have of winter weather?
2. If they explain a positive memory, ask them for a negative memory and vice versa.
3. At what point in the year would you say that you notice winter weather?
4. How have your feeling towards winter weather changed throughout your life?
5. How have your feelings towards walking changed throughout your life?
6. What is your physical response to winter weather (I.e. runny nose)?
7. How does the weather affect your mood when walking?

Route specific

1. Why have you decided to take me on this route today?
2. What does this route mean to you? (How do you typically feel when walking through here?)
3. Do you walk this route often? / Why
4. What is your favourite part of this route? (Can you explain why that is?)
5. What is your least favourite part of this route? (can you explain why that is?)
6. Are there any specific routes that you would avoid in County Durham when it is winter?
7. Are there any specific routes/ spaces that you are particularly drawn to in winter?

(Pay attention to key areas of the route, are we in a woodland, is there a body of water? Use this where appropriate "I notice you having to lean into the wind a bit there, what's walking in windy conditions like for you? Has that always been the case?"

break "winter weather" down a bit and see if you can get insights into the impacts of different weather elements. (wind v rain v snow v darkness etc.)

Weather

Suggest that people go walking in all weathers and weather often has a big impact on changing their experiences of a walk and how they experience their surroundings, but also how it makes them feel. So, they could be on a walk and feel unsafe, or anxious in certain weathers and invigorated and alive in others.

1. What types of weather would be your ideal preference when going walking? (Focus in on answers and expand) (what types of weather make you feel safe, happy, sad, angry)
2. How are the weather conditions effecting your walking ability today?
3. How, if at all, has your preparation for your walks changed over the last month or so?

4. If you could describe winter weather in the Northeast to someone who hasn't experienced it, what would you say?
5. When you woke up this morning, you knew you were coming for a walk, you drew back the curtains and looked out ... how would you describe what you saw in terms of today's weather conditions?
6. Are there any elements of winter weather that you find aesthetically pleasing?

Movement

1. Can you tell me how you might adjust your actions or behaviour for walking in winter weather?
2. How does winter weather impact your movement?
3. How do you feel about walking?
4. How would your physical activity be affected when it is dark outside?
5. How do you feel when the nights get darker?
6. Do you have more or less reason to be physically active in winter?

Appendix, 3: Traditional Semi-structured Interview Guide

Traditional Semi-structured interview guide

Ice breakers

1. When you woke up this morning, you drew back the curtains and looked out, what did you think of the weather?
2. How would you feel about walking in today's weather?
3. What have you thought of the weather this winter?
4. How have you found the storms (ARWEN) this winter?
5. Were there any damages to your house?
6. What did you think of the weather at that time?
7. How did it affect your physical activity?

Lifestyle and identity

1. Could you tell me a memory you have of winter weather?
2. If they explain a positive memory, ask them for a negative memory and vice versa.
3. At what point in the year would you say that you notice winter weather?
4. How have your feeling towards winter weather changed throughout your life?
5. How have your feelings towards walking changed throughout your life?
6. What is your physical response to winter weather (i.e. runny nose)?
7. How does the weather affect your mood when walking?

Route specific

1. Could you describe what a usual walking route that you walk?
2. How do you typically feel when walking that route? (focus on elements)
3. Do you walk that route often? / Why
4. Can you explain your favourite part of that route?
5. Can you explain any areas of the route you dislike?
6. Are there any specific routes that you would avoid in County Durham when it is winter?
7. Are there any specific routes/ spaces that you are particularly drawn to in winter?

break "winter weather" down a bit and see if you can get insights into the impacts of different weather elements. (wind v rain v snow v darkness etc.)

Weather

Suggest that people go walking in all weathers and weather often has a big impact on changing their experiences of a walk and how they experience their surroundings, but also how it makes them feel. So, they could be on a walk and feel unsafe, or anxious in certain weathers and invigorated and alive in others.

1. What types of weather would be your ideal preference when going walking? (Focus in on answers and expand) (what types of weather make you feel safe, happy, sad, angry)
2. How are the weather conditions effecting your walking ability this winter?
3. How, if at all, has your preparation for your walks changed over the last month or so?
4. If you could describe winter weather in the Northeast to someone who hasn't experienced it, what would you say?
5. Are there any elements of winter weather that you find aesthetically pleasing?

Movement

1. Can you tell me how you might adjust your actions or behaviour for walking in winter weather?
2. How does winter weather impact your movement?
3. How do you feel about walking?
4. How would your physical activity be affected when it is dark outside?
5. How do you feel when the nights get darker?
6. Do you have more or less reason to be physically active in winter?

Appendix, 4: Walk Leaders Interview Guide

Walk leaders interview guide

Ice breakers:

1. What is your role as a walk leader consist of?
2. What has participation been like in the group this winter in comparison to other winters?
3. What has running the walking group this winter been like?
4. How have you managed the group through the various storms?

Lifestyle and identity

1. When you woke up this morning what did you think of the weather?
2. How do you feel about running this walking group?
3. What are your walking habits like away from this group?

Route specific

1. Why have we decided to walk this route today?
2. I know from going on these walks you have different routes to walk, how do you decide which route to take the group on? (Are they weather dependent)
3. Why do you have a slow and fast walking group?
4. Do you have a specific route you walk more than the rest?
5. How did you find these routes and decide on timing for the walks?
6. Are there any areas that the group particularly enjoy?
7. Are there any areas of the route that the group struggle with?

break “winter weather” down a bit and see if you can get insights into the impacts of different weather elements. (wind v rain v snow v darkness etc.)

Weather

Suggest that people go walking in all weathers and weather often has a big impact on changing their experiences of a walk and how they experience their surroundings, but also how it makes them feel. So, they could be on a walk and feel unsafe, or anxious in certain weathers and invigorated and alive in others.

1. What weather do you think would be the groups ideal preference when going walking? (Focus in on answers and expand) (what types of weather make the group feel safe, happy, sad, angry)
2. Are there any weathers that you wouldn't take the group out in?
3. Are there any weathers that the group struggles in?
4. In what weathers would you have more or less participants for the walk?
5. If you could describe winter weather in the Northeast to someone who hasn't experienced it, what would you say?

Motivations:

1. What do you think are the motivations of people joining this walking group?
2. Why does this institution offer this walking group/ what are the real pulls of the group?
3. How important, if at all, is the social aspect of this group?
4. How do you recruit people to walk in this group?
5. What do you do when someone is new to walking?

Appendix, 5: Non-academic Report

30/09/2022



Walking in a Winter Wonderland? The role of weather for older adults' winter walking practices in County Durham.

Author: Miles Lowson
Supervisor: Professor Cassandra Phoenix (Durham University Sport, and Exercise Sciences)
Funding: County Durham Sport

The Research



▶ Masters by research project



▶ Funded by County Durham Sport



▶ Produce a thesis for Durham University and a report style presentation for County Durham Sport

Notes:

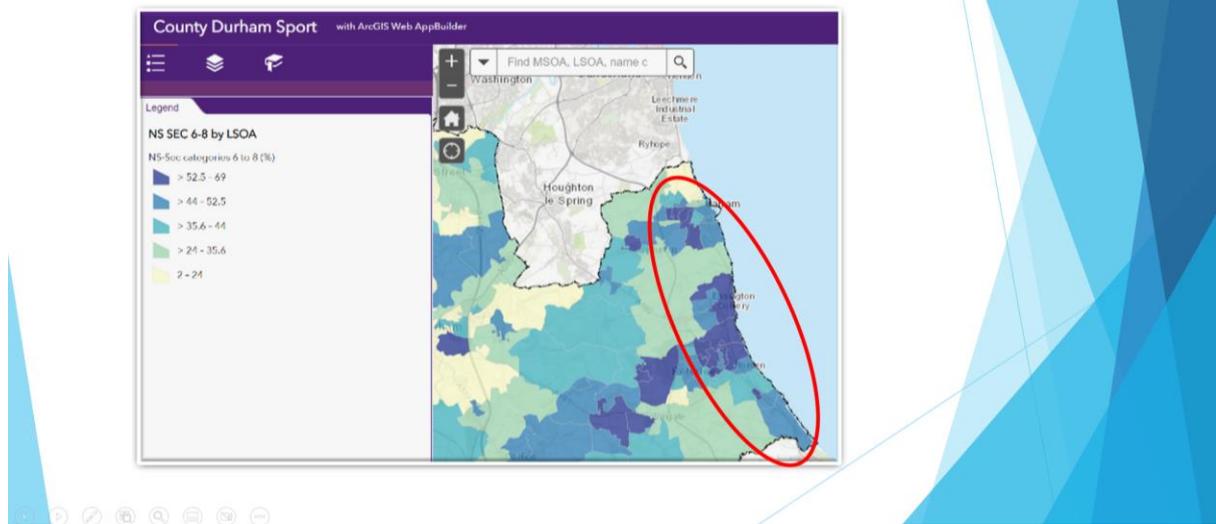
This project is a Masters by research project at Durham University. The project was supervised by Professor Cassandra Phoenix (Department of Sport and Exercise Sciences) and was funded by County Durham Sport.



What did we want to find out?

- ▶ We wanted to **understand how winter weather** (rain, ice, wind, sunlight, snow, temperature, fog) **shapes older adults'** opinions and experience of **walking in East Durham**.
- ▶ We used walking interviews to speak to older adults about their experiences. We are aware that **weather shapes experiences** of physical activity, but equally, **being physically active outdoors** can influence how people experience and give meaning to weather.

East Durham



Notes:

NS-SEC groups are defined as:

- Most affluent (NS-SEC 1-2): Managerial, administrative and professional occupations (e.g. chief executive, doctor, actor, journalist).
- Mid-affluent (NS-SEC 3-5): Intermediate, lower supervisory and technical occupations; self-employed and small employers (e.g. auxiliary nurse, secretary, plumber, gardener, train driver).
- Least affluent (NS-SEC 6-8): Semi-routine and routine occupations; long-term unemployed or never worked (e.g. post man, shop assistant, bus driver).
- Students and other (NS-SEC 9)

(Source: Active Lives Adult Survey November 2020-21)

We decided to conduct the research in East Durham as these are some of the most deprived areas within County Durham and have a high proportion of people within the NS- SEC 6-8 bracket according to the Census, (2011).

% of people in NS-SEC 6-8 where data was collected: (Easington Colliery: 57%) (Seaham: 51%) (Peterlee, 53%) (Blackhall, 50%)

We also consulted data from the Indices of Multiple Deprivation (IMD), (2019)

The data from IMD is the measure of relative deprivation across a range of factors that could contribute to deprivation (Income, employment, education, health, crime, barriers to housing and services, living environment) (Ministry of Housing, Communities, and Local

Government, 2019). It then ranks small areas (Lower super output areas) from Rank 1 – most deprived to Rank 10 – least deprived.

(Easington Colliery: Rank 1) (Seaham: Rank 2) (Peterlee: Rank 1) (Blackhall, Rank 1).

Consulting this data was a deliberate decision as we wanted to understand the specific barriers and motivators to winter walking for this population - because activity levels are typically lower in this population.

References:

County Durham Sport, 2022. Mapping tool. Available at:

<https://mapitout.maps.arcgis.com/apps/webappviewer/index.html?id=eea66ab4caac486b8d354abc077225ee>

Ministry of Housing, Communities, and Local Government, (2019). The English Indices of Deprivation. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/833959/IOD2019_Infographic.pdf



Why research the weather?

- ▶ In County Durham, we know that being physically active in winter can be challenging and that as **age increases so does inactivity**.
- ▶ We also know that **physical activity levels are lower** among people from **less affluent backgrounds**
- ▶ We wanted to be able to learn more about the **relationship between weather and physical activity** to allow us to promote physical activity more realistically to older adults in winter.

Evidence on next slide...

Notes:

The evidence for these claims will be shown and presented in more detail on the next slide. Towards the end of the presentation we will also come onto recommendations of how we might be able to promote physical activity more realistically to older adults in winter.

Why research the weather?

- ▶ A study of over 2000 adults found that more than half go out less in winter blaming the cold, wet weather, less daylight, and a lack of motivation. (We Are Undefeatable, 2021)
- ▶ The winter can, create significant stress and decrease mental health (Met Office, 2022)
- ▶ Within County Durham, trends suggest that those who are less affluent are also much more likely to be classified as inactive and as age increases so does inactivity

Physical activity behaviour in County Durham 20-21	
NS SeC	Inactive (%)
1-2	18.4%
3-5	35.3%
6-8	31.9%

Physical activity behaviour in County Durham 20-21	
Age (Yrs.)	Inactive (%)
35-54	22.7%
55-75	32.4%
75+	59.7%

Notes:

The weather can have an affect on us mentally, such as we may feel the need to sleep more and activities we normally do can become a struggle (Met Office, 2022). Furthermore, approximately around 2 million people in the UK suffer from Seasonal affective disorder or “winter depression” (nhsinform, 2022).

The weather can also stop us from being physically active. A study of over 2000 adults found that more than half go out less in winter blaming the cold, wet weather, less daylight, and a lack of motivation (We Are Undefeatable, 2021) The we are undefeatable report also found that 2/3rds of those people struggle to get themselves to do any physical activity during the winter months, with 59% naming the weather as the biggest barrier.

A recent report conducted in East Durham suggested that how much money you have has a significant impact on physical activity (Edwards, 2022) something that is also true nation wide (Active Lives November, 2021). The same is true for people as they age, who gradually become increasingly inactive (Active Lives November, 2021).

This is increasingly significant given that the UK has an ageing population (Storey, 2018) and that by 2068 there is predicted to be an additional 8.6 million people aged 65 and the age group 85 plus is the fastest growing and will make up 7% of the UKs population by 2066 (ONS, 2018). This demonstrates that people living in the UK can now expect to become old and live longer lives, but this wont necessarily be in good health (Scott, 2021). Therefore now is the time to look at solutions that will help people stay in good health.

In conclusion the weather can affect how people are active, so can age and how much money you have. Therefore we conducted this project with the hopes of understanding these barriers in more detail.

References:

Edwards, J. (2022) East Durham Physical Activity and Wellbeing Mapping. Lucidity Solutions Project Report 2022. Available at: [EastDurhamMapping_FullReport.pdf](#)

Met Office 2022: <https://www.metoffice.gov.uk/weather/warnings-and-advice/seasonal-advice/health-wellbeing/winter-and-mental-health>

Nhsinform, 2022: <https://www.nhsinform.scot/illnesses-and-conditions/mental-health/seasonal-affective-disorder-sad>

ONS. (2018). Living longer - Office for National Statistics. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/livinglongerhowourpopulationischangingandwhyitmatters/2018-08-13>

Scott, A.J., (2021). The longevity society. *The Lancet Healthy Longevity*, 2(12), pp.e820-e827.

Storey, A., (2018). Living longer—How Our Population is Changing and Why It Matters. Office for National Statistics: Newport, UK. pp.1.

We are undefeatable, 2021, report: <https://www.thesun.co.uk/health/16731541/millions-of-adults-dreading-winter/>

Physical activity can help

- ▶ Organisation such as Age UK, NHS, and Sport England recommend physical activity as a way of supporting both our mental and physical health.
- ▶ In winter we tend to be inside more and less daylight hours often mean we are less physically active in winter
- ▶ This project was conducted to understand *how* weather affects walking in winter
- ▶ We were interested in walking in particular as walking for leisure is popular in County Durham and given such popularity it might be a great tool for engaging those who are not yet physically active.



Notes:

The benefits of Physical activity are well established. To name a few physical activity can improve brain health, help to prevent, diseases such as Alzhiemers (Santos-Lazano et al., 2016) and dementia (Livingston et al., 2020) help manage weight, reduce the risk of disease and strengthen muscles and bones improving our ability to do everyday activities and stay mobile (Centre for Disease control and protection, 2022).

Additionally, it is suggested that being outdoors and experiencing nature can help us mentally such as improving our mood and (Mind, 2022) decreasing our stress levels (Olafsdottir et al., 2020). However, in winter we tend to be inside more and are often robbed of the benefits being active outdoors can bring.

We wanted to focus on walking in particular as it is popular in County Durham (Active Lives Adult Survey November 2020-21). Additionally, walking can be easily integrated into a daily routine (Yang et al., 2010) requiring no previous skill level to participate (Ball et al., 2017). Furthermore walking can be done as an individual activity (Tischer et al., 2011) or within a group (Kritz et al., 2020) with both demonstrating various benefits. Given this, we hope that walking will be a good tool for engaging those who are not yet physically active.

This project was designed to understand how weather effects walking in winter for older adults in East Durham, with the hope of being able to promote physical activity more realistically to older adults in winter.

References:

Active Lives Adult Survey November (2020-21)

Ball, K., Abbott, G., Wilson, M., Chisholm, M. and Sahlqvist, S., 2017. How to get a nation walking: reach, retention, participant characteristics and program implications of Heart Foundation Walking, a nationwide Australian community-based walking program. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1), pp.1-10.

- Centre for Disease Control and Prevention, 2022, :
<https://www.cdc.gov/physicalactivity/basics/pa-health/index.htm#:~:text=Being%20physically%20active%20can%20improve,activity%20gain%20some%20health%20benefits.>
- Kritz, M., Thøgersen-Ntoumani, C., Mullan, B., Stathi, A. and Ntoumanis, N., 2020. “It’s better together”: A nested longitudinal study examining the benefits of walking regularly with peers versus primarily alone in older adults. *Journal of aging and physical activity*, 29(3), pp.455-465.
- Livingston, G., Huntley, J., Sommerlad, A., Ames, D., Ballard, C., Banerjee, S., Brayne, C., Burns, A., Cohen-Mansfield, J., Cooper, C. and Costafreda, S.G., (2020). Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *The Lancet*, 396(10248), pp.413-446.
- Mind, 2022. <https://www.mind.org.uk/information-support/tips-for-everyday-living/nature-and-mental-health/how-nature-benefits-mental-health/>
- NHS, 2020, Were here to help you stay well this winter.
https://assets.nhs.uk/prod/documents/Stay_well_this_winter_-_large_print.pdf
- Olafsdottir, G., Cloke, P., Schulz, A., Van Dyck, Z., Eysteinnsson, T., Thorleifsdottir, B. and Vögele, C., 2020. Health benefits of walking in nature: A randomized controlled study under conditions of real-life stress. *Environment and Behavior*, 52(3), pp.248-274.
- Santos-Lozano, A., Pareja-Galeano, H., Sanchis-Gomar, F., Quindós-Rubial, M., Fiuza-Luces, C., Cristi-Montero, C., Emanuele, E., Garatachea, N. and Lucia, A., 2016, August. Physical activity and Alzheimer disease: a protective association. In *Mayo Clinic Proceedings* (Vol. 91, No. 8). Elsevier. pp. 999-1020.
- Tischer, U., Hartmann-Tews, I. and Combrink, C., 2011. Sport participation of the elderly—the role of gender, age, and social class. *European Review of Aging and Physical Activity*, 8(2), pp.83-91.
- Yang, L., Sahlqvist, S., McMinn, A., Griffin, S.J. and Ogilvie, D., 2010. Interventions to promote cycling: systematic review. *Bmj*, 341.



Notes:

I am now going to discuss how we did the project.

Ethical approval and recruitment

- ▶ Ethical approval for the study was obtained from the Department of Sport and Exercise Sciences at Durham University
- ▶ Participant packs were created, which explained in detail what we hoped to achieve by doing the research
- ▶ Through existing County Durham Sport relationships we engaged with community groups at Peterlee-pavilion and Blackhall community centre



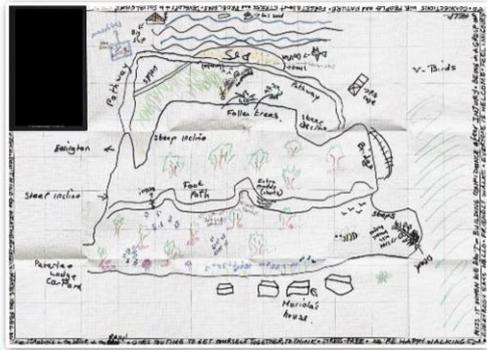
Notes:

Before anything in the study began we had to gain ethical approval from the University. This allowed us to get all our ideas down on paper and understand exactly what we wanted to achieve.

Through collaboration with the University and County Durham Sport we were able to put together some participant packs which allowed participants to understand the project and gain their consent for the study. These participant packs explained in detail what we hoped to achieve by doing the project, what would be involved in the research project, and informed participants they could leave at any time and gave them assurances of how their data would be handled. This allowed people to fully understand the project and whether or not they wanted to participate.

Recruitment: Through existing County Durham Sport relationships we engaged with community groups at Blackhall community centre and Peterlee pavilions to start off. Peterlee pavilions had a existing walking group that I could connect with. After this I was able to talk to more people and engage with some walking groups at Seaham and Easington as well as talking to people individually.

Research methods



- ▶ Qualitative research (Typically focused on opinions and experiences rather than statistics)
- ▶ Sit down interviews (Interviewing participants indoors at a location of their choosing)
- ▶ Walking interviews (Interviewing participant whilst going on a walk of their choosing)
- ▶ Creative group workshops (Group session where participants created imaginary and visual maps of their winter walking in East Durham)

Notes:

The project is a piece of qualitative research, so what that involves is collecting and analysing data to understand concepts, opinions, or experiences. It can be used to gather in-depth insights into a problem or generate new ideas for research.

In this project we did a mixture of sit-down interviews that were audio recorded, walking interviews where we recorded audio again but also recorded the route we walked. We had to be quite flexible with this and sometimes did a mixture of walking and sit down, because some people couldn't walk that far or didn't want to. We offered this variation to be as inclusive as possible and hear from people who didn't walk so often.

Finally we carried out some creative group workshops, this is because it is quite hard to get people to open up about how they feel about the weather past saying I don't like certain weathers or I do like certain weathers. So, we used this method to develop on the interviews and understand what about walking in winter is important to people. This session took place indoors at Peterlee Pavilions and was a sessions where people created imaginary and visual maps of their winter walking practices. (As seen on image)



Interviews

- ▶ 13 older adults with a mean age of 74.4, 3 walk leaders who led walks with older adults
- ▶ **Inclusion criteria:** Are aged 62+ (excluding walk leaders), Live in East Durham, Has experienced winter weather in County Durham, Walk outdoors (any distance, purpose, frequency) and English speaking.
- ▶ **Question topics:** Weather, Movement, lifestyle and identity, route specific.

Notes:

We managed to speak to 13 Older adults and 3 walk leaders in County Durham. The sample was made up mostly of older adults but also included three walk leaders who led walks with older adults as we felt they may have useful insights into potential barriers and general insights on older adults walking in winter. The walk leaders were typically younger than the older adults and had received walk leader training.

We wanted to make sure we got a range of activity levels and had diversity in how people were active, so we could understand the barriers and motivators for participating.

Unfortunately, we got more people from walking groups as other people who didn't walk so often were put off at the thought of walking, even when told they could do a sit-down interview.

We defined the age for older adults as 65+ as this is what is most commonly used in the UK such as by the NHS and Age UK. However due to the nature of recruitment in the study and gaining participants through word of mouth we gained interest from some slightly younger participants. The overall age ranges for the project was 62- 90. The participants were made up of 12 females and 4 males.

All the interview locations and walking routes were chosen by the participant. This was to make sure that the participants felt as comfortable as possible and we felt this helped them to open up more (Elwood and Martin, 2000) in the interviews. Especially in the walking interviews this was apparent as the places we walked in took the pressure off and acted as an instant icebreaker where people talked with ease about what they experienced on the walks (Foley et al., 2020; Evan and Jones, 2011; Van Cauwenberg et al., 2012).

All of the interviews were semi-structured which mean that they loosely followed an interview guide that included topics such as Icebreakers (when you woke up this morning what did you think of the weather? how have you found the storms?) lifestyle and identity, route specific (Why have you decided to take me on this route today? Or describe a route you

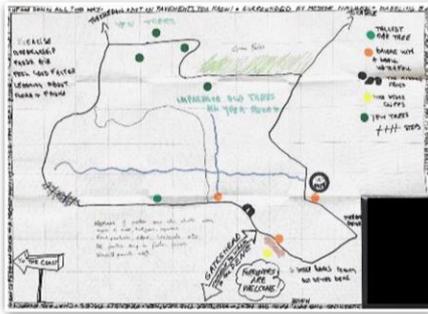
typically walk?), weather (If you could describe winter weather in the Northeast to someone who hasn't experienced it, what would you say? What types of weather would be your ideal preference when going walking?) and movement (Can you tell me how you might adjust your actions or behaviour for walking in winter weather? How does winter weather impact your movement?). All of the questions were centred around the weather and were open ended as these types of questions are designed to encourage detailed answers from participants rather than simple yes or no, which can lack depth (Smith and Sparkes, 2016).

I thoroughly enjoyed talking to people in East Durham, they were all incredibly positive and contributed some incredibly interesting comments and this was mostly achieved whilst being active (County Durham Sport, 2022).

References:

- Age UK, 2019, Later life in the United Kingdom 2019, https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/later_life_uk_factsheet.pdf
- County Durham Sport, (2022) Walking in a Winter Wonderland? Q&A with Durham University Researcher, Miles Lowson. <https://countydurhamsport.com/news/walking-in-a-winter-wonderland-qa-with-durham-university-researcher-miles-lowson/>
- Elwood, S.A. and Martin, D.G., 2000. "Placing" interviews: location and scales of power in qualitative research. *The professional geographer*, 52(4), pp.649-657.
- Evans, J. and Jones, P., 2011. The walking interview: Methodology, mobility and place. *Applied geography*, 31(2), pp.849-858.
- Foley, R., Bell, S.L., Gittins, H., Grove, H., Kaley, A., McLauchlan, A., Osborne, T., Power, A., Roberts, E. and Thomas, M., 2020. "Disciplined research in undisciplined settings": Critical explorations of in situ and mobile methodologies in geographies of health and wellbeing. *Area*, 52(3), pp.514-522.
- NHS, 2022, Improving care for older people, <https://www.england.nhs.uk/ourwork/clinical-policy/older-people/improving-care-for-older-people/>
- Smith, B. and Sparkes, A.C. eds., 2016. *Routledge handbook of qualitative research in sport and exercise* (pp. 1-518). London: Routledge.
- Van Cauwenberg, J., Van Holle, V., Simons, D., Deridder, R., Clarys, P., Goubert, L., Nasar, J., Salmon, J., De Bourdeaudhuij, I. and Deforche, B., 2012. Environmental factors influencing older adults' walking for transportation: a study using walk-along interviews. *International journal of behavioral nutrition and physical activity*, 9(1), pp.1-11.

Creative workshops



- ▶ 9 participants
- ▶ Drawing visual and imaginary representations of their walking in East Durham
- ▶ The workshops allowed people to express opinions and experiences through drawings
- ▶ People tended to draw areas they found difficult and areas they enjoyed

Notes:

The creative workshops involved nine participants with two having completed a sit-down interview, one having completed a walking interview, and another having completed a mixture of both. The other five participants were new to the study, did not regularly attend walking groups and were seen as more “casual” walkers. This was deliberate as an attempt to understand why people might not walk and what was important to them for walking in winter.

The session was set up by hiring out a room at Peterlee pavilions and involving a creative facilitator from Durham University (Mary Robson) Who ran the session. The participants were sourced through asking four participants who had previously been involved in a type of interview to attend and the rest were sourced through word of mouth from those participants. The word of the session was communicated through WhatsApp group chats and word of mouth.

After all the data was collected from the interviews there was a two month break to allow transcription and any initial findings to emerge before analysis. Then attention turned to the second phase of data collection that was the form of a creative group workshop. This workshop involved participants creating imaginary and visual maps of their walking in winter across County Durham. The “maps” involved multiple routes in County Durham and people drew areas they enjoy, found difficult, need improving, and generally, how areas made them feel.

Firstly, participants were split into two groups and encouraged to draw a map(s) either imaginary or similar to a route they have walked around East Durham. After this, participants were told to draw any areas that they would typically encounter when walking in East Durham. People were slightly unsure what to draw at this point so we suggested that they draw areas they found difficult or areas they enjoyed.

People drew areas they found difficult to navigate such as areas of steep incline and decline, fallen trees, and steps. People also contributed with key landmarks on walks such as bridges, tall trees, the coastline, or meaningful rocks. Within this people began to personalise the maps noting areas they enjoyed or found fascinating such as certain types of trees, birds, or flowers. People even added areas such as their own houses and areas they sit down on their walks. People were then asked to consider how weather interacts with these spaces and which areas of the route were most affected. Typically, people here detailed how paths became muddy. Finally, the session concluded by talking to participants about why they walked and writing words around the edges of the maps.

Strengths

These sessions were a useful and valuable method that complimented the interviews conducted. Emerging findings from the interviews were able to be developed on as will be explained later. The maps drew showed emotions people experienced whilst walking in areas that were meaningful to them (Giseking, 2013). This was a valuable way to get participants involved in talking about their winter walking practices who may not otherwise have contributed to this study or indeed felt more comfortable expressing themselves through different forms – in this case art. Furthermore, the group session provided an opportunity for participants to meet one another, many people spoke or recognised each other through mutual friends. The session also allowed for participants to visit local areas that they had not before despite living nearby for lengthy periods.

The fact that the maps were co-produced by multiple participants in the group was a benefit because what was included on the map was mostly agreed by the participants and therefore provided an overall feel for what was important to the participants and for walking in winter.

Limitations

At the beginning of the session people were relatively anxious about drawing, feeling as though they could not draw in a group scenario or that their drawings would not be accurate. For most this was brief hesitation and once a couple started drawing others got involved. It was useful in this instance to have someone acting as a facilitator who would offer to draw for them.

However some peoples hesitation to draw or feeling as though they couldn't draw did cause some group members to suggest that their maps were not accurate and they aimed to disengage and get others to disengage with the drawing. Again, the facilitators' role was essential here by reminding participants that maps did not have to be accurate and got involved within a group helping them construct their visual representations of walking in East Durham. This at times included changing the way in which people drew their maps. For example, the facilitator suggested that participants could put stickers on their map of their route and create a key of what the stickers meant.



What did we find out?

Notes:

Now for the interesting part. The data from the interviews and workshops were collected and analysed which now allows us to reveal the findings and recommendations.

Winter weather changes terrain



(Margret(walk leader) "You get some really bad ice in the Dene when it's cold. I wouldn't take them down if it was icy, because lodge bank, is like an Ice slide when it's really bad, because water runs down it and then it freezes and it is literally just like a sheet of ice all the way down. So I would not when it's that bad we actually close the path. I think that happened last year. So yeah, ice. Ice and like really like slippy snow. I think that's it really"

- ▶ The winter weather creates different terrain for older adults to walk on
- ▶ Terrain that the majority of older adults found difficult to combat was slippery mud/leaves, Ice, bits of root or branches on paths and narrow paths.
- ▶ Hills, steep inclines or declines were difficult for participants in all weathers but worse in winter due to changes in terrain

Notes:

Terrain that the majority of older adults found difficult to combat was slippery mud/leaves, Ice, bits of root or branches on paths and narrow paths.

This terrain at times this meant that Older Adults were unable to concentrate on their surroundings as they were looking down at their feet and being conscious of placement. People would often encounter this type of terrain when walking in woodland areas such as Castle Eden Dene.

Quotes from participants:

(Henry) "I mean, well I mean, see, because there's loads of scrub in the dene. Yeah. I mean, the some narrow, very narrow paths and there is some quite wide ones. So, you know, you have one or two people walking beside you. There's one, I think it goes more or less near the coast it's very narrow, so it's like single file and yeah, just gotta watch because there's roots and trees and everything in the road."

(Olivia) "I don't mind. I like going down the dene, but I don't like coming back up. Because there's two ways you can come up and we missed it one day. There was three of us, I said I'm sure you've got us lost *Names walk leader* but we had to go up, heart attack hill they call it. It's like that (Gestures with hand showing that it is steep), where we normally come out, It's only on a slant. Aah kills your legs. I suppose it's good for you."

(Margret(Walk leader) "You get some really bad ice in the Dene when it's cold. I wouldn't take them down if it was icy, because lodge bank, is like an Ice slide when it's really bad, because water runs down it and then it freezes . And it is literally just like a sheet of ice all the way down. So I would not when it's that bad we actually close the path. I think that happened last year. So yeah, ice. Ice and like really like slippy snow . I think that's it really"



People wanted to experience variation when walking

- ▶ Despite some ground being difficult to walk on, this didn't stop older adults from wanting to walk on them

(Janet) "I call this a varied walk where you've got climbing up you know the steep rough track and then we've got this and then we're going to go back through the woods. I think breaking it up a bit makes it a little more interesting. But yeah, there's Hawthorne Dene along the way that's a very nice place and I said now the big thing is to walk the coastal path which is fine as long as there's not an East wind."

Notes:

Despite some terrains being difficult to walk on for older adults this didn't deter them from engaging with these terrains, nor was it something they would avoid. In fact people showed a desire to engage with a variation of different surfaces within one walk as this also meant they were engaging with different areas and environments. The majority of the walks walked with participants involved a variety of surfaces and environments within one walk.

(Joan) "Well for your health, it's always says to get out in the open, especially different environments, you know, like this one is on the beach banks, you know, you'll see the sea, well normally, although the sun's trying to shine now, whereas in the Dene you're in amongst all the trees it's just diff... well it is isn't it a different atmosphere. But I think for health reasons, you've got to keep I mean, *Names relatives occupation* as well, you know. So, she always said you need to cardiac exercise, I said well I do, when I walk up the hills in the Dene".

(Janet) "I call this a varied walk where you've got climbing up you know the steep rough track and then we've got this and then we're going to go back through the woods.

I think breaking it up a bit makes it a little more interesting. But yeah, there's Hawthorne Dene along the way that's a very nice place and I said now the big thing is to walk the coastal path which is fine as long as there's not an east wind."

(Miles Lawson (Researcher): "So, when you say a varied walk, what do you what do you mean by that?"

(Janet) "Well I mean... totally, perhaps totally different surfaces to walk on"

Adapting to the weather to stay active outdoors

- ▶ The older adults in the study, paid close attention to the weather and adjusted accordingly which allowed them to continue walking and enjoy the benefits of the outdoors.
- ▶ For example: people noticed which way the wind was blowing and walked in the opposite direction, or planned out routes that were flatter and avoided mud if the ground was too wet or slippery.

(Daniel(Walk leader) “You’ve just got to keep an eye on the weather forecast. Aye you have to deal with the high winds. Tailor the walk to the conditions, I mean if it’s snowing for instance you know, you can always find an alternative route because we have a repertoire of routes that you can take in certain conditions that you know will be better than going down in the Dene itself because you may get people down there but if it’s snowing you might not get people back out.”

Notes:

From these quotes you can see how people planned their days to accommodate the weather. As mentioned earlier people often don’t go out and be active in the winter due to the weather, however, this demonstrates how you can adjust and plan out your routes to stay active and enjoy all the benefits from the outdoors. Further examples included people adjusting to wind areas and walking in areas that were covered by hedges or by noticing the way in which the wind was blowing and walking in the opposite direction. If there was high winds often a concern is falling trees so people would walk in areas that were less populated by trees. People would also plan out routes that avoided muddy paths when it was seen as “too wet”. If terrain was slippery people would adjust to more flat routes. Hills were difficult terrain to walk up in any weather but people would simply take breaks after tackling a steep incline for a few minutes to catch their breath and then carry on. These breaks also allowed people to take in their surroundings. It must be said that there are certain conditions that can create safety concerns. If there is extreme weather such as a red weather warning we would not advise going out.

In conclusion, people paid close attention to what the weather was like on the day and adjusted accordingly, which allowed them to still walk.

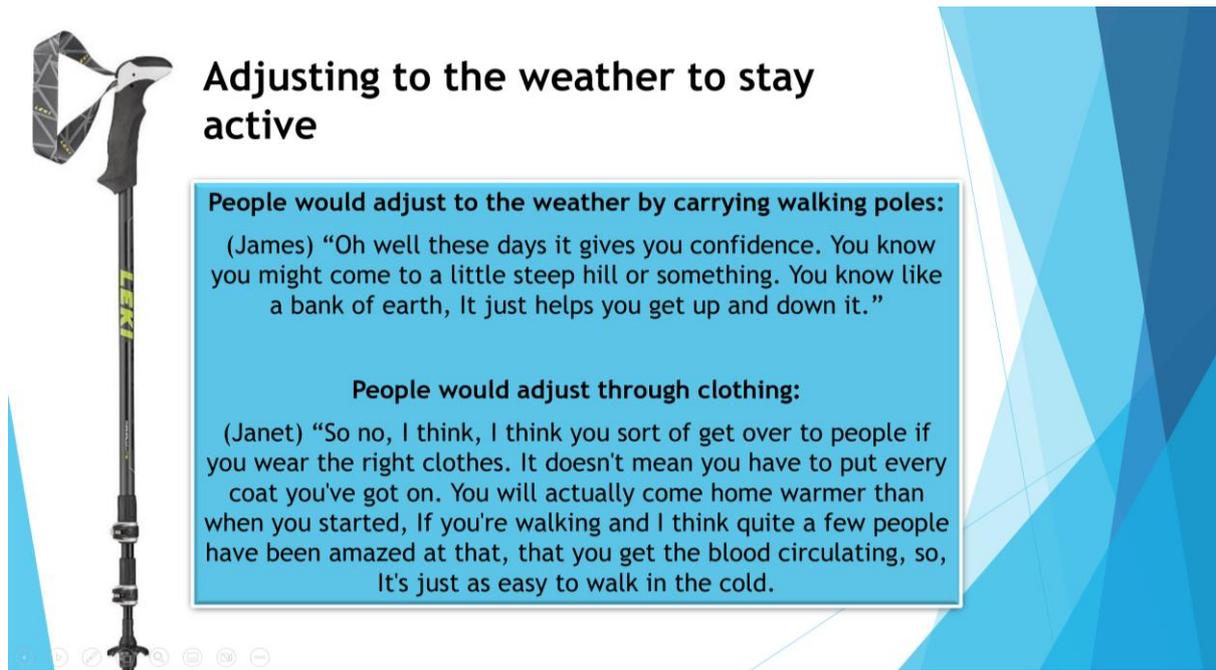
(Anne) “We decide on the spur of the moment and weather largely guides it, you know, like if it's windy we tend not to go down along the seafront because you'll get blown over and if it's really wet the forest is too muddy and slippery. So, it's sort of like governed by the weather to a big extent, really.”

(Venessa) “No the fine rain I think I would be alright and depending I mean, you come to the Dene and you sometimes a lot more sheltered. Whereas the Easington walk that I used to go on, that's more of the coast. Have you been on that one? And I mean it's lovely. It's very exposed, isn't it? So if it's very windy and wet. You have no protection at all, so you get pretty wet. Whereas you come down here and you're a little more sheltered.”

(Bethan) "I don't walk once it gets dusk because I think a woman alone. You know, they're in the middle of the fields and everything and yeah, I wouldn't do that. If it's if it's slightly just slightly turning I would walk the village where I would feel safer then. You know, but normally, I don't go out if it's dusk no."

Miles Lowson: Why would you feel safer in the village?

(Bethan) "Because there's people around. Whereas I can often do that walk fields walk and never see a soul."



Adjusting to the weather to stay active

People would adjust to the weather by carrying walking poles:

(James) “Oh well these days it gives you confidence. You know you might come to a little steep hill or something. You know like a bank of earth, It just helps you get up and down it.”

People would adjust through clothing:

(Janet) “So no, I think, I think you sort of get over to people if you wear the right clothes. It doesn't mean you have to put every coat you've got on. You will actually come home warmer than when you started, If you're walking and I think quite a few people have been amazed at that, that you get the blood circulating, so, It's just as easy to walk in the cold.”

Notes:

People would also adjust in other ways to ensure they could tackle tough terrains such as investing in walking poles.

Walking poles:

(Mary(Walk leader) “They may struggle in the winter. Especially if people have physical, medical conditions. For example, bad backs they're more at risk of injuring themselves if they slip in the winter. So, people, maybe even though we wouldn't discriminate against anybody coming out with a bad back or, you know, a joint problem, arthritis, whatever it is, we would advise them to take it very easy or buy a walking stick so that they've got a little bit more support with the balance.”

(Ellsa) “This is why I have me stick, up the banks and down the banks it just gives you that little bit of security really. I didn't used to have one but other people had them and I thought oh I might get one and I do find it useful. Having the poll.”

(Venessa) “I think I've always had them, I've always had them, I've always brought it to the Dene, yes . But I didn't use it at Easington because it is flatter. I don't think I would attempt it without, because it does help you... Well, just gives you more confidence I think, you see and It helps gives you, you've got something to push against to go up the hills, Yes.”

People would also adjust by buying “winter” clothing such as walking shoes, waterproofs, and coats. But this was by no means a necessity and not everyone engaged this way.

(Janet) “So no, I think, I think you sort of get over to people if you wear the right clothes. It doesn't mean you have to put every coat you've got on. You will actually come home warmer than when you started, If you're walking and I think quite a few people have been amazed at that, that you get the blood circulating, so, It's just as easy to walk in the cold. I mean you've got things like you haven't got such a long day, you know, shorter days.”

(Joan) “Well it's not so much the wind, that's not so bad when it's dry, but when they're both together, it wets you, well it's cold anyway, but when it's cold and you get soaking, but in saying in my boot, I have a picnic blanket and on one side it's plastic, you know, you will have seen them, on one side it's tartan on the other it's plastic and rubbery underside. And i've only twice had to use that, i'm going back to the car and i've had to put that over me seat otherwise, i'm going to actually strip off in the car (laughter), so I just get in soaking wet and just take the rug in and just dry the rug out. And it lives in my car, like another bag i've got with my ear muffs, me gloves, i've got a scarf, you know them over things them blue over things, over shoe things, yes, some of them. Gosh i've got all sorts of things I carry around.”

(Ellsa) “The most important thing is having the appropriate clothing and footwear. I mean there is a young chap I think he's an apprentice for Durham County I don't know where he's at but he came on the Seaham one, he's been on a couple since he's put a coat on, few weeks it was bitter and he'd come with the lad who was doing the walk and he just had a light tracksuit top on, he was frozen. He said did he not tell you you'd be coming out, he said well yes he did but I didn't expect it to be this cold. I mean next time he came he was well wrapped up... I think he definitely underestimated how cold it would be, because it was quite bright you see, he thought it won't be that cold but on those bank tops at Seaham it was cold. So yeah, as long as you have the right clothing and footwear on you are absolutely fine.”

Personally engaging

- ▶ Adjusting to the weather also involved personally engaging, People worked out what walk is suitable for them and what they enjoyed. For example some participants didn't like the traffic so would adjust their walks to go earlier in the day when there was less.
- ▶ Other participants struggled with Asthma amongst other health conditions and adapted their walks accordingly:

(Bethan) "I walk all the way down the street because it's a good start. Because it's all downhill. I don't like to start with a hill because with having asthma I need to sort of pace myself. So, I walk down the hill, and then up on to the fields, and then right around the fields, and then somebody has no matter what the farmer does, somebody makes it a path, right across the field. So, we go right, I can go right and make it extra-long and so then I would come and end up nearly home. So that's what I would do. But if it's raining, I walk right around the village, which means I'm on a path then. So it's not quite as muddy."

Notes:

Adjusting the weather was also about personally engaging and working out a walk that you enjoy and is suitable for you. One participant really didn't like the traffic so she adjusted her timings for her walk to be early in the morning so that she could walk, enjoy all the benefits of the outdoors but also avoid the traffic. Some participants had Asthma and in certain weathers (typically high wind) their Asthma would be affected, so they would alter their distances. Some participants who had Asthma would plan their routes out to start off with a downhill slope as this helped them to pace themselves with their breathing and get into a rhythm before tackling hills. Some participants were recovering from operations and were starting off on flatter terrain and building up their strength and confidence to then progress to steeper terrains. There are also different levels of walks for all.

The moral of the story is to personally engage, know your body, start slow and build up.

(Henry (Walker struggling with Asthma) "Well way, I mean, it never used to bother us you know, I used to go out in all weathers. But I mean Sunday it was raining, and I mean, I just got my new inhaler and then, I didn't go on and it's just as well because I would have been in the Dene and then I don't know how I would've got out. Because like yesterday was the first walk I did, week and a half since the last walk I did and we got halfway around so other than that, you know, I just have to do the short walks now."

(Bethan(Managing Asthma) "Yes. Usually, I do, I walk down. I walk all the way down the street because it's a good start. Because it's all downhill. I don't like to start with a hill because with having asthma I need to sort of pace myself. So, I walk down the hill, and then up on to the fields, and then right around the fields, and then somebody has no matter what the farmer does, they, somebody makes it a path, right across the field. So, we go right, I can go right and make it extra-long and so then I would come and end up nearly home. So that's what I would do. But if it's raining, I walk right around the village, which means I'm on a path then. So it's not quite as muddy."

(Venessa (talks about knee operation) “The first week that they opened the hospital in Hartlepool for me I went and got mine Done. So I was, you know, rehabilitation from that and then I started walking again, I went to the Easington to walk, because it's not as strenuous as this and then I did that. And then I got into it again. And then there's about three or four of us that walk on a Wednesday, including *names friend* to come back here. So, I wasn't doing so much in the Dene and then I thought and now I've got this *names illness* or whatever they call it for your eyes. And I went on Sunday and they said at the moment I haven't to drive . So, wow, so I can't go to Easington, you see, so I said to *names friend*, yesterday, when we were walking, I said, I'm gonna give Thursday walk a go again.”

Recommendations

- ▶ People should engage personally and choose a route that is right for them and the weather conditions. Walkers can always start off doing less and build up.
- ▶ If people attend a walking group the walk leaders will adjust to the weather whilst considering peoples walking ability. There are multiple levels of walking group and most are relaxed and will adapt to whoever is walking in the group.
- ▶ It would be helpful if walk leaders made their weather and terrain adjustments widely known?
- ▶ People can stay weather connected by leaving chores to do, such as, getting the paper that force them to go out regardless of the weather.
- ▶ It would be helpful if walk leaders could suggest what are the essential items for walking?

Notes:

People should personally engage and pick out routes and walks that are suitable for them.

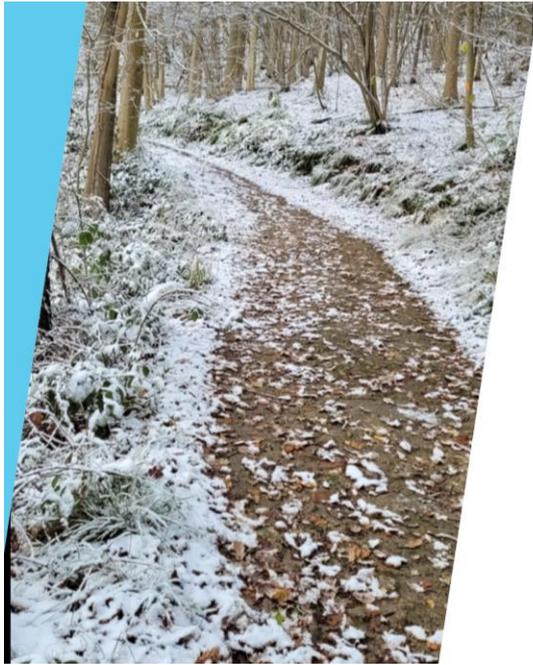
(Daniel) “Just to try and ensure the safety of the group , sort of tailor the walk to who we've got to their abilities , I mean as a walk leader you are always taught, you go at the pace of the slowest walker , tailor the walk to their needs.”

Walk leaders will take care of the safety aspect having received training, they will also take care of navigation and ensure people wont get lost, whilst ensuring that they adjust appropriately to any weather conditions. There are many relaxed walking groups and if people attend a group they do not have to be a “seasoned walker”, they will easily be able to find a walking group that is right for them. Whether that is if they want to be more serious and walk at a good pace, or be more relaxed.

Can walk leaders make the adjustments they make more widely known and give top hints and tricks to stay active in winter.

Can walk leaders or councils provide support such as providing walking poles for people or suggesting where people can buy cheap walking gear. (People can buy second hand equipment or equipment that is in the sale).

(Olivia) “One of my friend works she's just retired. She got me a pair of the waterproof trousers. And I think we're only seven pound but they're too long. But normally, I have a pair of walking shoes but they're not waterproof anymore. So I mean, I've had them since year dot. So I got these at Dalton park they were in the sale and there really comfortable, hard work to get on like because the tongue and the shoe is all one. But I suppose that keeps the water out.”



People had an identity with the weather

(Olivia) “Well I don't think were bad, I don't think we bad. I think there's sometimes they say oh the northeast is freezing but, sometimes it is sometimes it isn't at all you know. In Liverpool, London like they get the heat waves and they think what's happened to us but they maybes get something, they get the rain and we haven't so... It stop the wrinkles Miles! Too much sun gives you wrinkles.”

Notes:

People created an identity with the weather they experience. This can be shown through the typical “Northerners vs Southerners” debate. Northerners (Defined as currently living in the North) typically experience “harsher” weather conditions such as lower temperature, higher levels of wind and absence of heat which portrayed them as being “tough”. This was the direct opposite for Southerners who were portrayed as “Soft”.

There was also here an acknowledgement that the North East has a reputation for their weather which is often overly dramatic to what it actually is. People defended their own weather (if they said something bad they quickly followed up with a positive) and demonstrated how they were content with the weather they experience. Suggesting that there is also nice weather to experience in the Northeast in winter.

(Janet) “You see, I don't mind it and I don't mind it being cold. It's when people come up to stay with you or when you go somewhere else. I mean, I notice in Rotherham it's at least four degrees warmer there, you know, you can even notice it over that distance. If you go down where *Names relative* is in Wiltshire, you know, when they come up here they're just absolutely shivering the whole time. And they think it's really really cold, when it's not really that cold.”

(Ellsa) “I mean, we do get colder weather because I must admit when you go like maybe to London or something and you're coming back on the train. You can definitely by the time you get to Leeds It's a bit colder but by gum by the time you get up here. The saying we use is two topcoats colder up here. Two top coats warmer down there. So yeah, I think we do get a little bit of... So yeah, I think we do get a bit colder weather up here. I do think it is colder up in the Northeast especially. But that's the way it's always been so we appreciate the nice warm days.”

(Ellen) “I know, Well, it's like (Laughter) my brother used to live in Oxford. And his wife and his family. When they used to come, he used to say God it's freezing up here. I used to

say don't be so soft (Shared laughter) But there again when we go down south it's a lot warmer. And yet I always used to feel cold on the night when I used to go and stay but it never used to bother us here. It's just what you get used to, I think isn't it."

It was interesting as there was a few people in the study who had lived down South and moved up to the North and one who was up North and moved down south and the typically defended wherever they resided perhaps demonstrating that people acclimatise to the weather they experience and create an identity in accordance with it.

(Anne(Moved up North from South) "I haven't found it much colder than down south and everyone did warn us about that oh it's cold up north and it's not been like that. I say it's very similar to where I used to live. Right down near Dover and *names relative* still lives down there and we sort of like message every day and you know what, it's hardly any different.... Weather, weatherwise, you know, she'll say, Oh, it's lovely and sunny and I say it's nice up here aswell! You know it's just like that."

(Tabitha(Moved down South from North) "You, I get to Pontefract and I said the wind changes . Somebody puts the light out and somebody turns the wind up high . I always say because I've travelled up and down for years now. I've been down there 20 odd years, haven't I in Northfolk and I hit there air, where's me fleece. I am freezing!"

(Ellsa) "To be fair, it's been pretty good. Really has been pretty good. I mean, we've never had we've got a bit of snow and it only lasted a day and went so, no , I think the weather this winter we've had it lucky, so far. We can still get snow can't we, but no, I think we've been pretty lucky getting away with, I mean like I say with the high winds and that but a couple of days and then you know, back to normal, so yeah, I think we've had a pretty good winter really weather wise, never sort of stopped I mean, probably like you probably never stopped you going anywhere . Because it's you know, I mean, I think they had better bad weather up Conset way and but they're high aren't they high up. We've had no really bad weather, odd day here and there but nothing that's lasted."

People had an identity with the weather



- ▶ People marveled at the power the weather had specifically surrounding fallen trees.
- ▶ People who lived in East Durham were tolerant of the weather
- ▶ The weather in East Durham allowed people to continue walking all year round

Notes:

People marvelled at the power of the weather especially surrounding the storms that were experienced this winter (Arwen, Barra, Malik, Corrie, Dudley, and Eunice), this was alongside an understanding that they were completely at mercy to the weather.

(Joan) “That's a root off a tree and when that come out, right and fell over like that it left a great big hole and we still walked it we went down the hole and back up.”

(Ellen) “The only thing that we had done was plant pots were moved. Big heavy ones and that you know, you just think somebody had gone (blows air) and blown them along but I mean it did cause a lot of damage. That was all. We were lucky, Alison lost some tiles off her roof. And like as you go through the village and what not, well actually when we got on the coach, we couldn't go normal, you know, Castle Eden village, we couldn't go up there it was blocked because fallen trees and so we had to go in a circle round Blackhall to get back you know but otherwise gah its unbelievable the damage it does cause.”

(Ellen) “Look at the size of that one! (points at fallen tree) Blimey. Look at the pattern it leaves on the grass. It's unbelievable isn't it. Wow look at them (fallen trees) cor blimey, it'd half get a hold of them they're big ones and all.”

Despite people marvelling at the weather rarely stopped them walking in winter in East Durham.

(Anne) “You know, I can't remember that we really lost a lot of walks through bad weather, because it's never been that pouring that we don't go out and you know I can count probably on one hand the times it's been called off, I mean when we had the big gayles a few weeks ago, stopped then but and always we just sort of come out.”

(James) “I don't think so other than if it looked dangerous, no I think weather, only in five years weathers only stopped me walking about three times.”

(Carol) “But we always laugh on this walk because it never rains, on a Monday (to other walkers) does it? Very very we don't have rain, very much on a Monday do we? (others agree) Watch it rain before we get back today.”

People had an identity with the weather

- ▶ People spoke about personal culture when walking such as where they lived / used to live and places they carried out activities with their families
- ▶ People referred to local culture whilst walking such as things that were important to the community such as mining culture.
- ▶ People created an identity with place through “Symbolisations” that were meaningful to them



Notes:

When walking in winter with the participants in the study it became apparent that the places people walked in and experienced were meaningful to them.

People would often refer to personal culture when walking on these walks such as telling you where they lived/ used to live, where they used to take their children and grandchildren to enjoy days out. The majority of the sample had lived in the same areas or in close proximity to areas and could tell you about lifetime engagement with areas. Others who were new to areas often constructed identities to places through walking and creating memories in these areas.

People also referred to local culture whilst walking, showing that these areas were full of social significance for people who engaged in these areas. This also perhaps suggests another reason that people are motivated to walk in areas they find socially significant in winter.

(Anne) “Yeah, and you still get lots of glass searchers you know for the seaglass so, people are out on this beach in all weather, really. Because after a storm you get all churned up you pick up the sea glass easy....The sea glass. There used to be in bottle works here, on top of the cliffs, in Victorian times and they used to shove all the rubbish over the edge of the cliff. And it's got crushed about by the storms and the sea and it turns into little coloured pebbles. People come from all over the world to collect it, it put Seaham on the map.... People make earrings and craft with it. And you have to find the bright brightest colours like perfume bottles, pink and orange and stuff. But mostly, it's the little white and green one they are very lovely. People make a lot of money out of making things with them.”

(Janet) “This is Stoney Cut, just abit of local interest, Oliver Cromwell once came down looking for the church in Daltly Dale. A very old church and he was looking to ransack it with his band of merry men. All the way down the hill. He was looking for it. He got to the bottom. He said you told me, you know, there was a church here, we used to have a giant

horse chestnut tree Infront of the church. And it was in the summer. It just completely blocked out. So you had this beautiful Church in 44 or whatever being saved because Cromwell couldn't see it. He just kept on going up the other side of the hill, you know with the right of way.”

(Joan(The black beaches) “Oh, it's been cleaned up alot, because where we are going to walk actually is over where the pit heap was, you know the heap of waste, and I mean they used to tip alot of it into the Sea and they cleaned it all up they actually took loads away but now it's very stoney, can you see down there? But I mean it was black, just black it was horrendous.”

People would also create an identity within these areas by creating “symbolisations” within place that had meaning to them, which included a mix of both local and personal culture. These symbolisations contributed to how people understood the places they walked in some instances became known locally by nicknames of these symbolisations. Some of these symbolisations had to do with the characteristics of walks but not all.

(Bethan) “And if you sit at this particular rock I sit on, you can see the sea and you can see the boats and you know, ships on the sea , so I feel this no comparison, really. Because the summertime everything is you know, oh, it's all green and it's all this you know, whatever. So I enjoy the different in the countryside.”

(Joan) “Because it makes everything look different. I mean, we used to have a place called it was a landslide it's not there no more, it is but it's inaccessible, so they say. It was what we used to call the grotto and it was a big, great big, like rock coming down and the path was below it. Yeah. And in the winter, there was great big long icicles dropping down from, then Oh, it looks like one of these Christmas the Christmas cards. Oh beautiful. And of course the snow over all the trees, oh I love snow me.”

(Mary) “It is lovely in the Dene and there are different levels of walks in the Dene as well. Some more challenging than others, some are flat and obviously there is what we call Heart Attack Hill to contend with on your way out of the Dene, so yeah.”

Recommendations

- ▶ People can sometimes take for granted what is in their local areas. Older people in East Durham might benefit from a resource that helps people acknowledge what's in their local area
- ▶ Some walks could be put on that show people what is in their local areas
- ▶ Areas must have enough benches so that everyone can appreciate their areas at their own pace
- ▶ Walks could be put on that help people get to know different local areas

Notes:

People suggested that they sometimes took their areas for granted when walking, although when talking to an outsider (me as a researcher) it was obvious that these places were full of social significance. Could a resource be created that helps people to understand what's in their areas.

(John) “That's the trouble, if you live near a place you tend not to go to as often, you know what I mean?”

(Carol) “Well, you do take it for granted, you've got probably people in the colliery there. That have never been round here don't know it exists, don't know the beauty of it. My daughter lives away now. This is the first thing she wants to do when she comes home, apart from look and see the full fridge to see the sea, she wants to come down. And see the sea.”

(Ellen) “I've always lived near the coast, but you don't appreciate it. When you live close hand.”



Weather and place

- ▶ Experiencing weather was important for people
- ▶ People felt weather differently across East Durham
- ▶ People enjoyed different variations of weather

(Bethan) "If it's windy, I actually quite like the wind. I don't like the damage it does on things, and I wouldn't go out when you have to really walk, you know, into it but I feel sometimes invigorated with the wind. I stand, I stand there open me arms and get the wind in me.... I feel as if it's invigorating, I feel, I feel like, Oh, this is like, (smiles and breathes in) lovely the wind."

Notes:

It became apparent that experiencing the weather was important to people when they were walking. People enjoy feeling the weather and often explain this as getting "fresh air". The quotes also demonstrates that experiencing nature is important and getting the benefits from exercise. Weather exposure, experiencing nature and benefiting from exercise are all things you can experience whilst walking in winter making it a powerful tool for wellbeing. Some also mentioned another addition which was socialising which will be explained later.

(Mary(Walk leader) "I think it lifts people's spirits and just getting outdoors into the fresh air it's, for me, it's uplifting, and I hope our participants would feel the same about getting outside. There's a lot of people, as I said, in Peterlee that live alone, and maybe don't go out as much during the week. So when they come on the walk, they're getting the best of both worlds. They're getting the company the chat, but they're also benefiting from a bit of fresh air as well."

(Olivia) "So now we just do a walk. which I enjoy. Because there's another girl used to do the walking, but she goes to the badminton now, but I like the outside, I like the fresh air and the vitamin D if you get the sun. I think it's more beneficial."

(Ellen) "I mean, like today it's not windy. It's the North wind that really makes it bad. But the usual walk I usually do keeps you going right over the fields. oh (groans) and it blows at you, you know. But once you get over, I don't know I just feel refreshed when I've done it, either refreshed or numb (shared laughter)."

Weather was also felt differently in various locations such as the weather being different in Durham city centre than Easington that was high up. This was the same for areas that were deemed to be high up such as Noses Point in Seaham. People also spoke about how they felt the wind more and felt colder by the Sea and in Open fields. This shows a

real level of detail that people were able to pick out about their local areas and helped people to really get to know their areas and adapt accordingly.

(Bethan) “But when you talk about Durham, I can get the temperature here and I can go to Durham and it's so many degrees warmer. Just in Durham from here, because actually we're really high. In fact, the church the village church there was used as the highest point for the ships from years ago because that's the highest point so were high. And then if you want to go down to the colliery you go all the way down because I have seen snow here and I've gone down the colliery and there isn't any snow.”

Weather and place

- ▶ People enjoyed seeing how winter weather changed areas they walked in such as coverings of snow and ice that created visual spectacles.

(Ellen) “This is what they call the Tit pond. It's quite a big pond. I wouldn't go on there because it's really really slippy you seen it goes back there? But the last time I was over there was just a thin layer of ice well must've been last winter must it. And then the sun just peeped through behind the cloud and bounced Oh, God was lovely. Really nice.”



Notes:

People enjoyed seeing how weather interacted with place. People enjoyed seeing how winter weather changed areas they walked in such as coverings of snow and ice that created visual spectacles. Additionally people enjoyed seeing how weather interacted with the sea, such as when the wind was high seeing the choppy waters, when there was no wind and it was still and when the sun shined off the surface. This demonstrates there was a lot of enjoyable scenery and weather to experience in winter.

(Venessa) “Oh, it's alright (shared laughter) I mean, I wouldn't come down if it was inches deep in snow. But it's very pretty if there has just been a light covering of snow or, or a frost and then all the Frost's on the trees it's very picturesque then, mind we haven't had much of that this year have we.”

(Ellen) “But it can be, I don't know when it's not wavy like that . That's just when as they say it's like a millpond, you know, God that lovely that. You know? Up here they always say if there's no waves, and it's just straight like that. They always say, oh, it's like a millpond. You know, so smooth and calm. And if you know what I mean.”

(Bethan) “It's just the peace of it just coming in, it's going out and it's just something and it goes whoosh (breaths out) down here like that (Actions a calming affect). You know and I'm Cancerian as well and were governed by the moon and the moon has a lot of influence on the sea. That's when the highest tide is after the full moon things like that.”

Weather and place

- ▶ Place changes significantly in the different seasons and there are different things to see. Walking is a great way walkers got to know their local areas.
- ▶ The less leaves on trees allowed for areas to be viewed completely differently
- ▶ Different routes are available as in winter paths tend to be less overgrown
- ▶ There are different animals that visit areas at different times of the year



Notes:

Place also changes significantly in the different seasons and there are different things to see. The winter season often lead to increased visibility for people. This was due to the fact that in summer areas are often overgrown and views are obstructed, however in winter people had more visibility of their areas. People suggested that it made areas look completely different. Streams and rivers tend to fill up in winter often creating different views. Also there were different routes available in winter due to paths being less overgrown. There was a variety of things to see such as different flowers coming into blossom, which often created activities such as the “Bluebell or snowdrop” walk. Seeing different flowers in their environment was a way people noticed the turning of the seasons. There are also different animals to see and hear that visit different areas at different times of the year and the changing of what farmers put in their fields. There is incredible variety and detail to witness in winter that is due to the differing weather. Walking in winter was a great way to get to know your area better and see the differences.

(Bethan) “No, no. It's entirely different. You know, the scenery is different. You know, while I have been walking this time, and it's been like the sun well even if the sun's not out, but then there was we're lucky because it's the countryside here. And we're lucky because it's the sea you know, here, but walking in this type of weather a little bit colder, thing whatever, I enjoy it because different birds to start with. I don't know them, but I know different sounds and the countryside's all different and, and some paths that's very easy now, they won't be easy in the summer because they get over grown. And you can see I always feel in the winter, you can see clearer. And if you sit at this particular rock I sit on, you can see the sea and you can see the boats and you know, ships on the sea, so I feel this no comparison, really. Because the summertime everything is you know, oh, it's all green and it's all this you know, whatever. So I enjoy the different in the countryside.”

(Carol) “I think with doing the same walk one or two people have come before and said, but you do the same walk? You know, every Monday. Yeah, but I said, you could walk with different people, the scenery changes, now you've got all the beech trees at the moment. Look at it everything is coming out now in a few weeks time things will be so different, you know, you get to the end here, you see the sea, the sea is different every week. The tide could be in, the tide could be out. There are different ships, boats there, it could be rough, it could be smooth. So yeah. And now we've got these gorgeous sheep in here. And the cattle. Oh, yes, they are. They're lovely aren't they. We had um, yeah, we had donkeys last year. But evidently, yeah, donkeys can't stand the cold. Like these sheep can and cows can Highland cattle. So they're in for the winter? So yes, it does change. And you've got the seasons. You've got your snow drop, your daffodils now and then when you walk further over to Hawthorne, there's a great big meadow now which the National Trust have nurtured and they've let it recede, You know, each year. Because some of the locals when National Trust first took the coastline over. Some of the locals were cutting things down. But they didn't understand that's the way to get more flowers next year. So come sort of July time they go down and cut it all down but that's when the seeds go underground and you've got more flowers for next year and it's beautiful. So that's your summer time. And then you go right through, you dreaded Ivy, you've got that all year round. But, I love it you see but my husband hates it, we haven't got any in our garden now.”

(Margret(Walk leader) “I was gonna say visibility in the Dean as well. It's really interesting how it changes over the year. I mean, because in the in the winter, you can see that you can stand right on the edge of the cliff and see right down to the viaduct all the way down to the coast. And standing on this side of the dean. You can see the castle from the other side, you can see like the castle wall, and we can't see any of that in the summer. No, no. So I think it opens up. It makes the woodland field bigger in the winter. I've had this conversation with a lot of people and they agree with me it kind of it just feels like a completely different place. Yeah. Whereas in the summer, when we put the leaves on the trees, it could be anywhere because you can't really see very far. It's quite disorientating. For a lot of people, I know. They, they kind of don't feel like they've got anywhere in the summer because they just constantly like in leaves and the trees.”



Weather and place

- ▶ Older adults have seen weather change the areas they live overtime.
- ▶ Some of these areas have been influenced by human interaction such as mining from the pits. Showing how history and culture was important for people whilst walking.
- ▶ How older adults feel the weather is changing:

(Venessa) “We don't have the seasons like we used to and all people say. Oh! it's just you, you are forgetful you know (laughter) and all this but no, we did have seasons more. More proper seasons you know and it's you know, spring, summer, winter. But we don't now I think, you know, you can get all types of weather in any time of the year.”

Notes:

The participants within the study have seen weather change place throughout their lives. For example they have seen how overtime the wind and waves have eroded the cliffs and taken away the path that they walk on, they also know how areas have adapted overtime, such as, in this instance extending the path to allow walking. Additionally people have seen how the weather has caused plants to overgrown paths and change routes meaning that less are available or new ones to be formed..

Some of these areas have also been significantly effected by human interaction or “weathering” that changed place. For example all the waste from the pits used to be carried by big steel girder's and tipped into the sea and onto the beach. This changed what was in the sea and the appearance of the beaches. However some participants suggested that the girders also saved the cliffs from years of erosion by stopping the waves from hitting the cliffs. Similarly in Seaham there was a glassworks that used to tip their waste of the edges of the cliffs and the combination of the weather and sea that is then washed up on the beaches as colourful pebbles. This shows that the areas people walk have been changed overtime through history. People demonstrated a knowledge of this history, which helped people to know the places they walked in and develop connections to their local areas.

(John) “Well what it was like an like, steal gurders and you used to have a rope and used to be out in the sea about 100 meters out or something a big wail and then you had these tubs and when it went to the wail there used to be a bar, great big bar on the thing that used to tip and then when it came back round the other way it used to right itself and go back and just continues and then they put it in the 90s, no 80s they put a conveyor belt, just put a conveyor belt, all covered in like so none could get in.”

(Carol) “Yeah, this is where we've had a big fall. Because this path was right down on the on here... We've had a big fall here, so they've had to make a new, new path .And that's only recent, last year it was closed, because that was the time people were wanting to be out! In

the fresh air, that's all people did. Walked and it's free, isn't it? That's all people did and it was a bad time so they had to close this whole stretch, stretch because it was too dangerous . So then they extended the path further out.”

(Anne) “There used to be in bottle works here, on top of the cliffs, in Victorian times and they used to shove all the rubbish over the edge of the cliff. And it's got crushed about by the storms and the sea and it turns into little coloured pebbles . People come from all over the world to collect it, it put Seaham on the map... People make earrings and craft with it. And you have to find the bright brightest colours like perfume bottles, pink and orange and stuff. But mostly, it's the little white and green one they are very lovely. People make a lot of money out of making things with them.”

How older adults feel the weather in winter has also changed throughout their lifespan. Earlier on in their lives they suggested that seasons were more defined exactly into Spring, Summer, Autumn, Winter which would bring about differences in weather. However now it is suggested by the participants that this is less so and you can multiple variations of weather all year round. This meant that people found it easier to walk in winter as the weather was less of a barrier.

The participants mentioned how this winter in particular was relatively mild and had a noticeable absence of snow. Additionally, they suggested that flowers were bursting into flowers that are typically expected in spring-time were ready to flower earlier. This perhaps demonstrates that older adults are a useful source of knowledge for understanding climate change.

(John) “Well, what can I say, this time in life it's getting warmer, so therefore you aren't getting the winters that you used to get I mean when I was a child I mean we had snow from November right through to March and snow used to be really deep. I mean I used to sledge, when I was younger I used to sledge right through to march and this winter we have hardly had any snow, bit of frost, that's it... Well, it's for the better really, but it's not on the environment.”

(Carol) “Now I think the weather has changed, the climate, the seasons to what we used to have before, were defined weren't they? You had your Spring, you had your summer, autumn, winter. Now, I mean, you can get some beautiful days like this and you can get some lovely days in winter, obviously, cold but if you dress accordingly and most people have now invested in sort of a few waterproofs, even your waterproof trousers or and they have the cagoules and everything. So there's no reason you can't walk in the winter and this place is beautiful when it's snowed and there's snow on the ground. It's lovely. Sometimes it's abit harder to walking in the snow. Because it takes more energy, you know?”

(Miles Lowson) Do you think the seasons have changed?

(Venessa) “I do. Yes, I definitely do. We don't have the seasons like we used to and all people say. Oh! it's just you, you are forgetfull you know (laughter) and all this but no, we did have seasons more. More proper seasons you know and it's you know, spring, summer, winter. But we don't now I think, you know, you can get all types of weather in any time of the year.”

Recommendations

- ▶ Can people document where weather is felt differently across East Durham and use this for adaption
- ▶ Walking in winter weather allows people to get to know their areas better.
- ▶ History and culture are important for older adults when walking. Could some walks be put on that show other older adults who perhaps don't know?
- ▶ Older adults could be a useful for understanding climate change

Notes:

Can people document where weather is felt differently across East Durham and use this for adaption. For example if someone enjoyed feeling the wind, they would, perhaps consider walking besides the Sea, or up at high altitudes as this is particularly windy. If people didn't like the wind, perhaps a more sheltered route could be worked out.

Walking in winter makes areas look and feel completely different to other seasons. Walking in winter is a great way for people to get to know their areas better and if they don't walk in winter they are perhaps missing out on such variety that is offered in the winter. Could walking in winter weather be rebranded as getting to know your areas better?

History and culture were important for people whilst walking. Could some walks be put on that document the rich history of that these areas in East Durham have or perhaps a way in which older adults could teach one another?

Older adults have seen weather change over their lifespan. Whilst walking with older adults they were able to pick out how winter is a lot milder than previous years. This could provide a more personal understanding of climate change that is typically dominated by statistical understandings.



Weather and mental health

- ▶ People within the study needed to experience the outdoors to be able to deal with being indoors.
- ▶ Being outdoors helped a lot of people manage their mental health in the pandemic

(Daniel(Walk leader) Just getting out and being in the countryside and walking in general. I think particularly for people's mental health, and I noticed over, previous lockdown the amount of people who had actually been when were walking around the Dene, who you had never seen before. There were so many people you knew before they had dogs, they'd just got a dog just to get them out of the house and get them walking, I think it's been one of the major things for like, you know, keeping the body and soul together, you know keeping the mind intact. Rather than just sit on the couch and vegetate.

Notes:

Older adults within the study suggested that they needed to experience the weather and the outdoors to be content with staying indoors. People suggested how walking in winter and experiencing everything that it offers (Weather exposure, nature, fitness) became essential for their wellbeing. Some people suggested walking helped them to stay mobile as the more they did the more they could do and completing a walk gave people feelings of achievement, and helped them manage the rest of their day. This perhaps demonstrates that once you start walking in winter and experiencing the outdoors it becomes something that you are increasingly inclined to do. This was important for the majority of participants but particularly significant or people who lived on their own.

Some people also suggested that experiencing weather and being in the outdoors helped them through the pandemic. This was perhaps where people realised the values that experiencing the weather had for them and for some people it was the first time they engaged with walking. From this, they were able to see the benefits that it had for them and they haven't stopped!

(Joan) “Well, I think it just, it just gets you out of your, I hate stopping in the house if I've got nothing to do. If you know what I mean because it's in the same four walls and I live on me own, so unless I go out.”

(Bethan) “Health and Mental wise, both that's what it's done for me. Yeah... I know, and sometimes if I've missed a couple of days I go, your going to have to go out. You have to go, you can't just miss, you know, and not go. So, and I make myself go then and then I don't get out the door and I go oh this is nice. I think in mental awareness sort of out. And you don't realise till you've come in you go. I really enjoyed that.”

(Olivia) “You do and you get your, you unblock your mind don't you? You just let all the things of the day just go out the window along with the walk.”

Helping with the pandemic

(Olivia) Well, when we were on lockdown, I walked every day. Well it was fine. People were making me laugh like, because they would be walking along here and they would go over there (shared laughter), so that they didn't go anywhere near you. But for all you're told that you can't spread when you're outside.

(Miles Lawson) How did you find being in lockdown then how was you walking through all that? So was that a real motivator for you then knowing that you'd be safe outside?

(Olivia) Yeah well, it was better than sitting in the house and there's only so much housework you can do isn't there Miles and Netflix, thank the Lord for Netflix .

(Bethan) I used to say, I fell out of the house into the car fell out the car into the house and that was me, you know? And then in the first lock down, right. And I was in the house and people don't come in, get the window and all this, you know, and I thought to myself, there's something better than this. I've got to do something about this. So anyway, I decided okay, get your shoes on and walk. So I walked across the road and through this back Lane and then this walkway. So, I walked walk down then because I'd never been ever I didn't even know that was fields on me doorstep. Went and had a look around and walked and walked. But and then but then coming back, it was slight incline and because I was so unfit, I was I was really thing I got on this this man's fence and I hung on this fence. I hung on it going like this going like this. Anyway, this poor man came out of his garage and said, are you alright? Are you alright? Can I get you a chair? Because that's typical North East and I remember saying to him, no, I said, if you don't mind, I just want to hang on to your fence a bit longer. Just to get my breath back back. And that was my first trip there and then so then after that, I went a little bit further, a little bit further, a little bit further. And that's what that's how I managed to do three and a half miles. That's my goal!

Weather and mental health

Walking alone	Walking with others
(Bethan) I like my own company. I don't like walking with anybody. You know, I can walk at my own pace, I can think my own thoughts and sometimes I don't know if I would have enough breath to talk to somebody and do a hill. But I honestly like walking myself.	(Olivia) So, it's a social thing. You see these two girls here saved my life, Miles. I don't know what I would have done. Because as you get older your friends dwindle and you only have so many friends and now they are all married and I don't like being like the gooseberry tied on the end.

Notes:

There was differences in how people enjoyed experiencing the weather. Some people enjoyed walking on their own due to the peace and quiet of walking and the relaxation it brings. People suggested here how after walking in winter they felt as if their minds were clearer and they had less stress. People enjoyed walking on their own as they were able to set their own pace and do their own routes and engage with environments of their own choosing. Most people who walked alone were confident in being able to navigate a route without a fear of getting lost.

(Miles Lawson) So how come you would you like the solitary walking then? because you seem like obviously a very social person.

(Bethan) “Well, I think it's a balance a bit. You know, and not just that. I like to walk at my own pace and if I want to sit down, you know if I need some breath I sit down. I can do it without feeling well ee perhaps they don't want to sit down or you know, whatever. So no, there's something I think about solidary walking, I like that, that balances me out.”

(Janet) “Well I think you can. I find I often walk into home matches, for example. And I can solve any problem if I'm walking alone. Give me half an hour. Your mind sort of goes into the zone. And you just sort things out. Now whether that's called relaxation or meditation, I don't know but I always have my best ideas when I'm walking.”

The majority of people in the study greeted (said hello) people whilst we were walking and enjoyed seeing people when they were walking (strangers and acquaintances). A significant proportion of the participants attended walking groups. Typically a few people lived alone and wanted to interact with people. The walking groups also served a purpose for optional social spin offs such as going for a coffee after the walk or other events such as meals and events. Most people who attended walking groups were not confident of being able to navigate a route without the fear of getting lost.

(James) “More than anything, it's meeting people, making friends you know... like at Beamish group. One of the women who worked at Beamish used to organise things you know, for the evening, occasionally evenings well one day she said, oh i'll organise a group to go to the restaurant you know, for Christmas I think it was.”

(Ellsa) “Well, totally whole round the exercise, the mental health of like keeping your brain active just by talking, well cut up here, just by talking to people, keeps your brain active and keeps you active. Like I said before it's the spin offs of other things, you know, like, you know, in the group those maybe say oh there is so and so, we all going to go to the so and so if you fancy, you know the spin offs as well of things to do and it's yeah, definitely the company and so that's what helps us the mental health isn't it.”

Although presented as different options many people enjoy a balance of walking with others and walking alone.

Weather and mental health



- ▶ When people are socialising they often become oblivious to their surroundings.

(Anne(when walking in rainy conditions)
“People are laughing and having a nice chat and having a good time, nobody wants to get wet and bored but I think it's not the most important thing and we can just override that really. I'd rather be walking in this weather with having a good time and a laugh with the girls than sitting indoors in the warm and dry and not”

Notes:

When people are being social in weather this can often negate the weather. When people were talking to one another they almost became oblivious to their surroundings and to the weather they were experiencing. This was interesting and demonstrated another way for people to adapt to weather conditions.

Perhaps, if there were weather conditions that were not desirable to you, talking to someone can make the weather less of a barrier and still help you get the benefits of walking in winter.

(Daniel) “You know, talking to people and walking around often takes your mind off things and I think social interaction has a lot to do with it as well.”

(Anne) “People are laughing and having a nice chat and having a good time, nobody wants to get wet and bored but I think it's not the most important thing and we can just override that really. I'd rather be walking in this weather with having a good time and a laugh with the girls than sitting indoors in the warm and dry and not.”

(Margret(walk leader) “I try to be as engaging as possible and like, point stuff out as we walk. I mean, you probably notice when you go out walking with big groups of older people, they are just chatting away, they're kind of oblivious to their surroundings. Sometimes when we stop for a break, they'll stop and be like, where are we? And they haven't paid attention at all to where we've been going. So I mean, I suppose my job, not just, not just because I'm the walk leader, but because I work for *names employer* is to try and like, like, breach that gap between like them and their surroundings because they can just be in there own little world sometimes, which is fine. like it's nice a lot of them. For a lot of them it's like their social outing of the week sort of thing. So, it's nice for them to have a chat. But I also like try and make them notice a bit more about where we are and, and like the seasons like point stuff out to them.”



Weather and mental health

- ▶ People open-up when walking in winter weather talking about in-depth stories about their lives

Notes:

The final findings from this section was that people opened up when walking in winter weather talking about in-depth stories about their lives. This was even more significant when taking into account that I was a stranger to most participants and had met them a matter of minutes before interviewing them. These stories typically involved bereavements of loved ones, or in depth explanations of their health history and family lives. This could partly be because when we interviewed the participants they took me on a walk of their choice and this allowed for an instant ice breaker between myself and the participants. However what undoubtedly helped was that winter weather took the pressure off potentially awkward social situations by helping participants to feel more relaxed and de-stressed, which allowed them to open-up.

(Miles Lawson) do you get people really sort of like opening up to you then, on these walks?

(Mary(Walk leader) “Yeah we do, sometimes it's if I say challenging, for *names colleague* and I, were not qualified counsellors. And if we do, it hasn't happened often Miles but in the past we have been concerned about some of our walkers mental health, we can signpost them on to somewhere where they could get professional help. It is few and far between but at least we can. We have the ability to do that and manage to do that. Yeah, just chatting to people. It helps, helps them as well.”

In-depth stories.

(Olivia) “Yeah. Well, when my husband was here, we used to walk. We used to go walk... That's alright. So, I got used to it. And then when he died, I was lost. And I used to get up every morning and go for a walk. Pick different routes. Got bored was doing the same routes. And then one of the girls said, Why don't you try the keep fit at the pavilion? I said, oh I don't know anybody, she said well you know me. Anyway, I went and that was the best thing I ever did. Saved me life really, Miles. And then they started the walking group on a Tuesday.

Well, it started off it was a walking exercise group. So halfway around, we would do exercise. Then they found out it was against the law, you have to have a certificate!”

(James) “Well, I started walking, five and a half years ago , because my wife died... Well, it wasn't unexpected. We both got used to the idea that she had 10 weeks to live and that was it. But after she died, I thought well, what do I do now? Because we lived for each other and nobody else. So I decided to go walking. First of all, I went to the coast and walked along the coast. But I was on my own and I thought, this is not this is no fun. Because anybody can walk on their own you know, you need the company, need the social aspect of it. So, as I said in the article, I was walking around Beamish museum one day, because I used to go there every Sunday, walk around to the bandstand because they had a brass band during the summer. And listen to that, and then walk back. But one day, this woman came up to me dressed in her 1900s outfit. You know, she was obviously one of the workers there and asked us what I was doing. I told her and she says, oh can I walk with you. She's obviously on her way to work. So, we got chatting, and what we were on about and she says, well, why don't you join the walking group here? On every Friday, which I didn't know anything about at the time, but anyway, I joined it. And there was about eight people at the time. Most of them for the museum. But anyway, I joined it and I enjoyed it. Because it wasn't walking around the museum. Sometimes it was depending on the weather, if it was muddy or something you know or seriously muddy. Used to walk around the museum because it's tarmacked you know.”

(James) “I struggled with me feet as well. Well 10 years ago was it 10 yes it is. I had bowel cancer... Well, it happens you know nothing you can do about it . And they took a big section of me bowl away but I was on chemotherapy supposedly for 10 months and every month you had three months on the chemo, a month without and go and see the doctor see how you're doing and then another three weeks on the chemo? Well after about nine months my feet were killing me I could hardly walk and I said to the doctor I can hardly walk and she said stop taking it. You've taken it for nine months another months not gonna make any difference really? And I thought, hello that's suspicious so that's what I did. But it didn't stop me feet aching.”

Recommendations

- ▶ Weather exposure is essential for managing wellbeing, can walking in weather be promoted as a way to make yourself feel better
- ▶ When attending walking groups the majority of participants were white and female. Perhaps more research needs to be undertaken to ensure groups are more accessible
- ▶ Can walk leaders help people who walk in groups to walk independently

Notes:

Weather exposure is essential for managing wellbeing, this is increasingly important due to the current climate we are living in and the significant stresses people are under. Could walking in weather be branded as a way to look after your wellbeing.

It is essential that walking groups are inclusive. When walking with older adults the majority of participants tended to be female and white (Rigby et al., 2020). Perhaps more research needs to be done in East Durham or consult why this is? Additionally, some areas such as by the coast have limited engagement from some ethnic minorities (Phoenix et al., 2021). Understanding this would help to make areas and walking groups more accessible for everyone.

Can walk leaders teach people who walk in a group to be confident walking on their own. This could perhaps create a referral process where people attend walking groups for a couple of weeks learn a few routes and then walk on their own or with others.

References:

Rigby, B.P., Dodd-Reynolds, C.J. and Oliver, E.J., 2020. Inequities and inequalities in outdoor walking groups: a scoping review. *Public health reviews*, 41(1), pp.1-24.

Phoenix, C., Bell, S.L. and Hollenbeck, J., 2021. Segregation and the Sea: Toward a Critical Understanding of Race and Coastal Blue Space in Greater Miami. *Journal of Sport and Social Issues*, 45(2), pp.115-137.

Limitations of the study...

- ▶ This project was mainly made up of people who were walkers
- ▶ Ensuring COVID-19 safety
- ▶ As the study specifically mentions walking in winter and walking interviews we may have limited engagement from people with disabilities

Notes:

It was hard to attract people who were not walkers to the project, people often got the wrong idea of the project even though we stated we wanted to talk to people regardless of their walking ability. We did have more success on this within the creative workshops. A project doing something similar next time might want to approach more older adult meeting groups (Crees) at community centres and interview people there and then.

This project was undertaken when there were still COVID-19 measures in place. This meant that the researcher had to obtain an LFT test before every interview and ensure that the participants were comfortable with the procedures. These procedures were stated within a risk assessment that was cleared by Durham University ethics committee. Most interviews took place whilst walking outdoors. Which meant that a lot of older adults felt comfortable with the protocols.

This study did welcome the presence of people with disabilities, however when communicating with protentional participants we decided to use the term walking interviews as opposed to “mobile interviews” (Smith and Sparkes, 2016) as we did not want to cause confusion that our methods involved telephone interviews. Admittedly, the terminology used within the project may have limited engagement from people with disabilities.

References:

Smith, B. and Sparkes, A.C. eds., 2016. Routledge handbook of qualitative research in sport and exercise (pp. 1-518). London: Routledge.



Walk leaders what's going well...



- ▶ Everyone who I spoke to at the walking groups were happy with the walk leaders and enjoyed walking in winter
- ▶ The walk leaders filled an essential role for people by providing confidence for some of the participants to walk when they otherwise might not have
- ▶ All the walk leaders received training which allowed them to manage the group effectively
- ▶ All the walk leaders had a good rapport with the walkers
- ▶ The majority of walk leaders didn't care about the weather conditions and this rubbed off on the walkers
- ▶ Most walk leaders did Dynamic risk assessing on the day allowing them to adapt to the weather

Notes:

The walk leaders helped people to be active who otherwise may not have been for various reasons.

Enthusiasm of the walk leaders is important for the enjoyment of everyone's participation. Their social ability can help the group gel and contribute to their enjoyment of walks.

Methods such as, remaining eye contact with walkers and paying attention to body language and checking no one is lost helped walkers.

Dynamic risk assessing is useful and something that most walk leaders do. They keep an eye on weather forecasts but don't get too caught up in them and assess the weather on the day which allows them to adapt accordingly and take safety measures.



Walk leaders what's could be improved...



- ▶ Ensuring that new members feel welcome in the group is essential for continued participation. Ensuring there was an absence of cliques and walk leaders walking with new individuals helped.
- ▶ Can the areas people walk be accessible for all by ensuring there is enough seats to allow people to complete walks at their own pace.
- ▶ There is a stigma around walking groups. People need to know there are different walking groups available to fit their motivations and needs.

Notes:

(These groups could be more inclusive) When I was walking with these groups the majority of participants were white, female, older adults. I feel there may need to be a way of making walking groups specifically an option for all.

(Ensuring that new members feel welcome in the group is essential for continued participation) In castle Eden this was mostly done, however one participant spoke about how he was not included in some walking groups due to the presence of cliques. Most people who joined the walking group joined through a friend but this is not always the case. The walk leader walking with them and talking to them often helped people get settled. Obviously walk leaders have to lead the walk and look after everyone so having multiple walk leaders is ideal.

(Henry) "I mean, I was going on a couple of walks. But you weren't in the cliques, so they didn't talk to you... Well they would have a group and the group would stick together and then I would just walk behind them and then if you went into the cafe they will sit around the table . So, I thought ah"

(Can the areas people walk be accessible for all) When conducting the creative mapping section of the project (with people who don't walk so often) it became apparent that (log) seats were needed in the Dene. This allowed people to be able to take breaks before tackling the steep inclines that make up the terrain in the dene. The purpose of this session was not to find out what people needed in their local areas, however, I am certain that a similar session could be run and co-produced with older adults to understand what would help them to be more physically active in winter.

(Stigma around walking groups) People seem to categories themselves as a walker or not a walker. This can be determined by how many times a week you walk, how many walks you go on, or what terrain/ locations you walk in, what your motives are for walking, what you wear. There can be false interpretations such as if you are in a walking group you are a

serious walker and if you walk at certain paces you are a better walker. Speed can often create dimensions of involvement / enjoyment / inclusion, but all walkers are welcome at walking groups and there is various different paces. Pace is often seen as a way to stay fit. If you want to be pacy that is great but if you don't that is also great. There needs to be an understanding that walking groups offer relaxed participation that will cater to walkers needs and however they want to walk is completely up to them. Walkers will be able to find the right groups for them.

Could walk leaders possibly teach people how to not get lost when walking and give them confidence to walk alone?

Can walk leaders make their adjustments to the weather and the routes they use widely known?

Can walk leaders push people to engage personally and choose a route and walk that is right for them and provides them with enjoyment?

Can walk leaders push the benefits of walking in winter weather?



Why walk in winter?



- ▶ Places look completely different
- ▶ Walking in winter can be easier due to the weather
- ▶ It will help people get to know their local area better
- ▶ Seeing improvement over time can give walkers a sense of achievement
- ▶ It can make people feel good



Notes:

Walking in winter can be easier for people.

(Joan) “Oh, I think it's just, just good, in fact sometimes I'd rather walk when it's a bit cooler because you can, you know, you warm up anyway. I mean, the only thing that would be cold on me would be my finger ends, you know, and that would be, that's it the rest of me body is fine. I've got all the gear so it's, after all these years you get you get to know what you know what I mean, what we should be wearing or what you need to wear.”

(Carol) “Walking to me personally. Walking in the winter is just as nice if not better sometimes. Than walking in the summer, because in the summertime, if it's really hot. Obviously you always have your water with you whatever weather. But in the summertime, You can get out of breath, you can get hot, hot and bothered and stripping off and whereas the wintertime you can dress accordingly and take off if you're hot or whatever. So, this disadvantages and advantages of both weather really but it doesn't stop us (laughter) at all.”

(Carol) “In sort of June, July that's horrendous really because you get the sun, you get more breathless and your uncomfortable . So really, I would say this is quite nice, apart from if it's really windy, but it's lovely. When the sun's shining you've got to put your sun lotion on, you've got to have a hat on, you've gotta have a water with you (laughter), sun gets in your eyes, you've gotta have your glasses on.”

Walking in a Winter Wonderland At Any Age!



Top tips for people supporting older adults to be active in winter



- Helps people socialise and meet others in a relaxed way
- Fresh air, seeing nature, and being active can help people combat the winter blues!
- Walking can be more comfortable in the cooler weather
- Fewer leaves on the trees mean a better view of the fantastic County Durham wildlife & scenery
- Shorter days make it easier to enjoy sunrises and sunsets
- Walking can be easier as paths are less overgrown
- Helps people get to know their local area

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Walking in winter helps people Live Longer Better!

-  Walking can give a sense of belonging in the community
-  Walking and talking with others challenges the brain and reduces the risk of dementia
-  Walking outdoors can help to improve stamina, strength, and balance... This can help reduce the risk of falls
-  Walking for 30 minutes or more a day is great for heart health

What's Live Longer Better about?

Live Longer Better.

It's a movement that focuses on building your fitness at any age! And thinking positively about getting older. Live Longer Better focuses on...

Fitness

Loss of fitness is not inevitable. Loss of fitness can be reversed at any age.

Negative thinking

Is often linked to ageism in society. But positive thinking can change this.

Do you support older adults to be active?

Sign up for free training to help you challenge your understanding of older age.

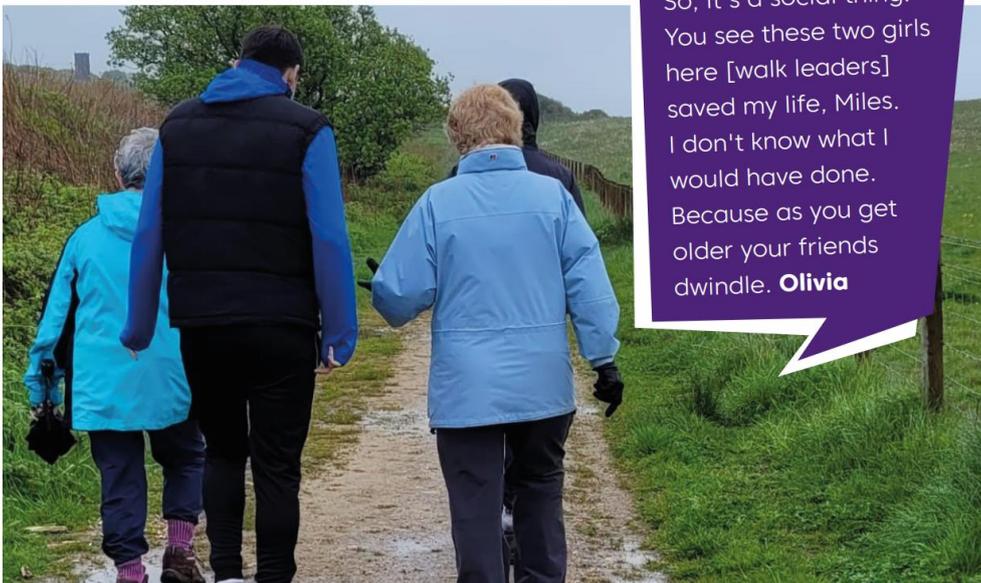
Contact County Durham Sport for more details...

hello@countydurhamsport.com

Free
Training



Walk leaders are brilliant!



So, it's a social thing. You see these two girls here [walk leaders] saved my life, Miles. I don't know what I would have done. Because as you get older your friends dwindle. **Olivia**

Top tips from the amazing walk leaders in East Durham!

Contrary to popular belief, older adults want to walk in all weather and on different terrains. Walk leaders play a key role in helping this happen!

How walk leaders help people stay active in winter:

- Pick a route suitable for the weather conditions
- Adjust the pace and route to suit walkers' needs and abilities
- Give people the confidence to take part in a walk they would not have done alone
- Encourage people to notice their surroundings and get to know their local area
- Develop a friendly and relaxed atmosphere in the walking group

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Top Tips for Walk Leaders

These five top tips build on the great work that walk leaders are already doing to help older adults stay active in winter...

1 Assess the weather and adapt



There is plenty of good walking weather in winter! Don't shy away from certain routes and areas just because it is winter. Keep an eye on weather forecasts and assess the weather on the day. Change plans and take appropriate safety measures, if needed.

2 Have a set of walking poles that people can borrow



Walking poles help people walk safely in winter and on various terrains. Providing these for free helps those who can't afford them take part.

I've always brought it [walking pole] to the Dene, yes... I don't think I would attempt it without, because it does help you... Well, just gives you more confidence. **Venessa**

3 Teach people how to navigate



Being unable to navigate can be a safety concern and prevent older adults from getting active. Teaching people how to walk without a walk leader can help people stay active independently.

Point out any signage, landmarks, or way markers that could help people feel more confident finding their way. Let walkers know which routes are good to do in different weather.

4 Give a warm welcome



Have more walk leaders, or even a “buddy” so that when new people join the group they feel welcome and have someone to walk with.

I mean, I was going on a couple of walks. But you weren't in the cliques, so they didn't talk to you... Well, they would have a group and the group would stick together, and then I would just walk behind them. **Henry**

5 Don't just walk for walking's sake



Changing how walking is advertised can mean more people want to walk. Advertise walks that show people what is in their local area or as an opportunity to learn about local history.

There used to be a bottle works here, on top of the cliffs, in Victorian times and they used to shove all the rubbish over the edge of the cliff. And it's got crushed about by the storms and the sea and it turns into little coloured pebbles. People come from all over the world to collect it, it put Seaham on the map. **Venessa**



Additional Information



Direct people to the County Durham Sport website for information about becoming an Active friend and encouraging others to be active.

[https://countydurhamsport.com/
active-friends-becoming-an-active-friend/](https://countydurhamsport.com/active-friends-becoming-an-active-friend/)



Do you know someone who would like to walk but needs some support? Check out Move Mates. They pair people up with friendly volunteers to meet for a regular walk.

<https://movemates.org.uk/>

Proudly supporting



Direct people to the We Are Undefeatable website to learn more about being active with long-term health conditions.

[https://weareundefeatable.co.uk/
getting-started/](https://weareundefeatable.co.uk/getting-started/)



Direct people to Durham County Council to see the wide range of local walks and groups. There is something for all abilities.

[https://www.durham.gov.uk/
article/26706/Group-walks](https://www.durham.gov.uk/article/26706/Group-walks)



This booklet is based on research undertaken in East Durham for a Masters by Research qualification at Durham University. The lead researcher was Miles Lowson. The project was supervised by Prof. Cassandra Phoenix (Durham University, Department of Sport and Exercise Sciences) and funded by County Durham Sport.

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Appendix, 7: Poster for the Knowledge Exchange in Higher Education: implications for teaching and research’ conference at Plymouth Marjon University.



Authors: Miles Lawson, Dr. Cassandra Phoenix (Durham University)

Funders: County Durham Sport

Contact: miles.a.lawson@durham.ac.uk

Knowledge Exchange in a MRes: Walking in a Winter Wonderland?



In County Durham, we know that exercising outdoors can be challenging in winter weather and that as age increases, so does inactivity. We also know this is true for people who live within NS SeC 6-8 socio-economic categories. We have worked with people in the area highlighted above to understand how the varied and combined elements that make up winter weather shape older adults' perceptions and experience of walking in disadvantaged coastal areas in County Durham. We hope this research will help us promote winter physical activity to Older Adults more realistically whilst also developing our knowledge on winter weather and how it effects Older Adults being active!

We are Collaborating and Connecting With:



County Durham Sport is one of forty-three Active Partnerships. Active Partnerships are locally based strategic organisations that work closely with national, regional, and local organisations to ensure sport and physical activity is developed in a coordinated and effective way across the county.



Live Longer Better is a national programme promoting healthy aging. Live Longer Better provides a forum for sharing learning with wider networks. Upon completion the project will be shared with organisations such as Durham County Council, Public Health England, and other Active Partnerships.

Recommendations for Effective Knowledge Exchange

Setting Up a Project

Find out how your research area might be of interest and benefit to non-academic partners. In my case, County Durham Sport are keen to promote healthy, active lifestyles at all ages by influencing other local stakeholders (such as community groups and the council).

Develop a project proposal developed with an academic lead. I presented two project ideas to County Durham Sport, who chose Winter Wonderland as the most useful to them at this time.

Consider that by working together, we incorporated the legally required ethical information into an engaging output suitable for members of the public. It helped all parties get on the same page about some of the research processes too.

Sharing Knowledge and Findings

Identify who will benefit from this research, and how could it be best communicated to them. In my case this will most likely include presentations, publications, posters, reports, and discussions.

Ensure that materials are accessible for all. Different stakeholders will take different learnings from the project.

Managing Relationships

For my project: I was fortunate enough to be offered work experience prior to the research beginning, this allowed me to get familiar with County Durham Sport and employees.

It was useful to establish someone within County Durham Sport whose responsibility it was to communicate with the University. In my project this person had a research background and experience/understanding of university, which was useful.

Placing monthly recurring meetings that were seen as a "catch up" and a place to provide updates worked well. It was important that no party took over these meetings with one reporting to another and one-on-one meetings or phone calls could be made as frequent as needed.

It was important to utilise each other's strengths, as something difficult for one party was relatively easy for another and saved a lot of time. For example, County Durham Sport have strong local connections making them great at finding participants for studies, and researchers at Durham University have excellent insights into creating interview questions that facilitate in-depth answers from participants.

We used a monthly "Reflection Log" that states four questions:



Ensuring Results are Useful for All

Communicating ethics documents to potential participants was via a poster, a visual pack and face-to-face or phone-call conversations to make sure their questions are answered.

Communicating to other staff within County Durham Sport about how best to do a collaborative research project will be through monthly reflection slides.

Appendix, 8: Q&A Article with Miles Lowson

countydurhamsport.com/news/walking-in-a-winter-wonderland-qa-with-durham-university-researcher-miles-lowson/

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Walking in a Winter Wonderland? Q&A with Durham University Researcher, Miles Lowson.

by County Durham Sport | Apr 4, 2022 | News

Cold, rain, snow, dark mornings and evenings mean many of us are less active during winter. Activity levels also decrease as we get older. Nationally, 42% of people aged over 75 are classified as inactive, compared to just 25% of those aged 35-54 years (Sport England 2019/20).

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- Finance Officer
- Project Officer
- Active Partnerships Welcome New Chair
- School Games Live 2022

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County Durham Sport are collaborating with Durham University to better understand how winter weather might affect older people's experiences of getting active. Miles Lowson has been going on walking interviews with people aged 65+ on the East Durham Coast. Through this project, we hope to amplify the experiences of older people, advocate for active environments which are safe and accessible for winter walking, and promote winter physical activity in ways which will resonate with local people. With winter now coming to an end, I asked Miles about his experiences of this innovative, and active research project so far.

What's the most enjoyable or rewarding part of your project?

"Being able to talk and listen to the residents of County Durham whilst going on some great walks and seeing some fantastic views,



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project so far.

What's the most enjoyable or rewarding part of your project?

"Being able to talk and listen to the residents of County Durham whilst going on some great walks and seeing some fantastic views, especially of the sea...Going on some walks with participants that they wouldn't have felt safe going on without me!"



How have community members reacted to walking interviews?

"Really positive. I can't thank the community members enough, everyone who has taken part in the study have been ever so kind and incredibly interesting and I have thoroughly enjoyed walking and talking with them."

What can researchers learn from non-academic partners like County Durham Sport?

Miles said that County Durham Sport have been "extremely useful for understanding the local population and have been vital for me in terms of being able to connect me with local community centres and walking groups."

What are you seeing and hearing in the community so far?

"People tend to open up whilst walking in winter and experiencing nature. There are suggestions that weather is linked to people's identity and people have often defended or are proud their local weather."

What are you seeing and hearing in the community so far?

"People tend to open up whilst walking in winter and experiencing nature. There are suggestions that weather is linked to people's identity and people have often defended or are proud their local weather."

"People emphasize the importance of history on walks...People who live by the coast seem to have an affinity towards the sea and have lived by the coast most of their lives."

People want to "experience variation when walking and experience a lot of different environments and surfaces within one walk."

Through County Durham Sport's strong community ties, and Durham University's innovative research approach, we have been able to engage people in research who may never have participated in this type of project before. Moreover, we have managed to do so whilst being active!

Conversations with local people are showing that walking is about so much more than physical activity and health benefits. History, culture, and social identity are all reasons why people choose to walk, and explore their local area. In the next few months, we will be holding creative workshops at community venues in East Durham, where people can come together to share and discuss these themes collectively.

This research project is part of a Miles Lowson's Masters by Research, funded by County Durham Sport and supervised by Dr Cassandra Phoenix (Durham University, Department of Sport and Exercise

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This research project is part of a Miles Lowson's Masters by Research, funded by County Durham Sport and supervised by Dr Cassandra Phoenix (Durham University, Department of Sport and Exercise Sciences). Article by Dr Rachel Mowbray (Insight Coordinator, County Durham Sport).

0 Comments

Appendix, 9: Reflection Blog

County Durham sport		Month	
What is going well in the Walking in a Winter Wonderland project? ✓		What is not going so well in the Walking in a Winter Wonderland project? ✗	
What have we learned from this? 💡		Based on this learning, what should we do next/in future? 🔄	

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County Durham sport
Supporting an Active County