

The logo of the University of South Wales, featuring a red shield-like shape with a rounded bottom right corner. Inside the shield, the university's name is written in white text.

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The Biopsychosocial Benefits of Walking Football in the Welsh Coalfield Regions.

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**A thesis submitted in fulfilment of the requirement of the University of South Wales for the degree
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the coalfields
regeneration trust
ymddiriedolaeth
adfwio'r
meysydd glo



Ysgoloriaethau Sgiliau Economi Gwybodaeth
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Abstract

Background

Comparatively to Great British city regions, the Welsh Coalfield regions experience distinct disparities relating to mental and physical health outcomes. These include, a higher number of older adults, a lower life expectancy, higher rates of disability living allowance, and incapacity benefit claimants. More needs to be done to improve the health of older adults in former Welsh mining communities. Within the Welsh Coalfield regions, and in relation to women's sport, football has a rich history. Sport, despite past gender inequalities, remains an integral part of Welsh identity, with Walking Football being the latest manifestation of this. Walking Football is an adapted sport with potential benefits for participants, including physical, mental, and social advantages. Considering the growing popularity and potential to address concerns within the Welsh Coalfields, further research in Welsh Walking Football is necessary. The aim of this thesis was therefore to ascertain the perceived benefits of Walking Football within the former coal mining regions of Wales.

Methods

The project utilised two research methods: a scoping review of existing Walking Football literature and focus group interviews. Following the review of literature, four focus groups were conducted across two clubs in South Wales' former coal mining areas to delve into perceived benefits, learning experiences, facilities, affordability, and suitability. There were two focus groups, one which involved a Walking Football team that was predominantly, but not exclusively, made up of male participants and the other focus group was with a team which was mostly made up of female participants but did not exclude male participants who wished to attend. Participants varied in locality, with some from the South Welsh coalfield regions and others from different areas. Participants were 8 male identifying individuals with an average age of 70, and 8 female identifying participants who did not disclose their ages. Male participants had an average Walking Football involvement of almost 5 years, compared to 1 year for the female group.

Results

The literature review revealed a lack of research on Walking Football and other Walking Sports in former Welsh Coalfield regions. Beyond the scope of this project, it highlighted the need for rigorous methods like randomised control trials and exploration of benefits among different population groups. It also identified various health facets and suggested Walking Football's potential as a complex intervention.

During focus groups, participants noted positive impacts on psychological, social, and physical wellbeing, offering insights for the sport's development, such as expanding age eligibility, implementing stricter rules, establishing minimum health standards, and promoting GP referrals. Opinions on the name "Walking Football" varied. There were calls for improved funding, support, and collaboration among organisations involved. However, as the adapted sport's direction, and the competitive vs. casual approach were debated, it is important to consider these and tailor practices accordingly. Overall, participants endorsed Walking Football and emphasised its inclusivity.

Conclusion

In conclusion, the study revealed a consensus on Walking Football's perceived benefits, comprising benefits related to psychological, social, and physical wellbeing, congruent with the biopsychosocial health model. Future research should employ randomised control trials to establish causality and quantify benefits, aligned with established complex intervention evaluation standards. Further exploration should focus on women and menopausal effects, as well as coach, official, and non-participant viewpoints. Extending inquiry into other Walking Sports variants, like Walking-Rugby, Walking-Netball, and Walking-Cricket, would bridge knowledge gaps about their advantages and implications for diverse demographics. This research approach will improve the understanding of adapted sports' benefits and consideration.

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Acknowledgements

In the whirlwind of academic adventures, I'm reminded of C S Lewis' words: "Friendship is unnecessary, like philosophy, like art... It has no survival value; rather it is one of those things that give value to survival.". As I embark on this journey of acknowledgments, I'd like to reflect on those who've provided me said value (although it does actually have survival value as I have now deeply researched).

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Thesis Outputs

- Goodison, E., Tyson, P., Lancaster, D., & Jehu, L. (2023, June). Walking Football in the Welsh Coalfield Regions. *The University of South Wales*. Postgraduate Research Showcase, Treforest, Wales.
- Goodison, E., Tyson, P., Lancaster, D., Jehu, L., & Jones, R. (2023a, June). A Mixed Method Evaluation of Walking Football in the Welsh Coalfield Regions. *The British Psychological Society*. Connecting communities through psychological and social change, Swansea, Wales.
- Goodison, E., Tyson, P., Lancaster, D., Jehu, L., & Jones, R. (2023b). The Psychological, Social, and Physical Effects of Walking Football in the Welsh Coalfield Areas. In *Green and blue spaces for health and well-being E-Bulletin* (pp. 8–9). Public Health Network Cymru.
- Goodison, E., Tyson, P., Lancaster, D., Jehu, L., & Jones, R. (2023c, June). Walking Football in the Welsh Coalfield Regions. *International Walking Football Congress*. International Walking Football Congress, Aveiro, Portugal.

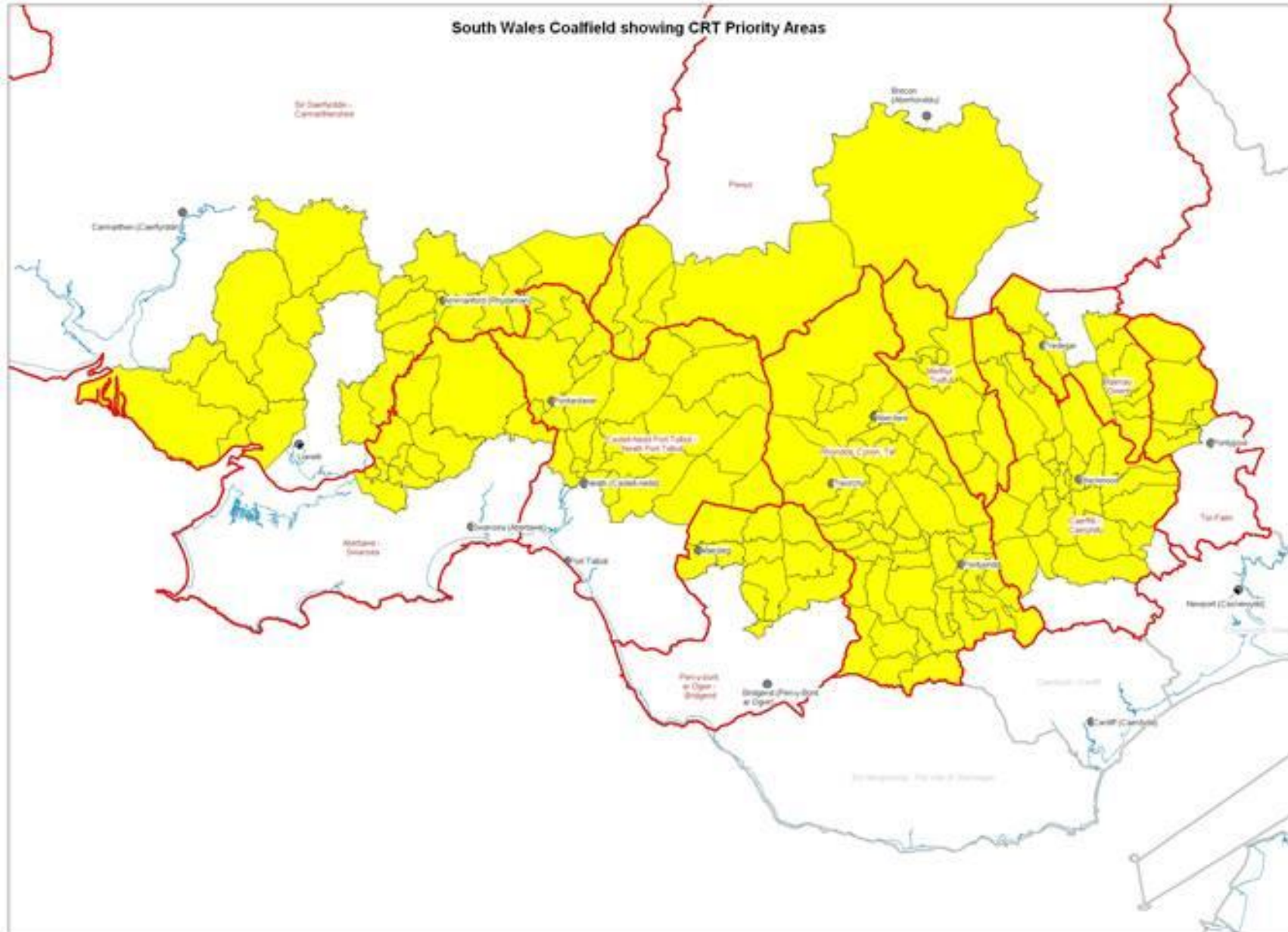
1: Research Rationale and Context

1.1 Introduction

This thesis describes an investigation into the impact of Walking Football within the Coalfields regions of Wales. A background to the population involved, Walking Football in Wales at current, and the potential benefits in relation to the population are discussed in order to provide context to the research. Finally, the aims, or purpose of the project, as well as a summary of the chapters throughout the thesis will be included.

1.2 The Welsh Coalfields Population

The Coalfield areas occupy parts of England, Scotland, and Wales. These areas make up what used to be the British coal mining industry, which, during its peak in the early 1900's, was one of the most significant industries, employing almost 1.2 million individuals (Coalfields Regeneration Trust, 2020). Coalfield communities depended on this trade, and since the pit closures and subsequent miners' strike of 1984-1985, the coal industry was effectively dismantled. Collectively, the former Coalfields community represents roughly 9% of Great Britain, with a combined population of 5.5 million people. In Wales, this translates to 25% of the population, with 768,000 people in South Wales, and 24,000 people in the North of Wales (Beatty *et al.*, 2019). Coal is only found in sedimentary rock basins, known as coal beds. This is the only place to obtain this finite resource (Greb *et al.*, 2017). The settlement pattern of the former Coalfields is displayed as such, being distanced from the main urban centres. Therefore, the systematic collapse of the coal mining left these areas, as some of the most deprived in the UK (Beatty *et al.*, 2019; Coalfields Regeneration Trust, 2020). The areas represented in Wales comprise the following: Blaenau Gwent, Bridgend, Caerphilly, Carmarthenshire, Flintshire, Merthyr Tydfil, Neath Port Talbot, Powys, Rhondda Cynon Taff, Torfaen, Swansea, and Wrexham (Beatty *et al.*, 2019).



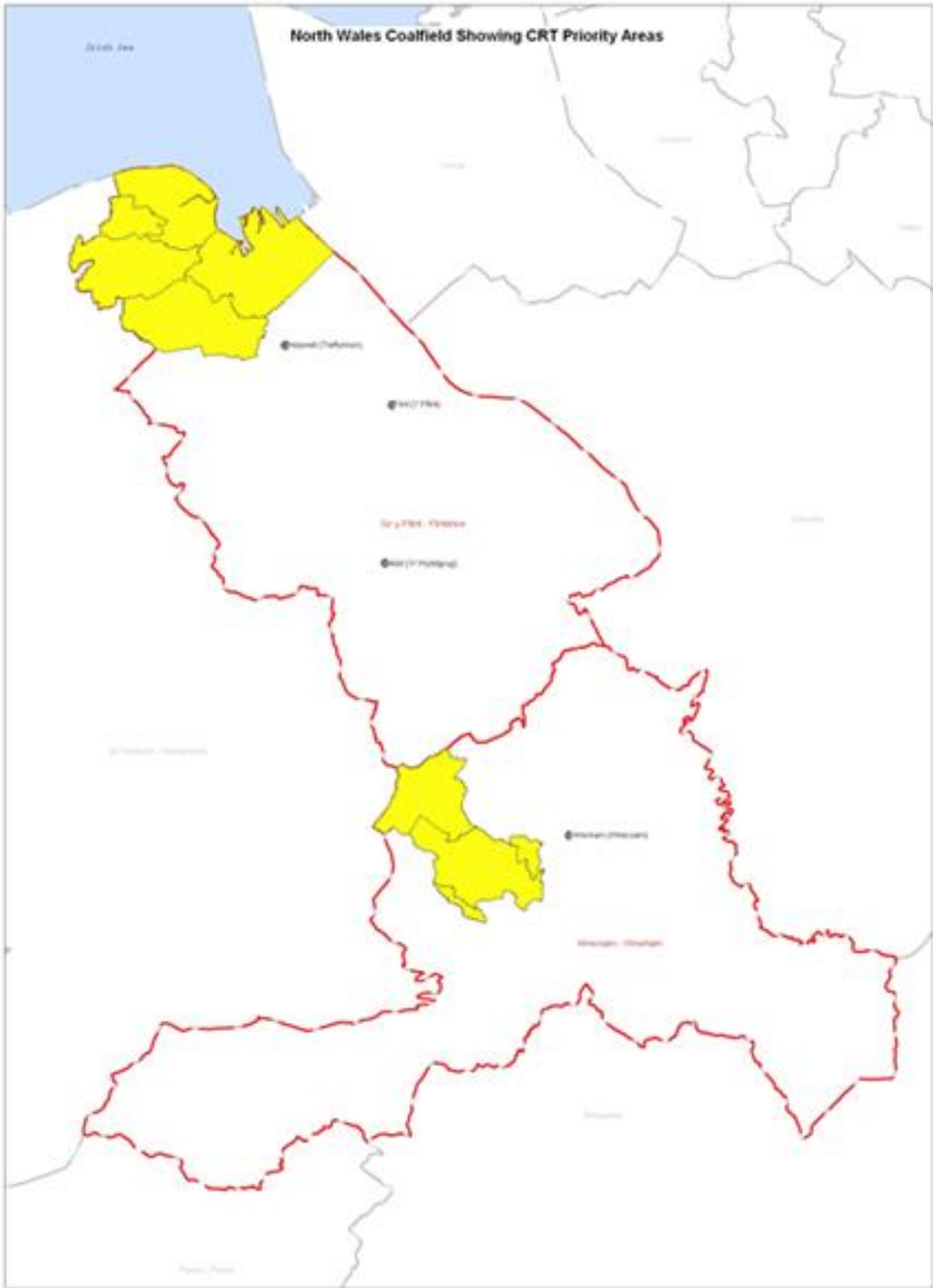


Figure 1: Maps of the Coalfields regions in Wales provided by Coalfields Regeneration Trust (R. Jones, personal communication, 2023).

As of 2019, one-in-five of the people in these communities were aged 65 or more years of age, compared to one-in-seven in main regional cities. The national average life expectancy for people in the former Coalfields throughout the UK was roughly a year less than the national average, being 78 for men, and 82 for women. Other statistics include a higher percentage of reported mental health problems in residents aged sixteen plus (38% vs. 34%), a higher percentage of individuals claiming Disability Living Allowance or its replacement (11.2% in South Wales vs. 5.8%), and a higher percentage of individuals claiming incapacity benefits (10.4% in South Wales vs. 5.7%) when compared to the average in Great Britain (Beatty *et al.*, 2019).

In the context of aging, there has been an upwards shift of the older adult, with research suggesting that by 2030, one-in-six people worldwide will be aged 60 or older. It is indicated that this population group will increase from a billion to 1.4 billion. While this initially started in higher income countries, the low- and middle-income countries are now experiencing a greater change. By 2050, two thirds of the world's population of over 60-year-olds will now live in lower- and middle-income countries (WHO, 2022a). Evidently, the former Coalfield regions are already experiencing this shift (Beatty *et al.*, 2019). In Wales, there are 662,000 people aged 65+, which is 21.3% of the entire Welsh population (Roskams, 2022). The former Welsh Coalfields local authorities, as a whole, contribute to more than half of that number, with 378,000 (to the nearest 100) individuals over the age of 65 (StatsWales – Welsh Government, 2021). Older people are more likely to suffer from poor mental and physical health, with people ages 65+ contributing to almost one third of outpatient attendees in hospital (British Medical Association, 2016), and being more likely to suffer from social isolation (Cornwell *et al.*, 2008). Social isolation specifically, can result in depressive symptoms and loneliness in people who have retired or lost their partner, or friends (Giummarra *et al.*, 2007), and has been linked to depression, and reduced health (Bowling *et al.*, 2003; Stickley *et al.*, 2013; Kearns *et al.*, 2014; Rico-Uribe *et al.*, 2016). Research has also shown that 22% of men, and 28% of women over the age of 65 live with depression and one-in-five have anxiety within the UK (The Royal College of Psychiatrists, 2018). This issue is compounded by the lack of access to mental health services as

experienced by this age group compared to younger individuals, even though the latter do have a higher incidence of mental health complaints.

In comparison with the statistics of individuals aged 65 and over, persons aged 16-24 with evidence of anxiety or depression is at 31% (MIND, 2021). Similarly, people between the ages of 16-29 are the most likely to have some form of anxiety, with the numbers steadily decreasing as individuals aged with the lowest percentage of people with some form of anxiety being 70 and over (5%) (Edwards *et al.*, 2016; mentalhealth.org.uk, 2024). However, of the people aged between 16-24, half will be referred to mental health services. Compared to the cohort of older adults, only 6% of will be referred to mental health services for support (The Royal College of Psychiatrists, 2018). As the number of older adults suffering with mental health concerns predicted to increase, yet 85% of the depression sufferers who are 65+ having no help from the NHS, it is important to note the disparity in mental health care from healthcare services, especially given percentage of suicide rates are higher within this population than in young adults (Fiske *et al.*, 2009; The Royal College of Psychiatrists, 2018). Factors relating to the development of depression in older adults include medical conditions, genes, stress, problems with sleep, social isolation and loneliness, lack of exercise or physical activity, functional limitations that inhibit day-to-day activities, and addiction and/or alcoholism (Nia.nih.gov, 2021). Therefore, is crucial to investigate potential interventions that could address these factors relating to the onset of mental health concerns, such as modified sports.

A further consideration regarding ageing and the care of older adults, especially regarding mental health is the theory of maturational dualism. This theory explains the potential weakening of the mind body connection as an individual ages, and how this might influence a persons' emotional experiences. The theory states, during the ageing process, there is a decline in sensory perceptions and physiological reactivity, and this causes a deficiency in an individual's ability to have their emotions, cognitions and behaviour guided by their internal biological states. A consequence of this is that external cues are likely to be used by older adults, as opposed to their internal bodily states,

to inform what would be described as their emotional experience. The theory of maturational dualism supports some evidence that older adults may focus less on negative and more on positive stimuli (Mendes, 2010; Isaacowitz, 2022).

However, this theory has several criticisms. The key premise of this theory, that the mind and body connection weakens with age that leads to impairments in emotional experience and behaviours, has limited and inconsistent empirical evidence (Mikkelsen *et al.*, 2019). Similarly, the idea that older adults rely more on external cues compared to internal functions for emotional regulation has inconclusive findings (Mikkelsen *et al.*, 2019). While studies have observed age-related declines in interoceptive awareness and physiological reactivity, their direct impact on emotional experiences is not definitively established. Further criticisms of the theory suggest it oversimplifies the relationships between mind, body, and emotions throughout a person's life. It does not account for any compensatory mechanisms or potential neuroplasticity in which to maintain emotional functioning in older adults (Mikkelsen *et al.*, 2019). Likewise, the trajectories of ageing differ between individuals, which this theory is unable to fully justify. Therefore, more research is needed into maturational dualism and the mechanisms which it relates changes in interoception, proprioception, and physiological reactivity due to age, and how this may influence emotional experiences and decision-making among older adults (Mendes, 2010; Mikkelsen *et al.*, 2019; Isaacowitz, 2022). For this reason, this theory was seen as peripheral to this thesis.

Regarding the case of the Coalfield's population, one-in-five people are aged over 65, 38% of individuals 16+ years old report mental health difficulties, and the life expectancy is roughly a year less than the average for Great Britain (Beatty *et al.*, 2019). Existing literature has explored the quality of life in older adults (Rejeski & Mihalko, 2001; Vagetti *et al.*, 2014; Cunningham *et al.*, 2020). However, there remains a gap in research focusing on addressing the disparity in the quality of life experienced by older adults residing in socioeconomically disadvantaged areas (Breeze *et al.*, 2005). Moreover, there is a need for targeted interventions to tackle the unique challenges confronted by former coal

mining communities in the UK. This is especially critical given the larger proportion of older adults within these regions.

There have been certain initiatives throughout the UK targeting the disparity in health outcomes related to the older adult, with the World Health Organisation encouraging 'healthy ageing' schemes (World Health Organisation, 2021). Sport Wales have invested in promoting more activity in older adults (SportWales, 2021), to support a healthier standard of living. The reason physical activity is being used to address these inequalities is because even a low dose of moderate-to-vigorous-intensity physical activity (1-499 Metabolic Equivalent of Task (MET)-minutes) per week can reduce mortality risk by 22% (Hupin *et al.*, 2015). Significantly, only 14% of older adults participate in activity 3 or more times a week, lower than the average (29%) (SportWales, 2017). This number is even lower in people over 65 living in deprived areas in Wales (5%) (SportWales, 2017), such as the former Coalfield's regions. It is also stated that there is a notable difference in activity levels in not only the older population, and the deprived population, but also a disparity between men and women. Women take part in less physical activity than men of the same age group (Sun *et al.*, 2013).

Coalfields Regeneration Trust's Game On Wales is a programme that invests in sport and physical-activity based interventions to serve the 12 Welsh local authorities to tackle the health inequalities throughout the former coal towns and villages (Game on Wales, Coalfields Regeneration Trust, 2022). Game On Wales also have specific programme to support and develop Walking Football sessions, a game designed to be slower, among other adaptations, than football, aimed at people aged 50+ (Game On Wales, 2022). This targets the disparity in health for older adults in the deprived areas mentioned previously. Research into the activities older adults engage in, such as Walking Football, and how to best implement these, especially within the Coalfields communities is important. It is also important to investigate how Walking Football and other activities can be used to engage women, in particular, in this age bracket to aim at reducing the disproportionate activity levels as well.

1.3 Defining Physical Activity, Exercise, and Sport

As noted in previous Walking Football research, physical activity, exercise, and sport are distinguishable, and therefore, defining the considered concepts is important when providing comparison (Caspersen *et al.*, 1985; Cholerton, 2021). The definitions used by Cholerton (2021), are outlined below.

Physical activity is defined by the World Health Organisation as: “any bodily movement produced by skeletal muscles that requires energy expenditure. Physical activity refers to all movement including during leisure time, for transport to get to and from places, or as part of a person’s work.” (WHO, 2022b)

Exercise can be defined as “the purposeful, structured, and repetitive movement, intended for fitness”. This is a ‘subgroup’ of physical activity (Dasso, 2018; Cholerton, 2021, p. 12).

Finally, sport in this research (Cholerton, 2021, p. 12) is defined as ““personal involvement in an organised fixture, match, or competition of a human activity capable of achieving a result requiring physical exertion and/or physical skill, which, by its nature and organisation, is competitive and is generally accepted as being a sport”. This definition was found to be widely used in sport psychology (Gayman, *et al.*, 2016) and consequently, relevant to this study.

There are differing definitions for the above concepts (Winterbotham & du Preez, 2015), and some are even used interchangeably (Lawrence & Singleton, 2017). Indeed, there is still a debate about what should be used to define and differentiate the concepts; however, it is still important to distinguish so to best apply the conceptual terms and elicit more accurate comparison between studies (Lawrence & Singleton, 2017). Furthermore, it should be considered that there are potential differences in effect between physical activity compared to sporting interventions amongst participants, which is discussed further on page 26. While there is a wide range of research discussing the benefits of physical activity amongst a range of populations, including the older adult, there is distinctly less exploration of the

phenomenon in a sporting context (Cholerton, 2021). It is important that this be investigated further especially in the ex-Coalfield regions, as they are noted to have a disparity in health, and health care (The Royal College of Psychiatrists, 2018; Beatty *et al.*, 2019), and sporting initiatives are being used to address this (SportWales, 2021; World Health Organisation, 2021). It should also be important to consider the interventions in context of the residents, in terms of what is important, and most likely to encourage both adherence and maintenance behaviours (McPhee *et al.*, 2016; Cholerton, 2021).

1.4 The History of Football in Wales and the Coalfield Regions

Football has a rich history, associated with working class, especially the Coalfields regions throughout Britain (Goulstone, 2000; Jones, 2022; Johnes, 2023b). Sayings such as “coal was king, and football was a religion” were used to describe the relationship between football and the Coalfields, specifically referring to a mining village in Durham (Walker, 2014). The historical experience of the people in South Wales generally, was similar to other industrial regions of Britain (Johnes, 2023a). However, during its conception, football was mostly popular in the north of Wales, with the Football Association of Wales (FAW) being founded in Wrexham, 1876 (FAW, 2021). Wrexham, of course, is a part of the Welsh Coalfields (Beatty *et al.*, 2019). Football remained more popular in the North of Wales for this initial period, and it was not until later, during an influx of migration to South Wales, due to the coal industry, that football gained support. Two-hundred-and-twenty thousand people moved from England into the Glamorganshire Coalfield between 1871 and 1911, and because of their familiarity with class identity, work, community, and sport, were quickly accepted into Welsh society (Johnes, 2021). Sport more generally has always been linked with the Welsh identity (Johnes, 2023a; Johnes, 2023b), and later as the sport grew in south Wales, with this migration, the likes of Cardiff City started to experience some success, winning the 1927 FA cup (Johnes, 2021). This received the support of the Welsh people with allegedly 100,000 people taking to the streets to welcome this team home from Wembley (Johnes, 2023a). For men during the time of industrial Wales, sport offered a shared experience, and along with pubs, working men’s institutes, and chapels, was one of the key social institutions. In the 1950s

the FAW became the first sporting association to translate their rules into Welsh, as even the more rural west Wales, or Welsh (speaking) Wales, were able to later acknowledge the importance of sport in what it meant to be 'Welsh' (Johnes, 2023a).

Women throughout history were treated much differently when contemplating sport, and more specifically, football. It is noted that sport did still play an important part in female life throughout history, but in a very different context. Sport was also seen through somewhat of a social lens, with chances to 'meet people', or meet men, especially in the middle classes during the 19th century. For the working-class female population however, sport remained out of reach, with them preferring the cinema industry (Johnes, 2023b). It was not until the first world war the women's football flourished, with women in industry slowly getting their chance whilst the men were away, but this was halted with the ban from the FA in 1921 (Jenkel, 2020). The FAW soon followed, banning the women's game in Wales from 1922 (Jones, 2021). This, in of itself was intrinsically linked to the coal industry. Women's football supported the miners strikes, fundraising to relieve the distress caused by the industry attempting to starve the miners back to work. The popularity of women's football saw a large numbers of attendees to games played throughout the coal communities, such as Cardiff and Swansea. This allowed them to set up soup kitchens amongst other things to aid the workers during the lockout. The women's charitable involvement in the Miners' Lockout 1921 was seen as a part of a national political movement, and as such, the breaking point for the FA, who were already concerned by the growth in status of the game. Consequently, the organisational bodies decided to ban women's football (Kelly, 2020). Sport after this period was seen as more of a community concept regarding women's involvement, which saw the social norms of the time reinforced. This contrasted significantly to the previous growth of women's football, which had the female contingent playing a very popular version of the sport (Johnes, 2023b). Pre-ban, Wrexham hosted a women's football match that included teams that played in front 53,000, at Goodison Park in the Christmas period of 1920. This suggested that women's football was very popular during the time before it was forcibly prohibited, however, football would remain banned in Wales until 1970 (Jones, 2021). Nevertheless, it is still argued that football,

and sport in general, remains a part of the Welsh identity, but largely in a male presentation of 'Welshness'. Whilst a women's 'Welshness' differs, it is still affected by sport in some way (Johnes, 2023a).

In 2021, the FAW released a strategy entitled 'For Her', where they outlined that during the previous 4 years, women's football had seen more than a 50% increase in participation, with currently 11,000 registered players (Pawb Cymru, 2021). Women's football is now the most popular sport worldwide (Statista, 2021), with plans from the FAW to continue supporting and funding further growth (Pawb Cymru, 2021; Game On Wales, 2022). With organisations such as Coalfields Regeneration Trust's Game On Wales, and Huddle (FAW Trust, 2020a), it is likely football will continue its popularity with women in Wales, especially in the former Coalfield areas. Although the journey of 11-a-side football in the Coalfield areas and its history differs between men and women, the sport of football now has 90,000 registered male and female players in Wales (Griffiths, 2021). The FAW stated that 47% of respondents to a survey specified they followed football, compared to the country's previous most popular sport, rugby, which received only a 45% following (BBC Sport, 2023; Nielsen & UEFA, 2022). This indicates football's current prominence within Wales. Furthermore, football generally, has shown to have a positive social impact when considering issues of social exclusion and mental wellbeing, as well as promoting a reconnection to communities, sporting history, and personal growth, including a sense of general inclusion (Brawn *et al.*, 2015). These issues are a concern with older adults (Bowling *et al.*, 2003; Giummarra *et al.*, 2007; Cornwell *et al.*, 2008). Therefore, the history of football, as well as its present, are important to consider. The temporal popularity of football in this community, subsequently, provides the potential for health and other interventions in which, are linked to specific football clubs.

1.5 Walking Football in Wales

There are a few Walking Sports, recently becoming popular as more accessible versions of well-known activities, for example, Walking Rugby (The WRU, 2019), Walking Cricket (Yorkshire Cricket Foundation,

2019), and more (“Walking Sports,” 2021). Recent surveys suggests that Walking Football has over 1,200 clubs, and 40,000 participants (The WFA, 2018), which would make it one of the more popular examples of a Walking Sport. A “Walking Sport” can be defined as an adapted sport, a type of sport or physical activity which is modified for those who require alterations in order to participate (Cholerton, 2021). Studies around sporting participation have suggested that some of the obstacles for partaking in sport were health conditions or physical limitations, and therefore more focus should be required on inclusion to allow the older adult to continue being active. Adapted sports, such as Walking Football allow for this (McPhee *et al.*, 2016; Jenkin *et al.*, 2017; Jenkin *et al.*, 2018). Due to there being noted barriers in conventional sports for the ageing population, adapted sports are gaining popularity. This is likely because areas, such as the Coalfields regions, are attempting to address the inactivity seen amongst the older adult. More research should investigate how to best utilise Walking Football and other ‘adapted’ or Walking Sports (Cholerton, 2021).

Specifically, Walking Football is a variant of the game of 11-aside football, said to be created by John Croot in 2011, although this remains contested (FIFA, 2019; The WFA, 2020). The concept of Walking Football is that of a small-sided game, aimed to be at a slower pace than it’s running parent sport, and has a distinct non-contact rule (The WFA, 2021). There are more than 50 noted differences between Walking Football and the game of football (The WFA, 2018). A PDF of the laws of Walking Football are included in the appendices (Page5) (The FA, 2019). It is a more inclusive alternative, aimed primarily at people aged 50 years and over although it is also suitable to be played by a wide variety of populations of any age, including those with disabilities or chronic conditions which prevent vigorous physical activity. The inclusion of more individuals is actively being targeted to promote a more diverse playing group, as at current it is mainly popular amongst male ex-football-players.

Walking Football is recognised by the Football Association of Wales (FAW), and the Welsh Walking Football Federation (WWFF) recently became associate members of the organisation (FAW Trust, 2020; Welsh Walking Football Federation, 2023). The Coalfields Regeneration Trust’s Game On Wales host

the largest showcase event of Walking Football in Wales with their annual “Wales Walking Football Championship”, with the most recent event taking place June 2022 at the University of South Wales sports park (“Walking Football,” 2022). The “Coalfield’s Cup” competition includes clubs from former mining communities in Wales. The areas the teams can be located include **Blaenau Gwent, Bridgend, Caerphilly, Carmarthenshire, Flintshire, Merthyr Tydfil, Neath Port Talbot, Powys, Rhondda Cynon Taff (RCT), Swansea, Torfaen, and Wrexham** (Sportsreg.co.uk, 2022). All are former Coalfield’s communities (Beatty *et al.*, 2019). There are also Welsh Walking Football leagues categorised by age, with 50+, 60+, and 70+ leagues in South and North Wales. Walking Football in Wales has even made it to an international level, participating in international fixtures, with national sides for men and women (“Walking Football,” 2022a; We Are Wales, 2022).

1.6 Walking Football as an Intervention for Wellbeing

Corepal *et al.*, (2020) suggests the social aspect of Walking Football is what allows Walking Football to work as a potential intervention. Behaviour change theory suggest that intrinsic motivation is facilitated by the impact of enjoyment, and the specific social qualities of an intervention. This includes things such as, social opportunity, social support, social comparison, and relatability with others (Bandura, 1997; Michie *et al.*, 2011; Ryan & Deci, 2017; Corepal *et al.*, 2020). This is supported by other research that shows, where physical activity is completed within a group setting, interventions are more effective than compared to home-based physical activity. To complete the activity within a group therefore provides more benefit and is more likely to support long-term adherence (Beauchamp *et al.*, 2018; Craike *et al.*, 2018; Corepal *et al.*, 2020). The review, therefore, suggests that Walking Football is appealing due to the social element. Promoting Walking Football as a chance to make ‘social connections’ through a team-based exercise, may convince participants to start, and provide motivation to maintain involvement subsequently. This may provide better results than perhaps focusing more on the ‘exercise’ portion of the intervention. Focusing on the social aspect is crucial in of itself as improving health disparities is reportedly best undertaken at a community and social level

(Bravata *et al.*, 2007). This emphasises the need for the social attribute first, as without the development of the social connections etc., physical health parity is less likely to occur. Corepal *et al.*, (2020), conversely, indicates that further study is required, researching the makeup of teams, and a players' inclinations and incentives towards the recreational vs. competitive debate. This is mirrored in other Walking Sport research (Goodison & Paval, 2022) as well as Walking Football (Loadman, 2017; Cholerton, 2021) including the research within this thesis. However, providing the social element, whilst also allowing for continued adherence to a physical activity-based intervention will likely improve the issues noted in the Welsh Coalfields populations, and this should be explored.

1.7 Social Benefits

Walking football specifically has already been shown to have a variety of social benefits (Loadman, 2017; Lamont *et al.*, 2017; McEwan *et al.*, 2019; Cholerton *et al.*, 2020; Taylor & Pringle, 2021). This adapted sport could be utilised as an appropriate community activity given the issues noted within the former Coalfields population.

A systematic review highlighted that compared to other approaches, multi-component adult group-based interventions with theoretical frameworks were most effective in increasing physical activity in socio-economically disadvantaged communities. Therefore, this indicates, that when trying to reach inactive adults within these deprived areas, social, or community approaches, compared to individual methods are more effective (Cleland *et al.*, 2012). When considering the Coalfields community – the regions could be defined as a socio-economically disadvantaged. Physical activity in a group setting, such as Walking Football, has the opportunity to improve such disparities that have been previously noted, such as the state of older adult health. Exercise, generally, as opposed to specifically Walking Football, has also been shown to improve social skills of people with autism (Sowa & Meulenbroek, 2012), learning disabilities (Bluehardt & Shephard, 1995), and has psychosocial benefits for those with physical disability (Giacobbi *et al.*, 2008; Martin, 2012; Martin, 2013) representing various socioeconomic areas. Disabilities were something highlighted in the ex-coal mining areas, with a

higher-than-average percentage of people claiming Disability Living Allowance or its replacement (8.6%) (Beatty *et al.*, 2019). Football, specifically, has shown a positive social impact when considering issues of social exclusion and mental wellbeing, as well as promoting a reconnection to communities, sporting history, and personal growth, including a sense of general inclusion (Brawn *et al.*, 2015). Again, these issues are a concern with older adults (Bowling *et al.*, 2003; Giummarra *et al.*, 2007; Cornwell *et al.*, 2008). Walking Football has been shown to have social benefits through current research. Social benefits in this case refer to – perceived improvements in relationships within a group setting (Lamont *et al.*, 2017), a sense of ‘social connection’ (Cholerton *et al.*, 2020), or an increase in social interaction with similar people (McEwan *et al.*, 2019). When considering the interactions between people with similar interests, the shared experiences allow for a higher likelihood of discourse with mental health professionals in the ‘sport’ setting, opposed to the ‘exercise’ or ‘physical activity’ environments (McKeown *et al.*, 2015). The context of these Walking Football studies is important to consider. Lamont *et al.* (2017) conducted a qualitative study on collaborative football and Walking Football groups for mental health care in two Scottish National Health Service Boards. Cholerton *et al.* (2020) employed a qualitative approach to explore the initiation experiences of 17 older adults in the UK who had participated in Walking Football for at least 6 months, with participants from varying socioeconomic backgrounds. McEwan *et al.* (2019) conducted a pilot study comparing Walking Football to a control group from newly formed Walking Football groups under a Scottish Premiership football club's Community Trust wing, with most of the participants coming from more deprived areas. These studies are discussed further on page 36 in the scoping literature review.

Sport is more flexible and well accepted by patients when considering psychiatric rehabilitation, improving sociality amongst other benefits (Corretti *et al.*, 2011). Team sports, especially, are theorised to facilitate well-being by increasing social connections between the team and the fan, through identification. Research supports that this more greatly impacts social psychological wellbeing via temporary and enduring social connections. This is because group and team identification, as opposed to social and personal wellbeing, are theorised to be more closely related (Wann, 2006).

It is especially important to note the type of activity undertaken when considering social connectedness. Productive activities are defined in terms of doing things together with people, usually towards a common goal. These types of activities allow for a gain in social capital, expanding one's associations, and increasing the diversity of their knowledge learned from others. Consumptive activities are defined as more passive, watching something, an activity whereby individuals are usually spectating. Activities of this nature, while social, tend to consist of family, or close friends, people with similar ideologies. These relationships can facilitate social and emotional support but do not expand or highlight a person's dependency on others. This is therefore less likely to contribute to an individual's democratic values. When democratic values are improved, it would lead to them being more civically and politically engaged (Van Ingen & Van Eijck, 2009). Indeed, productive activities tend to involve higher levels of cooperation and require a more active and creative process, distinguishable from consumptive activities which merely involve one 'experiencing' a leisure phenomenon. Productive activities have been found to be of higher benefit when encouraging connectedness, and decreasing loneliness (Putnam, 2000), which support the use of a physical activity-based intervention for the target population. Walking Football therefore allows for there to be an inclusive form of exercise that still allows for the group, team, and sporting environment, seen to have those specific benefits (Wann, 2006; Corretti *et al.*, 2011; McKeown *et al.*, 2015).

1.8 Psychological Benefits

Walking Football has also shown psychological benefits within previous research (Loadman, 2017; Lamont *et al.*, 2017; Barbosa *et al.*, 2020; Cholerton *et al.*, 2020; Taylor & Pringle, 2021). As it has already been noted, the Coalfields communities have a high reported number of mental health difficulties in individuals aged 16+, as well as individuals claiming Disability Living Allowance (Beatty *et al.*, 2019). Exercise, physical activity, and sport can provide a variety of benefits for individuals with depression (Cooney *et al.*, 2013) and anxiety (Jayakody *et al.*, 2013), with studies showing it can be effectively used to alleviate the symptoms (Mikkelsen *et al.*, 2017) in various socioeconomic areas. The

older adult residents within the Coalfields and throughout the entire UK receive inadequate treatment for mental health issues (The Royal College of Psychiatrists, 2018), which is likely why sporting bodies such as Sport Wales, and Coalfields Regeneration Trust are attempting to use exercise to address these concerns, bridging this gap in support for the older adult (SportWales, 2021; Game On Wales, 2022). Physical activity has also elicited positive psychological responses in those with neurodiversity (Archer & Kostrzewa, 2011; Sowa & Meulenbroek, 2012), physical disability (Giacobbi *et al.*, 2008; Martin, 2012; Martin, 2013) and chronic illness (Malone *et al.*, 2012), accentuating the importance of adapted sports, because they are more accessible to a variety of people, irrespective of socioeconomic background. Previous Walking Football studies report psychological benefits such as enjoyment (Barbosa *et al.*, 2020), a sense of inclusivity (Loadman, 2017), as well as distraction, a development of confidence and skills, and a sense of achievement (Taylor & Pringle, 2021). Other studies presented positive perceptions and experiences of walking football and the benefits (Lamont *et al.*, 2017; Cholerton *et al.*, 2020). Walking football, similar to other physical activity, is associated with an improved outlook towards life (Loadman, 2017), but a physically active lifestyle also has perceived psychological benefits in terms of enhanced mood, reduced stress, and a more positive self-image. Barbosa *et al.* (2020) conducted a randomised controlled trial involving middle-aged men with type 2 diabetes in Portugal, comparing the effects of Walking Football against a control group over a 6-month period. In contrast, Loadman (2017) employed an ethnographic approach, spanning 18 months, involving participant observation, informal conversations with Walking Football participants and facilitators, and the collection of relevant documents in the southern region of England. The final study focused on 7 white British participants from an established Walking Football group in Leeds, Yorkshire, who were selected for semi-structured interviews based on their identification by mental health services as individuals with mental health conditions (Taylor & Pringle, 2021). This is discussed further in the scoping literature review on page 36.

These psychological benefits are further pronounced within people who have anxiety: people who are clinically depressed; and the elderly (Berger, 1996; Youngstedt, 2016). Older adults particularly, tend

to stress how important mental wellness is, even prioritising it over physical health (Giumarra *et al.*, 2007). These groups have been highlighted as contributing to the Coalfields' population (20% are aged 65+ years of age, 38% of people aged 16+ report mental health difficulties, both higher than the national average) (Beatty *et al.*, 2019). Therefore, Walking Football may be able to provide the benefits required to mitigate the disparities in older adult health in the Welsh former coal mining regions.

In these Welsh Coalfields' regions, football does have history and roots, as previously noted, which links to the continuity theory. This assumes the idea that older adults favour structure in internal and external ways, which is linked to their experiences in earlier life. Individuals that maintain more sociable leisure activities during their ageing are likely to be happier with their lives, with a greater sense of wellbeing as shown in research (Kelly, Steinkamp, & Kelly, 1987; Atchley, 1989; Fernandes-Ballesteros *et al.*, 2001; Nimrod, 2007). This suggests that exploring a physical activity with history, and perhaps one with growing popularity, such as football, for both men and women during their transition into older adulthood, would be beneficial to look at. As Walking Football is a more accessible variety of the sport, this allows for even more participation, or participation even further into older adulthood, and may provide further psychological and social benefit that should be examined.

1.9 Physical benefits

Walking Football has physical health effects and benefits, as presented in earlier Walking Football research (Arnold *et al.*, 2015; Jaafar *et al.*, 2018; Heil *et al.*, 2018; Harper *et al.*, 2019; Madsen *et al.*, 2020; Salle *et al.*, 2020; Capela *et al.*, 2021; Kammoun *et al.*, 2022). Physical activity is a well-researched topic within the general population, with the benefits being well understood (Cholerton, 2021). Various health improvements have been shown via the increase of physical activity levels, preventing non-communicable diseases, for example, cardiovascular disease, cancer, and diabetes (Warburton, 2006). Physical activity has been shown specifically to aid older adults, reducing the impact of their poor health. Intervention studies suggest a large number of physical benefits for those at or coming to the older adult age, including, again, lowering the risk of cardiovascular disease (Earnest *et al.*, 2013;

McPhee *et al.*, 2016). People who are involved in higher levels of activity have a lower mortality rate (Feldman *et al.*, 2015), are able to maintain cognitive function (Lautenschlager *et al.*, 2008), have improved balance, coordination, and a reduced risk of falls and trips (Rubenstein *et al.*, 2000; Gillespie *et al.*, 2012; Franco *et al.*, 2013; MCPhee *et al.*, 2016). Moreover, even if older adults are involved in a fall, they are less likely to suffer a fracture because of a higher bone mineral density, as a result of engaging in more physical activity (Ireland *et al.*, 2014; MCPhee *et al.*, 2016). Therefore, the use of physical activity to target the disparity in health in the ex-mining area in Wales could be a useful intervention.

In the case of Walking Football, studies have shown this physical aspect, assisting in a reduction of body fat for people with comorbidities (Arnold *et al.*, 2015). Comorbidities, in simple terms, means more than a single disease or illness occurring in one individual simultaneously (McGeorge, 2023). In the case of Arnold *et al.*, (2015), this refers to hypertension, knee osteoarthritis, type 2 diabetes mellitus, spinal stenosis, atrial fibrillation, bronchitis, or other comorbidities in various combinations, yet Walking Football still presented physically advantageous results. The adapted sport also showed positive physical health improvements during Ramadan fasting, when considering religious contexts (Kammoun *et al.*, 2022). Similar to the previous research on increased physical activity improving balance, Walking Football research is also shown to support this, as well as an increase in muscular strength in prostate cancer patients undergoing androgen deprivation therapy (Capela *et al.*, 2021). The benefits found, however, are not limited to this participant group, as obese school children have been shown to have positive anthropometrical and fitness changes after 12 weeks of low impact, moderate intensity Walking Football programme (Jaafar *et al.*, 2018). It is also shown to be more effective than purely Walking alone, but not as effective as running football (Madsen *et al.*, 2020). Research has additionally supported that Walking Football is a moderate-to-vigorous intensity of exercise, which has the potential to improve physical health, but suggest it requires further investigation (Heil *et al.*, 2018; Harper *et al.*, 2019; Salle *et al.*, 2020). However, the wide range of

participant groups that it has shown some benefit to, does highlight the inclusive nature of the adapted sport, and therefore its potential applications.

One theory as to why Walking Football could work as an intervention for the suggested participant group is that the physical activity will be able to support the disparity in health and activity of the socio-economically disadvantaged and the older adult. These descriptors have been previously noted when describing the Coalfields populace (Beatty *et al.*, 2019). This is due to the moderate to low intensity exercise, as well as the low impact of this adapted sport, targeting the physical aspects that needs to be improved upon (Arnold *et al.*, 2015; Jaafar *et al.*, 2018; Heil *et al.*, 2018; Harper *et al.*, 2019; Madsen *et al.*, 2020; Salle *et al.*, 2020; Capela *et al.*, 2021; Kammoun *et al.*, 2022). The low impact, and low intensity being important due to the participants likely being the older adult, who during ageing are more likely to become frail, struggling with more vigorous physical activity. However, this group is still able to gain benefit from physical activity (McPhee *et al.*, 2016), which is why adapted sports are so important. Furthermore, Walking Football is able to provide a holistic approach to improving health, as it improves more than just physical health. The intervention is also noted to better other disparities, such as the social isolation of the older adult (whom are 1 in 5), or mental health issues (38%), within the Coalfield regions (Beatty *et al.*, 2019), which had been mentioned above.

As noted, there has been an increase in the body of evidence related to the older adult and quality of life (Rejeski & Mihalko, 2001; Vagetti *et al.*, 2014; Cunningham *et al.*, 2020). Quality of life can refer to an individual's sense of belonging and personal fulfilment as influenced by cultural and societal contexts, as well as personal goals, expectations, beliefs, and interests. This multifaceted concept is frequently influenced by the individual's psychological and physical well-being, as well as their social relationships (Aissaoui Moudjahid & Baida Abdarrazak, 2019). This links to the Biopsychosocial model of health, whereby health and illness are influenced by psychological, social and the physical biology of an individual, as opposed to just biology being considered (Engel, 1977). The fact that Walking Football has been shown to influence these components in particular, suggests that it could act as a

complex intervention, but also that these facets require examination. Current research indicates a paucity of theory in conjunction with the results found. The Biopsychosocial model supports Walking Football working as an intervention and for the community contemplated – the Welsh Coalfield regions. Expanding the research base in this area, as well as examining the defined population is a prerequisite for the progression of Walking Football enquiry.

1.10 Conclusion

There is a clear need for change within the ex-coal mining areas in Wales, with notable disparities in a number of health-related areas (Beatty *et al.*, 2019). With an ageing population more generally, and even more so within these select few regions of Wales, the negative health implications of inactivity are apparent (Beatty *et al.*, 2019; Cholerton, 2021). Research has recently focused on the older adult, and increasing activity, but there still remains a gap in adapted sports (McPhee *et al.*, 2016; Jenkin *et al.*, 2017; Jenkin *et al.*, 2018). There is some research in Walking Football, and some evidence to suggest Walking Football works in other socio-economically disadvantaged areas (Cholerton, 2021), however, there is a gap in literature in the Welsh regions, and especially within the ex-mining towns, where football could offer a popular intervention method. Studying Walking Football as an adapted sport, reviewing current research, and investigating Walking Football's perceived effects within the populace should be explored in more detail.

Therefore, this thesis will detail the experience of Walking Football within the Coalfields areas. This will be completed by gaining insight into the experience of Walking Football from those already involved in the intervention, within the sample group, according to the Medical Research Council framework for evaluating interventions (Campbell, 2000; Craig *et al.*, 2008) through focus groups. Then using inductive thematic analysis to establish key themes from the Welsh Coalfields Walking Football participants (Braun & Clarke, 2013). These themes will then be used to generate a questionnaire, providing the basis for the next stage of research (Lincoln & Guba, 1985; Schoonenboom & Johnson, 2017). This questionnaire will then look to compare Walking Football within Wales, and gain insight to

the differences between groups involved, whilst also testing the results on a wider scale. The survey will also highlight any notable information about Walking Football particularly in these ex-mining regions, and how best it should develop.

This research will look to grow and improve Welsh Walking Football, expressing any commentary noted throughout, or suggesting policy to potential organisations who may be involved in the adapted sport, supporting its progression. These include, but are not limited to, Coalfields Regeneration Trust's Game On Wales, Sport Wales, the FAW, and more.

2: Scoping Literature Review of Walking Football

2.1 Introduction

A detailed account of the Coalfield community within Wales has already been provided within this thesis, together with a summary of the challenges faced by these communities. Considering the specific population under consideration and the potential of Walking Football as a feasible and sustainable intervention to address health and activity disparities, it is crucial to review research in this area. A scoping literature review is a method of research that meticulously identifies, evaluates, and synthesises relevant studies on a specific topic using a rigorous process. Rigor in academia involves meticulous research methods, systematic processes, and high standards for accurate, valid, and reliable findings. It minimises bias, controls variables, and employs appropriate statistical methods, ensuring robust outcomes (NIH, 2019). Scoping reviews involve searching for studies, screening and selecting them based on predetermined criteria. The data is then analysed, and findings are synthesised in order to map the existing literature on a particular topic. It aims to provide an overview of the available evidence, clarify key concepts, examine research conduct, identify knowledge gaps, and inform future systematic reviews (Pham et al., 2014; Munn et al., 2018; Mellor, 2021; AJE.com, 2022). Conducting scoping literature reviews is crucial as they provide a comprehensive overview of existing evidence on a particular topic. Unlike systematic reviews that focus on answering specific research questions, scoping reviews offer a broader perspective by including a wide range of sources and study designs. By conducting scoping literature reviews, researchers can establish the foundation for their research, identify key themes, and guide the direction of their investigations effectively (Mak & Thomas, 2022). Current Walking Football studies will, consequently, be evaluated in order to provide a picture of current practice and identify any gaps in the literature particularly relating to the evaluation of such programmes. This scoping review is based on the Medical Research Council (MRC) framework for evaluating what could be considered a complex intervention (Campbell, 2000; Craig *et al.*, 2008; Skivington *et al.*, 2021). The MRC framework is considered the gold standard in in this regard.

There are 4 phases of this framework. The development phase identifies theory, defines components, and conducts feasibility studies. The feasibility and piloting phase tests feasibility, refines components, and conducts pilot studies for acceptability, adherence, and preliminary effectiveness. The evaluation phase rigorously evaluates effectiveness and impact through full-scale evaluation, including randomised controlled trials. Finally, the implementation phase assesses implementation, scalability, cost-effectiveness, fidelity, and potential for wider adoption and sustainability (Campbell, 2000; Craig *et al.*, 2008; Skivington *et al.*, 2021). Each study will therefore be associated to the phase it best aligns with throughout this review.

2.2 Methodology

2.2.1 Registering the Review Protocol

The protocol for this scoping literature review was registered with the International Database for Prospective Register of Systematic Reviews PROSPERO, using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA-P) guidelines (Moher, Stewart, & Shekelle, 2016). The protocol can be found in the appendices (page 25 of the “Thesis Supporting Documents” document). The link to the review, which was registered as of the 12/09/2022, is as follows:

https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=359062

2.2.2 Search Strategy

Online databases were searched during March 2022 to find all Walking Football studies, and their outcomes on participants. Five databases were examined: PsychINFO, Proquest Psych Journals, Science Direct, SPORTDiscuss, and Scopus. Grey literature, for example, unpublished theses and dissertations, conference presentation, and so on, was also considered from sources such as OpenGrey, or OpenDOAR. There were no results found from this avenue. Following consultation with the supervision team and a specialist librarian with expertise in systematic reviews, the search terms "Walking Football" and "Walking Soccer" were selected to identify relevant studies pertaining to the adapted

sport. Initial exploration presented no alternative terminologies for Walking Football, therefore only these terms were used in the search. A total of 149 studies were revealed by these search terms from the expressed databases. Screening of titles and abstracts, full texts, and data extraction from the full texts were completed independently by the main researcher (EG) and another postgraduate researcher (JG). Where there were any disagreements, the two researchers conversed and came to an agreement about the inclusion of the study. A Cohen's Kappa statistical test indicated a statistic of 0.97776 suggesting almost perfect inter-rater consistency (Viera & Garrett, 2005).

2.2.3 Inclusion and Exclusion Criteria

Studies that were eventually included in the review had to meet the predetermined eligibility criteria, that was published in the protocol before the review had begun. The inclusion criteria were as follows:

- Walking football must be one of the main intervention components.
- Literature must be written in English; No restrictions were placed on participants (age, gender)
- No restrictions were placed on study design or year of publication.
- Papers must be peer-reviewed.

Studies were therefore excluded based on the following exclusion criterion: Walking football is not one of the main intervention components; No other literature review will be considered in this study, but they will be used to find relevant sources. Since the review aimed to gather all relevant studies concerning Walking Football, assess the impacts of participation, and evaluate the methodologies employed for data collection, no limitations were imposed on the age or gender of the study populations. However, these factors were subsequently taken into account during the interpretation and application of the findings.

2.2.4 Risk of Bias and Quality Assessment

Due to the limited research on Walking Football, and the variety of methodologies used, a short quality checklist was derived from an assessment tool developed by the National Institute of Health, to verify

the quality of the included studies (“Study Quality Assessment Tools,” 2013). Evaluating the quality of studies can help mitigate bias related to the research methods employed and the accuracy of reported results, allowing for clear transparency (Siddaway, Wood, & Hedges, 2019). The tool comprised four questions: whether the question or objective was clearly stated; whether the study sample was clearly described in terms of number, gender, and mean age; whether Walking Football was a key focus, and whether the outcome was clearly stated and identifiable. Papers that answer these questions satisfactorily will pass the quality assessment and be included in the review. In case any of the questions receive a negative or unclear response, a discussion would take place to determine whether the study would be included. This would involve the two researchers, as well as the supervisory team. None of the studies required the discussion, as they all passed the quality checklist. Additionally, the transparency and quality of the studies were also evaluated based on their open accessibility of data including, for example, their method materials.

2.2.5 Narrative Synthesis

As Walking Football has limited research, meta-analysis was deemed inappropriate, as previously discussed, the studies included were noticeably heterogenous, therefore, a narrative synthesis was used (Corepal, *et al.*, 2020). The research was organised into different subsections based on similarity:

- Semi-structured interview studies (page 46)
- Other qualitative studies – This refers to studies that did not share commonalities and were, therefore, categorised as the remaining studies that employed a qualitative approach, with this being the sole point of similarity (page 48)
- Mixed method studies (page 49)
- Randomised control trials (page 50)
- Intervention studies (page 52)

- Other quantitative studies – Similarly to this qualitative section, the quantitative approach was the only shared characteristic of these studies, meaning they otherwise remain heterogeneous (page 54)

2.3 Results

After discarding studies that were not relevant to this literature review through the previously mentioned criteria, 19 studies were included. Six studies focus on the impact Walking Football had on participants quality of life; 8 studies discussed the effects of Walking Football on participants physical health, and 5 studies examined the feasibility of Walking Football and the likelihood of participants to sustain their engagement in the activity. The PRISMA flow chart is included below:

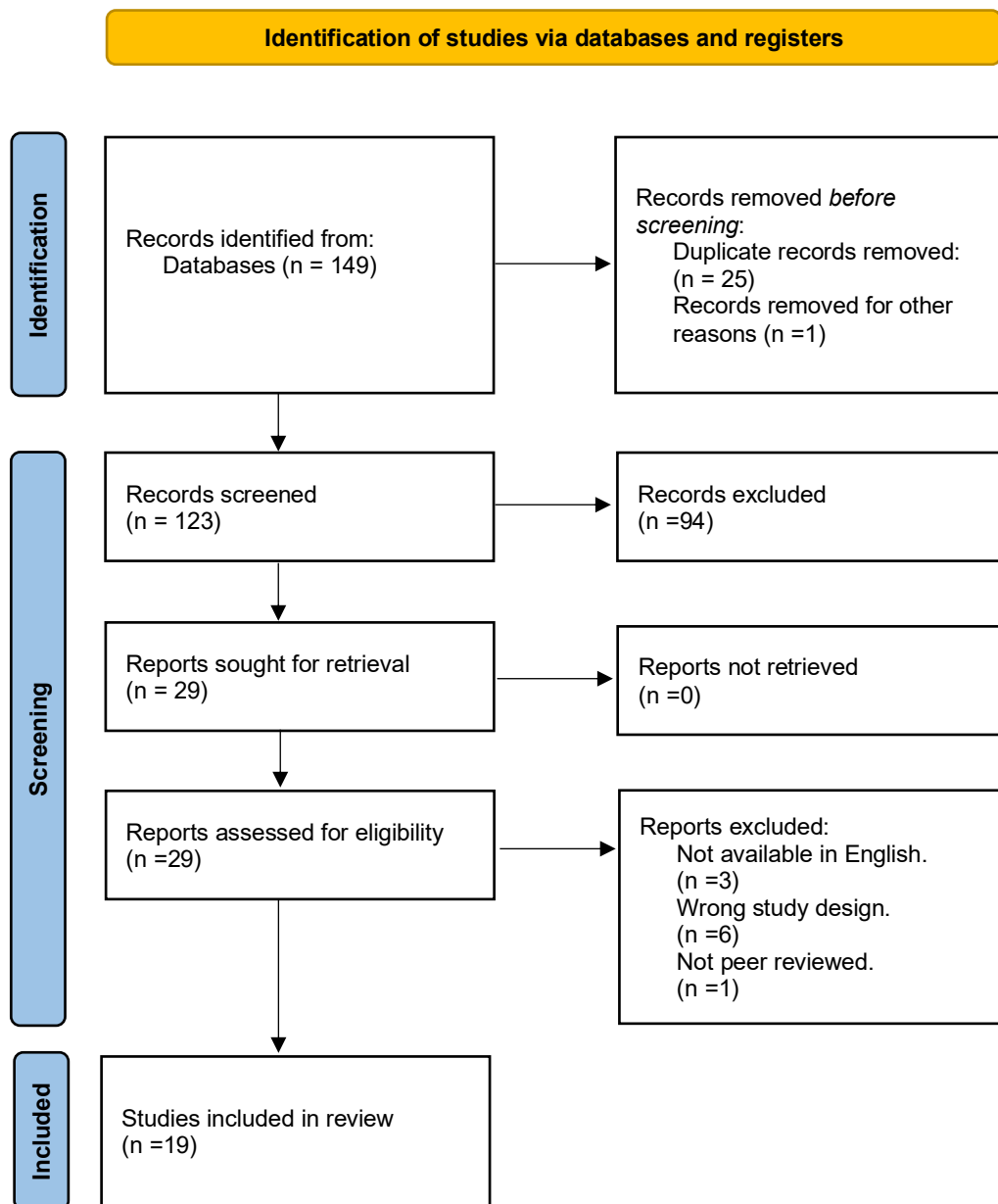


Figure 2: PRISMA flow chart (Macquarie University, 2020).

2.3.1 Participants

There was a large range of participants per study, with sample sizes ranging from 1 (Loadman, 2019) to 54 (Pringle, *et al.*, 2014). The age of participants also varied, between, 8 (Jaafar, *et al.*, 2018) and 74+ (Capela *et al.*, 2021). Of the included studies, 8, had participants in their 60s (Pringle, *et al.*, 2014;

Arnold, *et al.*, 2015; Reddy *et al.*, 2017; Harper, *et al.*, 2019; Barbosa *et al.*, 2020; Cholerton, *et al.*, 2020; Cholerton, *et al.*, 2020; McBain & Broom, 2022). Nine studies used a mixed gender participant group, with 2 of those being mostly male (Lamont, *et al.*, 2017; McBain & Broom, 2022). The 10 remaining studies included within this literature review used male only participant samples.

2.3.2 Study Characteristics

This scoping literature review included studies with various methodologies. Six of these were qualitative, with 4 of those using semi-structured interviews as their method of data collection (Cholerton, *et al.*, 2020; Cholerton, *et al.*, 2020; MacRae, *et al.*, 2020; Taylor & Pringle, 2021). One study then used semi-structured focus groups (Lamont, *et al.*, 2017), while the last qualitative study used an ethnographic approach (Loadman, 2019). There were also 2 studies that used a mixed method design in their Walking Football research. Both studies employed interviews as the qualitative data collection method, while physical characteristics such as blood pressure and BMI were used as quantitative measures. Differing wellbeing questionnaires were used in addition to the physical measure for the quantitative portion of study (Reddy *et al.*, 2017; McEwan, *et al.*, 2019). Regarding these quantitative research sections, one of the mixed method studies used pre and post measures (Reddy *et al.*, 2017). However, the other study was an intervention that used pre and post measures, but it also included a control group (McEwan *et al.*, 2019).

The remaining studies, 11, used quantitative measures only for their data collection. Seven of these were intervention studies, with 3 of them using control groups. All three of these studies were randomised control trials that collected measures pre, during, and post intervention (Capela *et al.*, 2021; Kammoun *et al.*, 2022; McBain & Broom 2022). In the first of these, 31 androgen deprived prostate cancer patients were either randomly allocated to the Walking Football program, or usual care. The participants took part in 3 supervised sessions a week – these sessions were 90 minutes, and the intervention took place over 16 weeks. The middle collection of data took place at 8 weeks (Capela *et al.*, 2021). In the second study, both the experimental and control groups, participated the Ramadan

fasting. During the fasting period, the Walking Football programme consisted of small-sided games that were held 3 times a week for a duration of 4 weeks. Each session lasted for approximately 65 minutes (Kammoun *et al.*, 2022). In the final quantitative study that used a control group, the intervention consisted of a 60-minute session, once a week for 12 weeks. The sessions involved a warmup, and small-sided competitive games. The midpoint for collection of data occurred at week 7 for this intervention (McBain & Broom, 2022).

The other 4 studies used pre and post measures for their intervention studies (Pringle *et al.*, 2014; Arnold *et al.*, 2015; Jaafar *et al.*, 2018; Barbosa *et al.*, 2020). A variety of quantitative measures were utilised in one of the studies, where the intervention was 2 hours of Walking Football sessions across the duration of the study (Arnold *et al.*, 2015), whereas another of the studies only used 60-minute sessions, 3 times a week (Barbosa *et al.*, 2020). Jaafar *et al.*, (2018) used repeated measures for a cohort study, involving 75 minutes of semi-structured moderate-intensity Walking Football sessions across multiple weekly meetings.

The remaining 4 quantitative studies used a variety of designs. One study looked at the implementation cost of providing a Walking Football programme over a period of 9 months, assessing the feasibility of the exercise program for patients with type 2 diabetes (Barbosa *et al.*, 2022). A second study took measures over 25 weeks of pre-existing Walking Football players, where they played for 60 minutes each week (Harper *et al.*, 2019). Salle *et al.*, (2021) used an observational research design, where certain measures were collected during a Walking Football. The final study included, used a counter-balanced design to allow participants to partake in 5 minutes walking, 10 minutes of Walking Football games, and 10 minutes of running football games, separated by 8-10 minutes break. Two of the measures, investigated perceived exertion, and enjoyment was measured after the sessions, whereas the other measures were all collected during the exercise sessions (Madsen *et al.*, 2020).

2.3.3 Study Length

The duration of three included studies was not deliberated because they used qualitative research methods, with participants who were already involved in Walking Football. However, there were minimum requirements for how long individuals participating had been involved in the adapted sport. Two studies required participants to have been involved in Walking Football for a minimum of 6 months (Cholerton *et al.*, 2020; Cholerton *et al.*, 2020), whereas the other study used a team that had been active for 15 years (Lamont *et al.*, 2017). Taylor & Pringle, (2021) used a mixed method approach, also incorporating a previously established group. In this study, they opted to not impose a minimum duration of participation in Walking Football for the participants. The researchers did attend the programme for 5 months prior to data collection, however the length of involvement of the participants in Walking Football was not recorded.

Starting with shortest studies that were included in the analysis, the first involved a single session of Walking Football, with the next, Salle *et al.* (2021), involving a one-day, 6-game, Walking Football tournament. Kammoun *et al.* (2022), McEwan *et al.* (2019), and Capela *et al.*, (2021), then had interventions lasting for 4- and 8-, and 16-weeks, respectively. The majority of Walking Football research, however, including 2 studies (Pringle *et al.*, 2014; Reddy *et al.*, 2017), and 4 interventions (Arnold *et al.*, 2015; Jaafar *et al.*, 2018; Barbosa *et al.*, 2020; McBain & Broom, 2022), that all spanned a duration of 12-weeks. The review also included 2 studies lasting 6-months (Harper *et al.*, 2019; MacRae *et al.*, 2020), and one lasting 9-months (Barbosa *et al.*, 2022). Nevertheless, the longest of the included studies was an ethnographic study design, with a duration of 18-months (Loadman, 2017).

2.3.4 Location

Eleven of the studies included in this review were from various areas of the UK (Loadman, 2017; Cholerton *et al.*, 2020; Cholerton *et al.*, 2020; McBain & Broom, 2022), such as parts of England (Pringle *et al.*, 2014; Arnold *et al.*, 2015; Reddy *et al.*, 2017; Taylor & Pringle, 2021) and Scotland (Lamont *et al.*, 2017; McEwan *et al.*, 2019; MacRae *et al.*, 2020).

The next most researched area was Portugal, with 3 studies in this country (Barbosa *et al.*, 2020; Capela *et al.*, 2021; Barbosa *et al.*, 2022).

The remaining research into Walking Football was from Australia (Salle *et al.*, 2021), Denmark (Madsen *et al.*, 2020), Malaysia (Jaafar *et al.*, 2018), and Tunisia (Kammoun *et al.*, 2022).

Only one study did not specify the location of the research (Harper *et al.*, 2019).

The following tables provide an organised categorisation of the selected studies based on their shared characteristics, encompassing relevant information such as title, citation, participant characteristics, data collection methodology, duration and geographic location of the study, as well as the identified outcomes and conclusions.

Table 1: Semi-structured interview studies.

| Title | Participant information (number, mean age, gender) | Data collected | Brief comments on method | Length and location | Method of analysis | Outcomes of the study | Conclusion |
|---|--|----------------|--|---------------------|--------------------|--|---|
| Experiences influencing walking football initiation in 55- to 75-year-old adults: A qualitative study (Cholerton, <i>et al.</i> , 2020) | 17, 64y.o., 9M&8F | Qualitative | Semi-structured interviews | N/A, UK | Inductive thematic | Themes reported include: Values and perceptions; PA/Sporting experience; life events; awareness of WF; self-efficacy, and factors delaying participation. | This study uncovers new insights into the role of values, perceptions, and awareness in the initiation of walking football among older adults. Positive experiences, such as coping with aging and cognitive and social development, were found to be important factors, while negative experiences, such as anxiety and negative team dynamics, should be considered. Coaches and programs should diversify marketing to include both genders and tailor sessions for different abilities. Future research should focus on long-term maintenance and strategies for sustaining participation in adapted sports among older adults. |
| Experiences and strategies influencing older adults to continue playing walking football (Cholerton, <i>et al.</i> , 2020) | 17, 64y.o., 9M&8F | Qualitative | Semi-structured interviews | N/A, UK | Inductive thematic | Themes reported include: Individual level influences; social level influences; WF culture; session specific factors; coach characteristics; cognitions concerning maintenance; affects concerning maintenance, and maintenance behaviours. | Highlights WF benefits, maintenance influences, such as culture and coaching. Maintenance cognitions and behaviours were also noted. This should influence future practice in WF |
| Modifying walking football for people living with dementia: lessons for best practice (MacRae, <i>et al.</i> , 2020) | 18, N/A, Male | Qualitative | Semi structured interviews with a variety of people involved with the programme. Interviews were conducted mid programme, and 6 months following the end of the programme. | 6 months, Scotland | Thematic | Participants noticed increased social interactions, a recurrence of memories and improved confidence as well as flexibility for carers. | That walking football can have a positive impact on dementia patients and their families although there are several logistic issues with this, and overall, more research is needed. |

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|---|---------------------|-------------|--|----------------|----------|--|---|
| Investigating the effect of walking football on the mental and social wellbeing of men (Taylor & Pringle, 2021) | 7, Not stated, Male | Qualitative | Semi-structured interviews which looked at the social and mental health benefits of walking football | N/A, Yorkshire | Thematic | Men reported mental and social health benefits of walking football with improved their wellbeing and contributed to their lives. | Playing sports and engaging in physical activity can provide a social environment that helps people who are struggling and connects them with supportive networks. A weekly walking football program not only offers physical health benefits but also has positive effects on mental and social health, which improves overall well-being. Men who were referred by a community mental health service reported enjoying playing football and felt included in the adapted version of the game. It is important to consider the venue, supportive staff, and signposting from mental health services when planning similar interventions. |
|---|---------------------|-------------|--|----------------|----------|--|---|

Table 2: Other qualitative studies.

| Title | Participant information (number, mean age, gender) | Data collected | Brief comments on method | Length and location | Method of analysis | Outcomes of the study | Conclusion |
|---|--|----------------|---|---------------------|------------------------------------|---|---|
| Qualitative investigation of the role of collaborative football and walking football groups in mental health recovery (Lamont <i>et al.</i> , 2017) | 25, 36.7y.o., Mostly male | Qualitative | Semi-structured focus groups with service users and staff from football groups (2 football, 2 WF) | N/A, Scotland | Inductive thematic | This study found that participants generally agreed that football groups improved social relationships, mental health recovery and overall wellbeing. Participants found value in the groups, including through physical health improvements (weight loss). | This study allowed service users and staff to share their experiences equally. Collaborative football groups act as a conduit for recovery and are important in mental health care. Benefits include improved wellbeing, mutual support, social opportunities, and friendship. The study highlights the importance of staff involvement and co-production, and enabling factors such as organisational support and permanence. Design and delivery are also important, with motivated staff and team spirit being crucial. Service users should be encouraged to take control and become leaders. |
| 'He's Running, Ref!' An ethnographic study of walking football (Loadman, 2019) | 1, N/A, Male | Qualitative | Ethnographic study | 18 months, UK | An ethnographic narrative approach | This study suggests that walking football improves community bonding, relationship-building and the health and wellbeing of older people. | Although walking football can offer various benefits to participants, there are also challenges that may hinder these benefits. Therefore, more research is needed, particularly in relation to mental health issues. Additionally, exploring different styles of participation, the game's spirit, and the competitive environment could also be beneficial areas for future research. |

Table 3: Mixed method studies.

| Title | Participant information (number, mean age, gender) | Data collected | Brief comments on method | Length and location | Method of analysis | Outcomes of the study | Conclusion |
|--|--|----------------|--|---------------------|---|---|--|
| Walking football as sustainable exercise for older adults - A pilot investigation (Reddy <i>et al.</i> , 2017) | 20, 61.1y.o., M&F | Mixed method | Interviews were conducted with thematic analysis. A variety of measure were collected, including: an adapted Groningen Enjoyment Questionnaire, HR, and distance covered. Also, pre and post, blood pressure, cholesterol, balance, etc. | 12 weeks, England | Interpretative phenomenological analysis/ repeated measures analysis of variance with group as a between-participants factor and before versus after 7–12 weeks play as a within-participants factor. | Little impact on physical health, although it is a moderate and vigorous activity. No improvement to executive function was found. Further need to investigate these, although it was found enjoyable, and promoted social contact. | The study suggests that walking football could be a viable activity for older adults. The game is not overly strenuous, yet still enjoyable. Initial doubts were replaced by excitement once participants started playing, despite the challenge of avoiding running. Eventually, the game felt natural and engaging. Seven of the participants have continued playing, although there was little effect on their health and fitness. |
| Recruiting Older Men to Walking Football: A Pilot Feasibility Study (McEwan <i>et al.</i> , 2019) | 25, 58y.o., Male | Mixed methods | This study was a randomised control design. Outcome measures collected via validated paper-based self-report questionnaires. Also, semi-structured interviews with participants from the intervention group took place. | 8 weeks, Scotland | General inductive approach/ Descriptive statistics. | Compared to other exercise interventions for older adults, attendance rates were higher in this intervention and attracted those with typically sedentary lifestyles. The study revealed that participants were more likely to adhere to the intervention protocols and reported enjoyment from the experience. | Walking football appears to be a feasible approach to attract and maintain males aged 50 years and over in a physical activity program, as well as to collect pre- and post-outcome measures. However, some degree of drop-out is anticipated. In future studies, larger sample sizes should be used to account for potential attrition and to generate adequately powered data for a better understanding of the effectiveness of walking football in enhancing the health of men aged over 50 years. |

Table 4: Randomised control trials.

| Title | Participant information (number, average age, gender) | Data collected | Brief comments on method | Length and location | Method of analysis | Outcomes of the study | Conclusion |
|--|---|----------------|---|---------------------|--|---|--|
| 682P Effects of a walking football program on muscle strength and balance of androgen deprived prostate cancer patients: The Prostata_Move trial (Capela <i>et al.</i> , 2021) | 31, 74y.o., Not stated. | Quantitative | 31 patients were randomly assigned to either a 16-week walking football program or usual care. Participants had to be on ADT for more than 6 months and have evidence of osteoporosis (T score > -2.5). The program involved 3 supervised 90-minute sessions per week, and measurements were taken before (baseline, M0), during (week 8, M1), and after (week 16, M2) using digital dynamometers, chair sit-to-stand test, and single-leg balance test to assess handgrip and lower limb isometric strength and balance. | 16 weeks, Portugal | Intention-to-treat analysis/within-group analysis/per-protocol analysis | Differences were found in balance and muscle strength between groups at baseline. In contrast, there was a significant improvement in the chair sit to stand test performance. No interaction was found across time between groups, but handgrip strength in the dominant limb and lower body strength in non-dominant limb increased after 8 weeks of WF, remaining unchanged in the UC group. | A WF program improves muscular strength and balance in prostate cancer patients undergoing androgen deprivation therapy. |
| Effects of Walking Football During Ramadan Fasting on Heart Rate Variability and Physical Fitness in Healthy Middle-Aged Males (Kammoun <i>et al.</i> , 2022) | 31, 53.7y.o., Male | Quantitative | RCT, 18 in WF, both groups participated in Ramadan fasting. The WF group were involved in a training program (small-sided games) of three sessions a week during Ramadan fasting. The time and frequency domains of HRV, body composition, handgrip, lumbar strength, Modified Agility Test (MAT), and 6-minute walk test (6MWT) were measured before Ramadan (BR), during Ramadan (DR), and after Ramadan (AR). | 4 weeks, Tunisia | Shapiro-Wilk test/Two-way ANOVA with repeated measures/Bonferroni post-hoc test/A priori power analysis to test difference between 2 independent group means using a two-tailed test | The study found that middle-aged males who participated in WF during Ramadan Fasting experienced notable improvements in physical fitness and HRV. The results suggest that exercising while fasting may enhance cardiovascular health and balance, which could potentially provide cardio-protection during exercise. | The study found that middle-aged males showed significant improvements in HRV and physical fitness parameters after four weeks of WF during Ramadan fasting. Training while fasting was found to enhance physical fitness and cardiovascular autonomic balance, suggesting that practicing WF in a fasted state may contribute to cardio-protection. These results warrant further investigation into the significance of ANS regulation during exercise training in a fasted state. |
| O2-8; Effects of a 12-week walking football intervention on cardiovascular disease | 23, 68y.o., M22, F1 | Quantitative | Intervention group participants (n = 17) were invited to one 60-minute walking football session per week consisting of a warm-up and small- | 12 weeks, UK | Repeated-measures ANOVA/between group comparisons | The intervention was followed by 83% of participants for 12 weeks with an average session attendance of 68+/-26%. The | The study outlines the potential for individuals enrolled in a walking football scheme to engage in weekly moderate-to- |

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| <p>risk factors in an older adult population: a randomised controlled trial in the UK (McBain & Broom, 2022)</p> | | | <p>scale competitive games, whereas control group participants (n = 6), continued with their normal habitual lifestyle. Outcomes measured were weight, resting blood pressure, non-fasting blood lipids, six-minute walk distance, and quality of life. Outcomes were assessed at baseline (week-0), midpoint (week-7) and post-intervention (week-13). Sessional RPE was recorded each session.</p> | | | <p>average rating of perceived exertion was 6.31 (range; 2-8). There was a notable decrease in total and LDL cholesterol in the intervention group (p = 0.01 and p = 0.19, respectively). However, there was no significant difference between the two groups regarding the changes in cholesterol levels between baseline, week-7 and post-intervention.</p> | <p>vigorous PA as well as maintaining and improving a myriad of health outcomes. Engagement in other pre-existing health promotion schemes, such as WF at other local organisations may have influenced outcome measures.</p> |
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Table 5: Intervention studies.

| Title | Participant information (number, average age, gender) | Data collected/Design | Brief comments on method | Length and location | Method of analysis | Outcomes of the study | Conclusion |
|--|---|--|---|---------------------------------------|--|---|---|
| Effect of a health-improvement pilot programme for older adults delivered by a professional football club: the Burton Albion case study (Pringle <i>et al.</i> , 2014) | 54, 69.38y.o., M23&F31 | Quantitative/case study | Effect of a health-improvement pilot programme for older adults delivered by a professional football club: the Burton Albion case study | 12 weeks, East Staffordshire | Descriptive statistics/independent t-tests/Mann-Whitney U tests Pre vs. post data changes: cross-tabulation/Wilcoxon signed rank tests (Z). | The majority of the sample appeared to be healthy, but individuals with health complications also participated. Participants with multiple health complications attended fewer sessions on average than those with fewer than two complications. In addition, men had lower self-rated health compared to women. However, no significant pre-post differences were found. | Further research should be concluded as there were no significant results. |
| The impact of 12 weeks walking football on health and fitness in males over 50 years of age (Arnold <i>et al.</i> , 2015) | 10, 66y.o., Male | Quantitative/repeated measures, pre-post intervention design, following a 1-month gap in regular training. | A range of measure were collected, including body mass, fat mass, fat free mass, max oxygen consumption, max heart rate, exercise time to exhaustion, and isometric hand grip strength. These were assessed pre, and post intervention. The intervention was a 2hr weekly WF session. | 12 weeks, Southampton and surrounding | Inferential statistical analysis: paired sample t-tests/Cohen's d./Pearson's (R) (correlation) | A reduction in body fat mass, and percentage body fat, with an increase in time to exhaustion during exercise. | This study provides evidence that WF could potentially be an effective intervention as it positively affected the physical health of individuals involved although more research is needed |
| Anthropometrical and fitness level changes following a 12-week walking football program for obese primary school children aged 8-11 (Jaafar <i>et al.</i> , 2018) | 32, 8-11y.o., Male | Quantitative/repeated measures | The participants were directed to engage in several moderate-intensity WF training sessions each week, with each session lasting 75 minutes and played with a 6-a-side semi-structured format. Measurements of anthropometry, body composition, and the 6- | 12 weeks, Malaysia | Paired t-test/Pear-son's correlation (R) | Following the intervention, there were improvements in muscle mass and fitness compared to other studies in different age ranges. It also showed reduction in fat percentage, although also found an increase in body weight and body fat mass. | The results of this study show that a 12-week WF program, a low impact moderate-intensity exercise, has positive effects on anthropometrical and fitness changes among obese school children. WF's cost-effectiveness indicates that it could be a feasible solution to combat the increasing issues of childhood |

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| | | | minute walk test were taken before and after the program. | | | | obesity and inactivity if implemented in Malaysia. |
| Feasibility and safety of a walking football program in middle-aged and older men with type 2 diabetes (Barbosa <i>et al.</i> , 2020) | 31, 64.4y.o., Male | Quantitative/quasi-experimental design | Intervention study which looked at health improvements following a walking football intervention for patients with Type 2 Diabetes. WF was completed 3 times a week with an hour session. A number of physical measures were accounted for, alongside an enjoyment scale, pre and post intervention. | 12 weeks, Porto (Portugal) | Descriptive statistics | This study highlights the potential of WF in promoting physical activity among this client group, with positive effects on health. However, the specific health benefits of WF compared to other interventions, such as medication, remain inconclusive. Participants reported enjoying the activity and some social benefits were observed. WF was found to be a low to moderate intensity exercise, and several physical health benefits were observed. | A WF programme proves enjoyable and has some benefits for this patient group although there are adverse effects. This also showed WF to be sustainable. |

Table 6: Quantitative studies.

| Title | Participant information (number, average age, gender) | Data collected | Brief comments on method | Length and location | Method of analysis | Outcomes of the study | Conclusion |
|--|---|----------------|--|----------------------------|---|--|---|
| P02-12; The implementation cost of a walking football exercise program for patients with type 2 diabetes: a case study of SWEET-Football (Portugal) (Barbosa <i>et al.</i> , 2022) | 40, N/A, Male | Quantitative | Cost/benefit analysis | 9 months, Portugal | Cost analysis | The implementation cost for one season of this program for 40 patients with T2D was estimated to be 11,026.51E, with a breakdown of 1,225.17E per month, 275.66E per patient, 51.05E per session, 30.63E per patient per month, and 2.55E per patient per session. | The cost of a community based WF program for patients with T2D is feasible and could be implemented on a larger scale by involving local communities, football clubs, municipalities, and primary healthcare units. This program could promote physical activity and help manage T2D. |
| The Physiological, Physical, and Biomechanical Demands of Walking Football: Implications for Exercise Prescription and Future Research in Older Adults (Harper <i>et al.</i> , 2019) | 17, 66y.o., Male | Quantitative | Heart rate, blood lactate, biomechanical load/accelerometry data, change in direction, RPE were all measured throughout sessions of 60mins | 6 months, none stated | Descriptive statistics/paired sample t-test/co-efficient of variation | This study shows that walking football can equal exercise of a moderate intensity for this age group which may have significant health benefits. | This study revealed that WF is a physical activity that falls under the moderate-to-vigorous intensity category and has a biomechanical load similar to 25 minutes of 'running' football. It also involves a considerable amount of changes in direction. However, the long-term health advantages of WF, particularly on bone health, cardiovascular fitness, metabolism, social and mental wellbeing, still need to be explored. Additionally, the benefits of WF in comparison to, and in combination with, other training types like HIIT and resistance training, require further examination. |
| Metabolic Intensity and Stepping Cadence for Middle-aged and Older Adults During Competitive Walking Football (Salle <i>et al.</i> , 2021) | 42, 51y.o., F22&M20 | Quantitative | Participants used a neoprene waist pack that contained an activity monitor (AM) based on accelerometry to collect data in 60-second intervals. The data was downloaded onto a computer after the tournament and converted into average Mets and WC for each minute of gameplay. To compare the mean Mets and WC values of all players for each match | 1 day (6 games), Australia | One-sample t-test/Bonferroni adjusted aloha | That Mets in walking football are generally above 3.0 but WC is lower than the 100 steps/min threshold | The findings suggest that middle-aged and older adults engage in competitive WF at a moderate-to-high intensity. However, the lower walking cadence values observed were unexpected, indicating the need for further research to comprehensively comprehend the factors influencing |

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| | | | against their moderate intensity, one-sample t-tests were used, and an adjusted alpha of 0.006 was applied using the Bonferroni method. Additionally, the linear relationship between Mets and WC was assessed through linear regression. | | | | metabolic and cardiovascular intensity during this adapted sport. |
| Exercise intensity during walking football for men and women aged 60+ in comparison to traditional small-sided football – a pilot study (Madsen <i>et al.</i> , 2020) | 32, 60+y.o. (unclear), 20M&12F | Quantitative | Participants performed a 5-min W, followed by 10-min WF and running football games in a counterbalanced order, separated by an 8-10 min break. The men and women played 5v5 and 6v6, respectively, on small-sided football pitches (men: 40x16.5 m; women 40x30 m) with medium-sized goals (3x1.5 m). Heart rate (HR) and locomotor activities were monitored throughout sessions and rating of perceived exertion (RPE) and Physical Activity Enjoyment Scale (PACES) scores were determined immediately after sessions. | 1 session, Denmark | One-way repeated measures ANOVA/Bonferroni post-hoc test/paired t-test | That whilst walking football has some benefits, these are not comparable to running football. | The study suggests that WF has lower intensity levels when compared to traditional running football. Although all types of physical activity have potential benefits, there is a lack of scientific evidence indicating that WF provides similar health benefits to small-sided running football. It is recommended that future research explore the hypothesis that WF is more effective than walking, but less effective than traditional running football, in terms of fitness and health benefits. |

2.4 Discussion

Overall, there were 19 studies included in this scoping literature review, using a total of 473 participants, across 7 countries. Due to there being a lack of homogeneity between the studies, specifically their methodologies, the results were instead organised into differing subsections based on the similarities that were found.

Walking Football has gained significant popularity worldwide, originating in the UK (Corepal *et al.*, 2020). Research in this field predominantly focuses on the UK, although studies from other parts of the world are emerging in line with the global growth of this adapted sport. Incorporating research on diverse ethnicities is crucial for understanding the impact of Walking Football on different populations (Pérez-Stable, 2018). The presence of studies conducted in various locations is encouraging in this regard. Additionally, an important strength of the existing research is the inclusion of religion as a factor, which is often overlooked in the care of individuals (Koenig, 2012). Expanding global research efforts and taking into account specific factors, such as religion, within the examined populations would contribute to a better understanding of Walking Football and its global effects.

The majority of research includes adults, particularly individuals aged 50 and above. Among the 19 studies included in the review, 8 incorporated female participants, and 2 of these studies noted that their participant group was comprised substantially of male individuals, with a small number of females. Excluding female participants in studies may limit the generalisability of findings, as they may not adequately represent the Walking Football population. Studies on Walking Football are particularly vulnerable to this limitation. While the majority of Walking Football players seem to be male, at current, the sport is growing in popularity among women (Game On Wales, 2016). Research with male only participants may impede the understanding of the adapted sport's benefits in the future. It is, therefore, recommended that both male and female participants should be considered in future studies to better represent the growing Walking Football population and to better understand the potential benefits for all (Holdcroft, 2007). Additionally, there is an issue of underrepresentation of

younger participants in the majority of studies, as they predominantly focus on individuals aged 50 and above. Given the growth of Walking Football, and especially considering the women's Walking Football starts at 40+ (Welsh Walking Football Federation, 2023), more research should include a wider variety of ages.

The duration of the studies varied, ranging from a single session to up to 9 months, with the most common duration being roughly 12 weeks. This therefore means studies may not capture the full extent of any outcomes found within the population, or the durability of said outcomes, making study length an issue with regards to the effect of Walking Football over the longer term (Hackshaw, 2008). The sample sizes also varied, with the largest study including 54 participants, however, the average sample size throughout all studies was 25, which is also relatively small, and therefore lacks generalisability of findings to other population groups (Hackshaw, 2008; Faber & Lílian Martins Fonseca, 2014).

Only 4 of the studies utilised a randomised control trial, with a mixed between-within design (McEwan *et al.*, 2019; Capela *et al.*, 2021; Kammoun *et al.*, 2022; McBain & Broom 2022). This approach is commonly regarded as the gold standard for evaluating interventions over time (Skivington *et al.*, 2021). It compares the main effects of group, which examines differences between groups, the main effect of time, which assesses changes over time, and the interaction between group and time, which determines if one group shows greater improvements compared to the other (APA, 2023). Other studies included convened groups specifically for exploring Walking Football but did not employ a control group, unlike the 4 studies that utilised the randomised control trial design. Consequently, these studies lack the ability to establish causal relationships or attribute any observed outcomes to Walking Football itself, even though they may have used a within design, as they cannot compare outcomes with any other factor or the absence of the intervention (Malay & Chung, 2012). Furthermore, the remaining studies included pre-existing groups in their research, limiting their ability to attribute the effects solely to Walking Football. Instead, these studies can only provide insights into

the current status or past experiences of the participants (Thomas, 2022). In relation to the MRC framework, the majority of studies in this thesis align with the initial two phases, development and feasibility (Campbell, 2000; Craig *et al.*, 2008; Skivington *et al.*, 2021). However, only these four studies aligned with the evaluation phase, utilising randomised controlled trials (McEwan *et al.*, 2019; Capela *et al.*, 2021; Kammoun *et al.*, 2022; McBain & Broom 2022). Evidently, the studies had a wide range of methodologies, however, outcomes throughout all of the Walking Football research seemed to be consistent. Generally, studies concluded that Walking Football had positive effects on aspects of physical, psychological, and social health for participants. There was one study (Pringle *et al.*, 2014), nevertheless, that showed no pre-post intervention differences. Four other studies also alluded to the potential benefits to physical health, but the studies themselves had found no significant effect (Reddy *et al.*, 2017; Harper *et al.*, 2019; Madsen *et al.*, 2020; Salle *et al.*, 2021). Of those 4 studies, Reddy *et al.*, 2017 found Walking Football to have benefits relating to social and psychological health, and similarly Madsen *et al.*, 2020, found it to be a more beneficial form of physical activity than simply walking. Nonetheless, the literature indicates that more research is needed in relation to the components of Walking Football, as well as the evaluation, in order to better comprehend the potential benefits.

Many of the studies alluded to physical health outcomes of varying degrees. Regarding the qualitative research, one study noted specifically that participants had expressed weight loss during their participation in Walking Football (Lamont *et al.*, 2017). The findings of the quantitative research expressed the physical benefits of Walking Football, as individuals with sedentary lifestyles, comorbidities, or clinical conditions exhibited various positive physical outcomes such as weight loss, muscular strength improvement, heart rate improvement, and enhanced physical fitness (Arnold *et al.*, 2015; Harper *et al.*, 2019; Madsen *et al.*, 2020; Capela *et al.*, 2021; Salle *et al.*, 2021; Kammoun *et al.*, 2022). Studies also noted that Walking Football was a moderate-to-vigorous level of intensity with regard to exercise (Reddy *et al.*, 2017; Harper *et al.*, 2019; Salle *et al.*, 2021), which can lead to positive physical health outcomes for a wider variety of individual, not limited to the older adult (Jaafar *et al.*,

2018). The evidence therefore generally does seem to suggest that for certain populations, Walking Football is able to provide physical benefits, for example, for the older adult. The adapted sport offers an accessible form of physical activity, making it a potentially valuable intervention for populations that may otherwise do not engage in regular physical activity.

The psychological outcomes experienced by participants of Walking Football were also a noticeable aspect of the adapted sport. There were studies investigating the experiences of individuals in Walking Football which consistently reported positive psychological effects (Cholerton, *et al.*, 2020; MacRae, *et al.*, 2020; Taylor & Pringle, 2021). The outcomes expressed included coping with aging, cognitive development, improved confidence, and mental health benefits. These semi-structured interview studies as well focus group study revealed similar outcomes, highlighting the psychological advantages of involvement in Walking Football (Lamont *et al.*, 2017). For instance, participants in the focus group study acknowledged the positive impact of football groups on their mental health and overall well-being. The final qualitative study, an ethnographic, observed improvements in the mental well-being of participants (Lamont *et al.*, 2017; Loadman, 2019) again, emphasising this psychologically beneficial aspect. Additionally, across various remaining studies, a consistent finding was the enjoyment of the adapted sport and a perception of its sustainability (Arnold *et al.*, 2015; Reddy *et al.*, 2017; McEwan *et al.*, 2019; Jaafar *et al.*, 2018; Barbosa *et al.*, 2020).

Finally, the inclusive nature of Walking Football, and the foundations of the modified physical activity reflecting a group endeavour, lends itself to a positive social environment. This was reflected throughout a variety of the studies with outcomes noted such as: social support, an opportunity to socialise, shared interests, which remains consistent with previous a previous review of Walking Football literature (Corepal *et al.*, 2020). Specific examples from the included literature include social development (Cholerton, *et al.*, 2020), increased social interaction (MacRae, *et al.*, 2020), and benefits to social health (Taylor & Pringle, 2021). The focus group study specifically noted the positive influence on social relationships that Walking Football was able to support (Lamont *et al.*, 2017). Furthermore,

Loadman, (2019) highlighted the improvement in community bonding, relationship building, and the health and well-being of the individuals involved. Another common theme across various studies was the positive impact Walking Football was able to provide on social contact (Reddy *et al.*, 2017; McEwan *et al.*, 2019) and enjoyment (Arnold *et al.*, 2015; Jaafar *et al.*, 2018; Barbosa *et al.*, 2020) as already stated.

To summarise, Walking Football expressed definitive aspects of physical, psychological, and social effects of a positive nature for participants involved, consistent with the aforementioned holistic approach to health and wellbeing – the biopsychosocial approach (Engel, 1977). Walking Football has the potential to address the need for physical activity among individuals who may find ‘traditional’ or running sports less suitable. While the physical benefits are particularly evident among this population, the adapted sport holds promise for people of all backgrounds and abilities. In line with previous assumptions on Walking Football (Corepal *et al.*, 2020), the research continues to promote social benefits applicable to the older adult, as well as the physical attributes provided. Walking Football is able to provide an inclusive alternative for all, with potential benefits to the psychological and social health, if not the physical as well. The methodologies utilised still require broader and larger samples, as well as longer durations of study needing to be completed, in order to provide generalisability. Furthermore, Walking Football remains to be the only variation of a ‘Walking Sport’ that is receiving investigation, therefore, more rigorous and broad research is needed in Walking Football, as well as other Walking Sport requiring examination.

2.5 Limitations and Implications for Future Research

There was a distinct lack of consistency amongst research in terms of scales, measures, methodology, which creates a heterogeneity between studies that makes the application of meta-analysis an inappropriate tool to interpret the data. This also make the data difficult to interpret more generally. The limited use of the mixed between-within study design in only 4 of the included studies especially, poses challenges in making comparisons regarding improvements in sedentary lifestyle and other

related factors. The research presents similar outcomes from the participation of Walking Football however, with it being seen as an enjoyable, feasible, and maintainable form of physical activity. Most studies mentioned a positive outcome in terms of social and psychological wellbeing, but this requires more detailed research. The studies all mention the physical aspect of Walking Football, but there does not seem to be a clear positive outcome found for the general population, and therefore, this requires a more detailed investigation.

Most of the participants included within the studies selected for review were male, and this should be considered when applying this research more widely. As stated, the research seems to focus on male participation as the main approach (Arnold *et al.*, 2015; Lamont *et al.*, 2017; Jaafar *et al.*, 2018; Harper *et al.*, 2019; Loadman, 2019; McEwan *et al.*, 2019; Barbosa *et al.*, 2020; MacRae, *et al.*, 2020; Taylor & Pringle, 2021; Kammoun *et al.*, 2022; McBain & Broom, 2022), suggesting Walking Football participation to be predominantly male. However, this approach would then make it difficult to apply the research to populations generally, and more should be done in the way of understanding female participation, or barriers to, in Walking Football.

The Walking Football research was completed in various locations, however, is mainly focused on the UK (Loadman, 2017; Cholerton *et al.*, 2020; Cholerton *et al.*, 2020; McBain & Broom, 2022), specifically England (Pringle *et al.*, 2014; Arnold *et al.*, 2015; Reddy *et al.*, 2017; Taylor & Pringle, 2021) and Scotland (Lamont *et al.*, 2017; McEwan *et al.*, 2019; MacRae *et al.*, 2020). With research in Portugal (Barbosa *et al.*, 2020; Capela *et al.*, 2021; Barbosa *et al.*, 2022), Australia (Salle *et al.*, 2021), Denmark (Madsen *et al.*, 2020), Malaysia (Jaafar *et al.*, 2018), and Tunisia (Kammoun *et al.*, 2022), an argument could be made for the generalisability of findings to different ethnicities, although more research on a wider range of participant would be beneficial.

Most research is also based on the Walking Football player, and their experience. Including perspectives from coaches, referees, and others involved in Walking Football beyond players would provide valuable insights for a holistic understanding of the adapted sport. Furthermore, it seems as

though Walking Football is the only Walking Sport, or adapted sport with any research base (Corepal *et al.*, 2020). More research into Walking Football, and other adapted Walking Sports, generally, and in Wales, would be a beneficial approach to tackling the inactivity in the aging population, and the disparities seen within the Coalfields areas, and in Wales.

2.6 Conclusion

To conclude, the 19 studies included in this scoping review consisted of a variety of differing methodologies, looking to better understand the outcomes associated with Walking Football involvement. Through the research, there were positive effects on the social, and psychological health, as well as various physical improvements found. The studies suggested that there were certain components – a social, a psychology, and a physical side of the physical activity. This suggests that potentially Walking Football has the ability to be used as a complex intervention when relating to these multi-faceted outcomes. With this being a more holistic approach, it could be supported by the Biopsychosocial model of approaching health and wellbeing (Engel, 1977), and therefore has the potential to work for older populations. However, more rigorous and comprehensive research needs to be completed to understand the reasons, and extent of any of the beneficial outcomes, and all studies dictated as such.

2.7 Research Progression

The inclusion of 19 studies in this scoping review reveals an absence of research conducted within the Welsh Coalfield regions. However, these studies highlight clear aspects of wellbeing associated with participation in Walking Football, including psychological, social, and physical facets, aligning with the biopsychosocial approach to health and wellbeing (Engel, 1977). Despite these findings, there remains a gap in knowledge specifically pertaining to the Welsh Coalfield population. To address this gap, an exploratory approach will be employed, allowing Walking Football participants from the Welsh Coalfield region to share their experiences of the phenomena. This approach corresponds to the modelling or development phase of the Medical Research Council (MRC) framework, enabling the

research to gain a deeper understanding of the intervention's impact within this specific population (Campbell, 2000; Craig *et al.*, 2008; Skivington *et al.*, 2021).

3: Thesis Methodology

3.1 Philosophical Foundations

The philosophical standpoint of this research is that of pragmatism. Pragmatism, if put simply, is a philosophical belief based upon practicality, but not limited to, any problem-solving activity (Morgan, 2014). When referring to research, pragmatism is neither realist, nor constructivist in ontology, as it attempts to allow various realities to undergo evaluation (Creswell & Plano Clark, 2007). Thus, this study assumes that reality changes dependent on whomever interacts with it. An individual actively creates their own reality as they interact with the world. Therefore, a person's experiences differ as reality is constantly changing, especially in the case of practical problems (Weaver, 2018). Based on these assumptions, both qualitative and quantitative methodologies can be utilised to investigate phenomena, dependent on the individuals experiencing the world. This approach has also seen success in previous Walking Football research (Cholerton, 2021).

3.2 Mixed Method Rationale

A mixed methods approach is one that uses both qualitative and quantitative measures throughout a single study, with both being used to draw conclusions (Tashakkori & Creswell, 2007). This study looks to use a combination of qualitative and quantitative methodologies whereby the former will influence those latter quantitative stages of the research in an exploratory sequential dependant mixed methods approach. The initial stages of research will be qualitative data collection, whereby the analysis and results will be tested or understood on a larger scale through the later stages of quantitative investigation. This means that the qualitative research holds more weight due to the fact that the later quantitative research will develop from and be connected to this initial question and programme of study (Schoonenboom & Johnson, 2017).

There is research in the area, utilising the mixed method approach, with those studies noting the positives outcomes of Walking Football, however it is limited to a small number of studies (Reddy *et*

al., 2017; McEwan *et al.*, 2019; Cholerton, 2021). None of these studies specifically consider the Welsh Coalfields' population. Due to this, an exploratory approach was considered suitable to allow the participants to lead the ideas within the research, discussing how Walking Football affects this population in particular, as opposed to the populations considered in previous research. An emergent design for the mixed methods approach was then completed, meaning that the second stage of the research was not known until after the initial study. This allowed the outcomes of the qualitative investigation to create the foundations and subsequently direct the latter phases of research, with the quantitative element being entirely based on these results (Creswell & Plano Clark, 2007; Schoonenboom & Johnson, 2017; Cholerton, 2021). The mixed method approach more generally has been used in previous Walking Football research and shown positive results in line with this research's aims, and therefore was seen to be an appropriate method to apply moving forward. Unfortunately, due to the limitation of the quantitative study, it was removed as a part of the thesis, upon recommendation from the post-viva assessment.

3.3 Methodology Overview

Key foci were derived from a review of literature first, in order to guide the question making process in the initial qualitative research. Best practice for the evaluation of what could be considered a complex intervention was then considered in this process. The method chose was therefore qualitative in nature, as to follow recommendations from the Medical Research Council framework, specifically, this study wished to consider how the intervention might interact with its context and the inclusion of stakeholder's perspectives within this population precisely. This was achieved through discussing the experiences of current participants of an existing Walking Football group (Campbell, 2000; Craig *et al.*, 2008; UK Research and Innovation, 2021; Skivington *et al.*, 2021). Furthermore, with currently no research into Walking Football in Wales, or in the Coalfield's areas, an inductive approach was utilised at the analysis stage of this initial study. In order to ensure that the findings were determined by the participants' experiences and to establish a foundation for future studies, this approach was deemed

necessary (Braun & Clarke, 2013). As it is argued that one cannot be completely unbiased during research (Groenewald, 2004), a reflexivity section will be outlined later.

The second stage of the research was the employment of a quantitative methodology, using an empirically grounded survey design, which was emergent from the focus group interviews. This was chosen to apply the findings from the qualitative study, and test them on a larger scale, to Wales as a whole, rather than just the Coalfield's regions. This allowed for a number of comparisons to be made, as well as being able to gain useful information about Walking Football in Wales, its participants, and their experiences. Once the qualitative results had been interpreted, the survey questions were decided upon based on these initial results, this is what makes the design 'emergent', and is also the 'point of integration'. During mixed method studies, there must be a point whereby the results are merged, or 'integrated' together. This process is known as triangulation and can enhance the validity and overall comprehension of the phenomena being studied (Bekhet & Zauszniewski, 2012). By basing the survey on the results of the focus groups, this makes the survey empirically grounded, combining the two programmes of study, providing the point of integration necessary (Schoonenboom & Johnson, 2017). Having one study informing the data collection of the next study is known as 'building', which was used in another Walking Football thesis, and shown to be successful (Cholerton, 2021). This study, however, was subsequently removed due to the recommendations of the viva assessment.

3.4 Reflexivity

Reflexivity is a process whereby an individual conducting research continuously expresses the context of their own influence in the engagement with the study, as well as the context of the study itself. It is an important step within qualitative exploration, allowing readers to better understand the work, whilst also clarifying the relationships between researcher, participants, and the line of enquiry. It makes for a more transparent method, highlighting the effect of the researcher, and their perspective on the investigation and results (Dodgson, 2019; Davis, 2020). This section, therefore, will give an overview of the researcher, reflecting on their experiences and the impact.

The initial background of the main researcher (EG) was as an undergraduate student from the University of South Wales. He completed a BSc in Rugby Coaching and Performance, before moving on to this current mode of study, a Master of Science in Research, specifically looking at sport and health. The history of the academic being in Rugby Coaching and Performance is likely to influence the way certain theories are understood and applied to the study. The main background of the researcher in a sporting context is having played mainly rugby, and rugby league, at a semi-professional, and county level, respectively. This means he has experience of the sporting environment, at a relatively high level, but not in football. While the individual has played football in a team, and in leagues etc., so does have some knowledge of this, he has not, for several years, been involved in any football. Therefore, he may not be as 'up to date' within the football environment. The researcher has also been heavily involved with Walking Rugby since 2019, being a part of the set up for two clubs, organising and supporting events, and the playing of Walking Rugby. Upon receiving a place on the research project, the lead author was then involved in a number of Walking Football events, and even played a few sessions. This was in order to get acquainted with the game, build relationships and rapport with potential participants, and improve his own understanding and experience of Walking Football.

The researcher referred to was aged 21 when first starting on the scheme of work and identifies as male. Football participation in Wales is currently at 17% of the overall population, with 28% being male players and 6% being female players (The Nielsen Company, 2022). This means the participants likely to take part in Walking Football, will also be predominantly male, but as female football participation has steadily been increasing in Wales (Pawb Cymru, 2021), the research wanted to reflect this, and ensure that the female perspective was considered. With the researcher identifying as male, he was aware this may have benefit when connecting to the experience of male participants, however, gaining an understanding of the experience of female participants might have provided a barrier to the lead researcher. In order to mitigate this, the researcher utilised the support of female postgraduate researchers when conducting the focus groups and analysing the data to gain the best understanding of the data possible.

The age of the researcher is also an important feature to reflect upon, as the majority of Walking Football participants involved in the research were 40+, and Walking Football being mostly aimed towards people aged 50+ (The WFA, 2018). The researcher then is unlikely to have the same lived experience within sport, or in life generally, as noted by previous Walking Football research, this is important to consider (Cholerton, 2021). The main researcher, however, had been involved in Walking Rugby, since 2019, with a similar participant group, and had conducted research with these individuals and their experiences during an undergraduate study (Goodison & Paval, 2022). Furthermore, he had participated within Walking Rugby, Walking Cricket, Walking Netball, and pre-study, even taken part in some Walking Football sessions. With this experience, the academic had gained a lot of knowledge from participants of their lived experience within sport, within Walking Sport, and throughout their general lives. He managed to do this by conversing and getting to know many of the people involved within these sports, and these age groups throughout the several years engaged in Walking Sports.

With the research looking specifically at participants from ex-coal mining towns within Wales, considering the class and nationality of the researcher is valuable to acknowledge. The researcher is English, coming from South Yorkshire, specifically from a Coalfields area. Although he was born in the South of England, he moved north, and heavily associates himself with the more northern identity taken on since moving, and growing up in the Barnsley/Rotherham areas. The researcher also has Welsh heritage, with his grandparents being Welsh. His ties to this are relatively strong, choosing to play regional rugby union for the Welsh Exiles from 2016, and living in South Wales since 2019, during his undergraduate degree. It is important that this is noted due to the participants being Welsh, and from the ex-Coalfields, some commonality with the designated populace was beneficial. This was to provide an understanding of experiences, and to build a positive relationship with participants. The upbringing of the researcher could be considered that of middle-class, with a working-class background. The researcher grew up in working class areas, and therefore was heavily influenced by the people he grew up with. This was one of the initial prompts in wishing to complete this course of research, in order to address the disparities in the UK, especially in the Coalfields, and Wales (Beatty

et al., 2019). However, considering that the researcher is more middle-class himself, and studying a Masters research degree, there is an acknowledgement of privilege held by the researcher. It is possible the nationality or background of the researcher may have caused misunderstandings, friction or a power imbalance between him and the participants (Råheim *et al.*, 2016; Cholerton, 2021). Therefore, during the engagement with participants, the researcher made sure to find common ground, in order to best build a relationship to facilitate discussion about the research topic. Reflecting continuously and employing assistance from others made it so participants' perspectives were comprehensively understood and what they wished to express was therefore agreed by multiple researchers for greatest accuracy feasible (Lincoln & Guba, 1985; Braun & Clarke, 2013; Braun & Clarke, 2020).

Throughout the qualitative portion of the research, the main researcher regularly utilised a variety of support from a number of individuals to gain the best insight and perspectives from the research group and interview data. During the focus groups, the researcher invited another postgraduate researcher to attend with him, one a Psychology Mres student, the other, a Sports Psychology PhD student attended different groups to assist. Transcripts were then reviewed by these individuals, and later, an early career researcher in a different field reviewed the codes and themes to ensure there was a clear, transparent, and easily understood process in each decision made. Finally, the themes and data summaries were reviewed by the supervision team (PT & DL & LJ) to gain different perspectives, and to best articulate and present the qualitative research portion of the study. The supervision team also had regular debriefs throughout this period of the research in order to discuss and best review the data for the most accurate perspectives to be expressed. This allowed for a better quality of data analysis and reliability, limiting any unconscious bias from the main researcher (Lincoln & Guba, 1985; Braun & Clarke, 2013; Braun & Clarke, 2020).

3.5 Conclusion

During the programme of research discussed, a pragmatic perspective was utilised in the form of an exploratory, sequential mixed method research design. An empirically grounded approach was then employed as there is little research in Walking Football at current, and none in the desired study population – the Welsh Coalfields. The literature around Walking Football will be explored in more depth, a systematic literature review, before a qualitative investigation with the unique participants. This qualitative stage of research will then be used to develop a survey, and overall, this research will be used to better understand the benefits of Walking Football throughout the Welsh Coalfield regions.

4: Focus groups with Walking Football Teams in the Welsh Coalfield Regions.

4.1 Introduction

Walking Football is thought to have started in 2011, making it a relatively new sport (The Walking Football Association, 2021). Currently, there is limited research available on the footballing alternative provision, particularly in relation to the proposed sample population - the Welsh Coalfield communities.

A review of literature presented that previous studies have shown a variety of benefits, including psychological, social, and physical benefits to the participating in Walking Football (Arnold *et al.*, 2015; Loadman, 2017; Lamont *et al.*, 2017). As this expresses a variety of components that, when considering the Biopsychosocial Model (Engel, 1977), would interact with one another, Walking Football could be considered a complex intervention (Campbell, 2000). Using the Medical Research Council (MRC) framework as an overarching gold standard in which to guide the evaluation of a complex intervention, this study will follow the modelling phase of the framework, consulting individuals already involved within a current intervention. As this study looks to evaluate Walking Football in the Welsh Coalfield's regions, Walking Football groups from this location will be used to discover the crucial components that are key for this intervention (Campbell, 2000; Craig *et al.*, 2008).

This chapter is, thus, an outline of the first mode of study, focus group interviews, following the scoping literature review. Using the background already provided, and incorporating the findings scoping literature review, the methodology, results, discussion, and concluding points of the qualitative focus groups are discussed. Finally, all recommendations and implications are outlined.

4.2 Focus Group Methods

4.2.1 Design

The research from this study will be used to drive the methodology, focusing on the practicality, such as the pragmatists approach towards research (Morgan, 2014; Schoonenboom & Johnson, 2017). This first study is using an exploratory design (Schoonenboom & Johnson, 2017), whereby the systematic literature review indicated a limited amount of research around Walking Football, with no research in this specific population – the Welsh Coalfield areas. This also suggests that the initial phase of research should be qualitative in nature, as it would be better to gain in depth understanding of experiences from the population itself (Groenewald, 2004; Braun & Clarke, 2013), providing the basis of later research within this thesis, dependant on the transferability (Lincoln & Guba, 1985; Schoonenboom & Johnson, 2017). While the literature review guided the questions used throughout this process, the goal of this research is to understand Walking Football amongst this population, exploring the phenomena through the medium of a pragmatic mixed method approach (Groenewald, 2004).

Based on the MRC framework for evaluating interventions, it is important to discuss the phenomenon with the individuals already involved in present iterations of, in this case, the physical activity (intervention) (Campbell, 2000; Craig *et al.*, 2008). Semi-structured focus groups were chosen for the methodology in this case, as the collective context is likely to encourage discussion amongst the individuals, gaining insight into the Walking Football environment. This will mean that the data collected will be more interactive, and the language used will be true to the individual and their perceptions, whilst reducing the influence of the researchers participating (Braun & Clarke, 2013). These focus groups will therefore be the tool utilised to do the evaluating of the intervention as aforementioned. For the same reason, the paucity of research within the considered population, inductive thematic analysis was chosen (Guest *et al.*, 2012; Braun & Clarke, 2013). Reflecting upon the lack of research within the Welsh Coalfield regions, an inductive thematic analysis was conducted to avoid biases stemming from the limited existing literature on Walking Football. The coding process and

initial thematic constructs were informed by extensive discussions held during the focus groups (Guest *et al.*, 2012). Inductive thematic analysis entails obtaining meaning and formulating themes directly from the data, devoid of predetermined notions, allowing for a data-driven exploration where themes emerge organically rather than being constrained by preconceived theories or frameworks. This approach is particularly valuable for uncovering novel insights, a critical consideration given the research gap within this specific population (Norris, 2017).

4.2.2 Participants

Two teams located within a South Wales Coalfield region were contacted to take part in the study. As a supervisor had previously been involved with the club, participants were contacted through this prior relationships to take part in the focus groups, therefore utilising purposive sampling. One limitation of purposive sampling is the potential for bias that can occur from both the researcher by targeting potential participants, but also in participant responses, potentially decreasing the representativeness of the data collected (Kassiani Nikolopoulou, 2022). However, this method also allows for detailed investigation regarding the phenomenon, which therefore encourages rich data collection, which in turn is able to provide researcher with a better understanding of the complex views with better clarity (Shrestha Ghosal, 2023). Furthermore, participants expressed negative opinions throughout this area of research, highlighting areas for improvement and issues they had. These aspects helped mitigate the potential voluntary response bias of this sampling technique (Simmons, 2018). Consequently, this method was seen as the best option given the objectives of this study. The study was introduced to the individuals using an information sheet, detailing the study and its goals. People who were interested were then able to volunteer to participate by contacting the lead researcher (EG) and organising availability with the leaders of the team.

The volunteers were selected based on their involvement within Walking Football, with participants having to have played Walking Football for a minimum of one month. This was so they had some experience of the environment, but the research was not discounting newer player's perspectives. One

of the groups contacted had been established recently, in the summer of 2022, compared to the other which had been ongoing for a longer period, of at least 7 years, starting in 2015.

To gain a wide variety of perspectives on Walking Football, from the focus groups, the aim was to recruit 4 focus groups with a maximum of 6 individuals. Literature suggests that 1-3 focus groups will be sufficient to achieve data saturation, with the key, or overarching themes definitely being uncovered. Furthermore, if 3-6 focus groups are used, this then exposes 90% of the themes within the population represented (Guest *et al.*, 2016), thus 4 groups were used. The process of thematic analysis as well as the definition of a theme will be stated in the procedure section. Unfortunately, due to the availability of the groups, 4 focus groups with only 4 participants each were used, as opposed to the aim of 6 participants per groups. This was deemed as still being acceptable, as the groups used were conversational, and as less people were involved, this allowed for individuals who were more wary of group settings to still attend (Kitzinger, 1995). Two of the groups were from the longer established, predominantly male Walking Football group, and the other 2 from the recently established, mainly female group.

Table 7: Demographics of the Focus Groups

| | |
|---|-----------------------|
| Predominantly female Walking Football group | N=1 |
| Participants | 8 (4 per group) |
| Average Age | Not Disclosed |
| Average amount of time involved in Walking Football | 1.14 (years to 2d.p.) |

| | |
|---|-----------------------|
| Predominantly male Walking Football group | N=1 |
| Participants | 8 (4 per group) |
| Average Age | 70.38 |
| Average amount of time involved in Walking Football | 4.89 (years to 2d.p.) |

4.2.3 Materials

The focus groups were used to improve the understanding of participants about certain topics: what participants like about partaking in Walking Football; how individuals believe Walking Football could improve; how individual's Walking Football sessions were structured; what impact Walking Football had on the people participating; if there were any other outcomes of participating in Walking Football that participants believed were notable. The focus group used a semi-structured question schedule, whereby participants would guide the discussion, but with key questions maintaining emphasis to direct said dialogue to gain insights in specific areas (Braun & Clarke, 2013).

As a systematic literature review was conducted before the start of the study, themes derived from previous studies were used to guide the question schedule's formation. These themes involved questions about participant's mental health (Lamont *et al.*, 2017), their social health (Cholerton *et al.*, 2020), and finally, the physical health of individuals involved (Kammoun *et al.*, 2022). The question schedule was agreed by the lead research (EG) and the supervisory team before it was piloted by a member of a different Walking Football group. The individual completed some screening questions to assess the ease of understanding relating to the questions. A minor change of rewording questions occurred at this point, before the focus groups. This individual was not involved further in this stage of the research.

The scripts from all 4 of the focus groups are included on page 42 and onwards in the Thesis Supporting Documents.

4.2.4 Procedure

The guidelines for reporting qualitative were used throughout the thesis (O'Brien *et al.*, 2014).

Participants were contacted through a member of the supervision team, who subsequently had no further role in this stage of the research. Information sheets were offered to participants, through the team leaders, and interested individuals volunteered to participation. The scheduling of focus groups

was coordinated in collaboration with team leads and a club representative. Once an agreement was reached, the focus groups were conducted in September 2022. To make the focus groups easier for participants to attend, they took place before their scheduled training sessions, in a meeting room located within the club, where they trained.

The individuals that were interested in partaking in the focus groups were then given a consent form to sign, which also had a unique identifier on. Once signed, the consent form was asked to be returned to the lead researcher, so that the individuals would be able to take part in this study. The unique identifier would then be added to the specific individuals debrief sheet so they could remember it. This unique identifier e.g., 111, was so participants would be able to request anonymous transcripts once the focus group had been written up, if they so wished.

Participants were sat around a circular table with the 2 postgraduate researchers, and a small USB microphone in the middle of the table that was attached to a laptop. The second research student accompanied in order to assist coordinating the focus groups, managing the recording, and to making notes. The second researcher could also ask any prompts or follow-up questions they thought would aid the conversation (Tobias Ochieng Nyumba *et al.*, 2018). The focus groups were split so that only people from the same team were in a focus group to maintain homogeneity, encourage deeper discussion and increase the likelihood of data saturation (Kitzinger, 1995; Guest *et al.*, 2016). Data saturation is reached when no new information emerges during analysis, indicating data collection can stop. It confirms consistent results and supports emerging themes and conclusions (Faulkner & Trotter, 2017). There were a number of reasons that participants were kept within their existing groups for the discussions around Walking Football. One advantage of this was the convenience for participants, as the focus groups were scheduled for before or after their sessions. It meant that individuals were less burdened by the research, therefore helping to establish a better relationship with the lead investigate from the start, allowing for accessibility from their perspective (Roller, 2020). Furthermore, with individuals already being familiar, and comfortable interacting with one another, this would lead to

more candid responses. The common ground for participants would therefore encourage more active and meaningful discussion, which in turn would allow for a better quality of information collect, analysed, and a deeper understanding of the phenomenon achieved (Femdal & Solbjør, 2018; Roller, 2020). Moreover, the groups established would lead to a more communicative environment, supporting question asking, and subsequently the re-evaluation of any pre-existing perspectives. This in turn would highlight any significance within the findings on Walking Football, and the underlying rationale as for the opinions held (Mihretab & Gebru, 2019). There is, conversely, a potential for bias being introduced as a result of the group dynamic (Mihretab & Gebru, 2019; Roller, 2020). However, as the social element of the Walking Football groups were under investigation, as per the scoping review findings, and these groups were formed as a result of Walking Football, the best way in this case to investigate them, would be to see them in that exact context. Therefore, while there are limitations, keeping individuals in more homogeneous groups for the focus group interview was decided to be the best course of action given the line of questioning involved in this study.

A variety of refreshments were provided, and available for participants throughout the focus groups. Once all the people involved were settled and ready, a brief introduction of the study took place. Participants were all given a copy of the information sheet on the day to review as well. Written consent was then collected from each of the individuals. The brief explanation included an outline of why the research was being conducted, what would happen during the focus groups, and reaffirming their right to withdraw, whilst also letting them know if they needed a break, or to step away from the focus groups and re-join later, they were also allowed to do so. The lead researcher (EG) then reiterated verbal consent before starting the recording.

The initial question from the focus groups was a short description of their session, after introducing themselves, and saying how long they had been involved in Walking Football. These first questions were designed to be easy in order to gently ease participants into the focus group process, allowing

for comfortable conversation and interaction before the rest of the content was covered through the rest of the questions (Kitzinger, 1995).

The focus groups lasted an average of 43 minutes, covering all of the topics the researchers wished to visit. Once the focus group had concluded, the lead researcher reassured consent, and ensured everyone had all the information they needed. Participants were then given a debrief form which thanked them for participating, gave them contact details to withdraw, or ask for any more information, if they so wanted. A verbal thanks was offered, before the recording was stopped, and individuals were allowed to leave to set up and train for their Walking Football session.

Upon completion of all focus groups, all were transcribed verbatim, ready for thematic analysis (Braun & Clarke, 2013). Transcripts were also edited to ensure anonymity. As there is a lack of research in this specific population, the Welsh Coalfield regions, inductive thematic analysis took place, to avoid preconceptions based on the limited previous Walking Football research. Therefore, coding and initial themes were dictated by meaningful period of discussion throughout the focus groups (Guest *et al.*, 2012). The use of software, such as NVivo (NVivo, 2024) was considered at this stage, to aid in the analysis of the data. While there are benefits to the use of software to assist in this process, such as easing organisation, the transcription process, and increasing the speed of the analysis (Zamawe, 2015), there were also disadvantages. One critique of software such as NVivo is the difficulty in learning the process involved. This is an issue as it can detract from the research itself, as well as being time consuming (Zamawe, 2015). Another concern with the use of software is the focus on width of data collection as opposed to the depth of understanding. While the analysis process can be made easier with the use of the software, there does tend to be a focus therefore towards collecting more data, and consequently, concerns that the analysis becomes too shallow, without a deeper understanding of the discussions had within the focus groups. Something that manual transcription is able to assist with is the repetitive understanding and contextualisation from the researcher's perspective of the discussions had by participants. By using software, this understanding becomes lesser, and therefore

the analysis is at risk of being more distant from its source (Zamawe, 2015; Maher, 2018; McLafferty & Farley, 2018). Furthermore, it is also argued that the use of software during analysis of qualitative data can be restrictive. It is seen as fundamental that a researcher must immerse themselves within the qualitative data, interacting with it in multiple forms, in order to best understand and therefore analyse the substance. By using software, interaction with the data is limited to a constrained visual format, which is likely to hinder the analytical process (Maher, 2018). Therefore, after consultation with postgraduate colleagues with experience using software for analysis, the lead researcher opted not to utilise this method. Given the principal investigator's prior training in manual qualitative analysis and successful completion of a recent project (2022) utilising this method, the decision to employ this approach was based on both the investigator's existing familiarity with the process, and the acknowledged benefits.

As a result, the first step the researcher took during thematic analysis included transcription and rereading of the transcripts to provide familiarisation. Initial coding from the transcripts were then completed. Codes were defined as, meaningful periods of text whereby that text can be understood independently and contains one idea or piece of information (Tesch, 1990). Codes with similarities were grouped together to form themes, and these themes were further grouped where appropriate. The themes were reviewed and assessed for significance, leading to the organisation of sub-themes and hierarchical arrangements of themes, higher or lower orders.

This will be shown via a thematic map and discussed in the results section, as per Braun & Clarke, (2013)'s approach. The map was created using an online flowchart designer (*GitMind*, 2022), to depict the groupings in a similar method to a previous sport psychology study (Anderson *et al.*, 2004).

To ensure credibility of this qualitative section of research the two postgraduate researchers involved with the focus groups also assisted in the process of coding based on their experience of the focus groups (Lincoln & Guba, 1985). Both were studying psychology, one a sport psychology PhD candidate, and the other, a Masters by research student, in psychology. Any differences upon the completion of

the independent coding process were then discussed between these postgraduate researchers and the lead investigator and a consensus was made before moving forward. Intercoder reliability was not used during this study as the method of analysis followed was that of Braun & Clarke (2013). They argue that reliability is not a suitable or appropriate criterion for evaluating qualitative work. Qualitative research focuses instead on interpretation and contextualisation and therefore quantifying reliability in the same way as you would for quantitative research is challenging (Cofie *et al.*, 2022). Likewise, it is contended that strict adherence to intercoder reliability measures can constrain creativity and flexibility in qualitative analysis. As qualitative research often deals with intricate, nuanced data, it is usually unlikely that it will fit neatly into predefined categories or codes. Subsequently insisting on high intercoder reliability may lead to oversimplification of data, potentially disregarding valuable insights derived from the complexity of qualitative information (Joffe, 2020). Therefore, due to the aforementioned arguments, paired with the debate regarding the methods of reporting of intercoder reliability (Joffe, 2020; Cofie *et al.*, 2022) it was decided that the contextualisation of reflexive practices would be sufficient. Another early career research student, in a different field then assisted in the groupings of the themes initially, to make sure each decision made had evidence, and a clear, obvious process. The final themes, and grouping were then discussed and agreed upon by the lead researcher (EG), and the supervision team (PT & DL & LJ). This was to provide reliability of the quality of the analysis and limit the unconscious bias of the researcher (Lincoln & Guba, 1985; Braun & Clarke, 2013; Braun & Clarke, 2020).

Ethical approval for this study was granted by the University of South Wales, (22EG08LR), on 25th August 2022.

4.3 Results and Discussion

The focus groups presented several initial codes, which were grouped by two researchers independently, and then compared. The codes were then grouped, whereby another postgraduate researcher ensured this was completed with trustworthiness, triangulation, and shared understanding

of the meaning of themes (Lincoln & Guba, 1985). Finally, the groupings of themes were then presented to and agreed by the supervision team (PT, DL, LJ). The grouping of the themes into second or third larger themes, where appropriate, will be illustrated using a flowchart, or thematic map. This will show the codes being collected into themes, and into higher themes, similarly to a previous sport psychology study (Anderson *et al.*, 2004).

To provide context to the themes, exact quotes from the focus groups will be used to highlight their meaning and improve the transparency of the findings that were established by the researcher (Lincoln & Guba, 1985). The findings are subsequently linked to existing literature, combining the results and discussion sections to highlight their significance and establish the connections between the outcomes and the current body of knowledge. This approach ensures coherence and looks to avoid unnecessary repetition (Smith, 1995; Anderson *et al.*, 2004).

4.3.1 Details and Descriptions

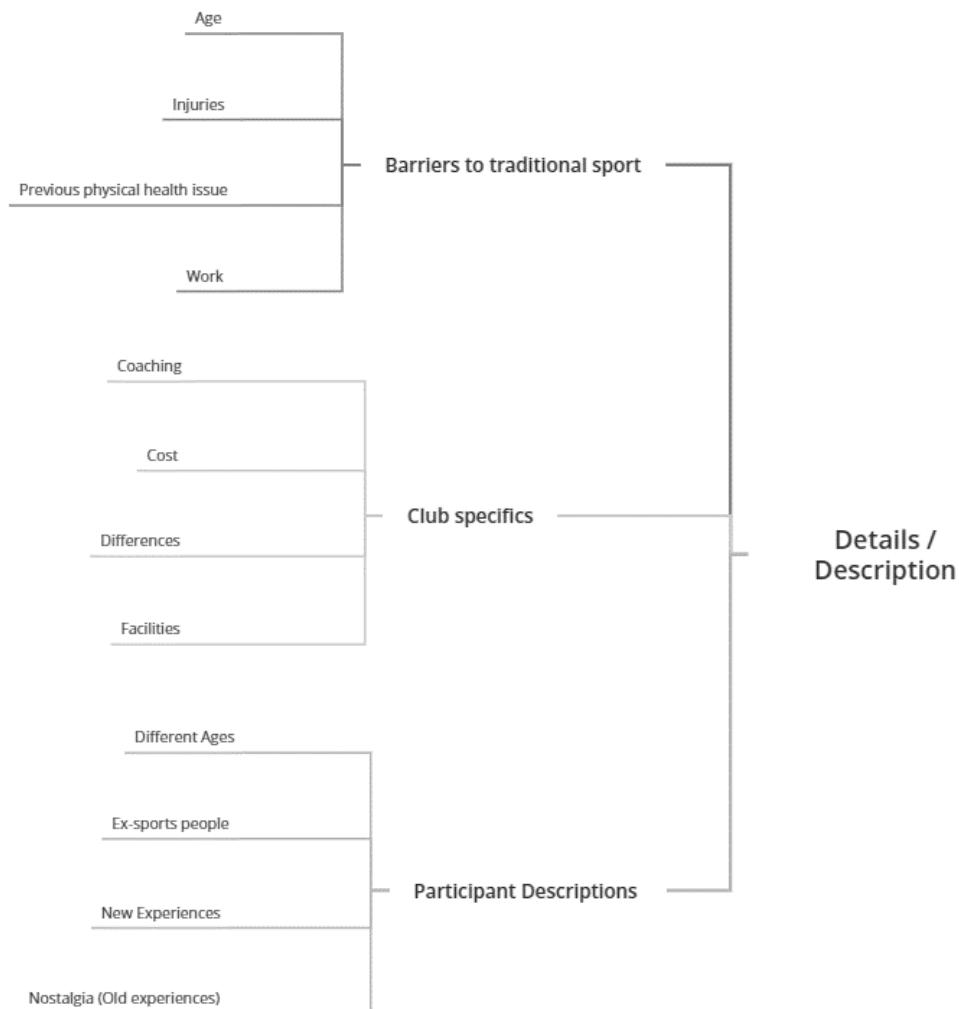


Figure 3: A thematic map, or flowchart, developed from the focus groups. It depicts the initial codes being grouped into subthemes and then, the final overarching theme of “Details and Descriptions”.

During the focus groups all of the individuals discussed their background, their club, and in some ways, their journey to Walking Football. The first subtheme is ‘Barriers to traditional sport’, which, to summarise, was any reason the participants had that made them unable to participate in non-adapted sports, such as 11aside football, rugby, netball, hockey, and so on. Participants made references to things such as their age, injuries they had sustained whilst playing the more traditional sports, previous

health concerns, and work commitments perhaps getting in the way of partaking in sport. Both the “men’s” team, and the “women’s” team noted aspects to do with aging that did not allow them to participate in any sport they had previously been involved with.

“And I think when people get to 40, they realise with 11aside football that chasing around younger players, you're not going to be able to keep up, so it's a nice thing to be able to carry on.”

The Welsh Coalfield residents has an exaggerated trend of an aging population, which is a worldwide phenomenon (Beatty *et al.*, 2019; WHO, 2022a). This would suggest that more people are going to struggle to participate in the sporting activities in their original format, potentially seeing a further drop in activity levels. People over the age of 65 in Wales are already less active than the national average, with 14% participating in activity 3 times a week. This number is lower, 5%, within deprived areas (SportWales, 2017). This tendency of the older adult in deprived areas of Wales, such as the ex-coal mining towns, to participate in less activity is likely to continue to grow without interventions, such as adapted sports (Cholerton, 2021). The individual in the first quote specifically mentions Walking Football allowing them to ‘carry on’ in their sporting participation, despite age as a barrier to being involved within the original format (McPhee *et al.*, 2016; Jenkin *et al.*, 2017; Jenkin *et al.*, 2018).

Another barrier noted with participation in more traditional presentations of football, were the injuries sustained whilst playing.

“I was about 44 or something, I kept getting injuries. Injuries started to prevent me from playing so I had to go down the boring things like golf and the less mad things. I just knew my body wasn't 20 anymore.”

This quote specifically emphasises how age and injury almost come together, and how this is likely to stop people engaging within more activity. People aged 65+ are prone to suffering from poor physical

health, already making up a third of outpatients (British Medical Association, 2016). Individuals are likely more aware of their body and its limits, and therefore unlikely to want to take the risk of injury.

Another barrier for people participating in their sports, that were noted during these focus groups were any previous health issue that the persons had experienced. Some examples such as knee operations, heart issues, or troubles with their lungs. Some individuals mentioned this as a reason for not participating in sports, while others saw it as a factor that motivated them to choose Walking Football over more established counterparts such as, 11-a-side or 5-a-side football.

“I was really ill this year, I was diagnosed after, and we found out it was fluid in the lung. And I had it all drained off and everything like that, and my wife said to me that there's Walking Football there. You ought to have a go.”

This again emphasises the need for adapted sports, especially within the older age groups, as they are more likely to suffer from physical health issues as previously stated (McPhee *et al.*, 2016; Jenkin *et al.*, 2017; Jenkin *et al.*, 2018; Cholerton, 2021). This is important in the Welsh Coalfield's due to the older population, the increased likelihood of individuals suffering from mental health problems, and the increased likelihood of people having a disability (Beatty *et al.*, 2019). Any of these mentioned could contribute to a 'previous health condition' that would prevent someone from participating in physical activity in some way.

The final barrier to sport mentioned was 'work'. Participants stated that work commitments meant they were unable to attend sports activities. Linking back to a previous issue, sport had the potential to cause them injury, which would mean they needed time off work – something that was not possible especially with families or nearing their desired retirement age. Given that the Coalfield areas constitute the most deprived region in the UK (Beatty *et al.*, 2019), the inability to work would be a substantial concern, linking to the lower rates of regular exercise participation in deprived areas of Wales (SportWales, 2017). Furthermore, research has shown that there is a disparity between men

and women, with women taking part in less exercise compared to men in the same age group (Sun *et al.*, 2013).

“Yes, so mine was work commitments as well, because I have all different shifts, and say family? My child sadly has a disability so he needed me, you know.”

“I got injured. So, a big injury, plus, I had a family, so, just getting back from injury with a family, working full-time, was not really possible in those days...”

Both quotes were taken from the women’s groups, talking about their barriers to participating in sport. The second quote is specifically in relation to playing higher level sport, with the person in question having international caps in multiple sports. This refers to how women’s sport in particular lacked support financially and otherwise (Jones, 2021). More generally, this would mean participating in sport or physical activity would not be a priority, especially considering the potential to interfere with work, and consequently, putting things such as family, or finances, at risk. This would be especially prevalent within the ex-coal mining regions due to the deprivation (Jenkin *et al.*, 2018; Beatty *et al.*, 2019).

The next subtheme refers to differences in the teams, how individuals engage with Walking Football, and how teams are run. This was titled ‘club specifics’. The first variation between the groups was the difference in coaching. The newer women’s team, had a structured session with individuals having a clear warm up, set drills and exercises, followed by conditioned games. The male group, which had been involved longer, alternatively had a session which involved turning up, without any coaching, simply playing a game of Walking Football.

This is important to consider, as different teams prefer different things, and catering to the people, and their wants or needs would be crucial in future practice. With Walking Football being recognised by the FAW, and recently becoming associate members, having coaching resources in place for those who want it would be beneficial (FAW Trust, 2020; Welsh Walking Football Federation, 2023).

Walking Football for both of these teams had the same cost involved. Individuals pay £4 a session to play Walking Football in their teams. However, one may assume that not all clubs would be the same cost, so some clubs may differ in what they charge, or what people receive for their 'subs'.

"You pay £4 on a Monday, and £4 each on Monday and Thursday, for that, you get an hour's worth of exercise, you get a free shower, and you get a nice cup of coffee and a chat after. That's a real good value for money that is. Mentally and physically."

Again, with the teams involved in this research, cost is an important thing to consider, as this could potentially be another barrier to physical activity, and making sure it is affordable would be crucial within the Coalfield areas (Jenkin *et al.*, 2018; Beatty *et al.*, 2019; Coalfields Regeneration Trust, 2020).

"Yeah, well, not many clubs have a structured session, you can go and visit any other club and you wouldn't see what you see here. This is unique, because no other club has as many qualified coaches in their club, and the structure and I think what our goal is, what our aim is, isn't it, long term ..."

"... we, you don't know in advance how many people are going to turn up. Just like being in school, 4 captains, usually we have enough for 4 teams, 4 people pick up relatively balanced teams..."

Whilst between the 2 teams, they are both playing Walking Football, for the same cost, at the same location there is still a lot of variation. The variation between clubs is noted by the first quote. One team exhibits a distinct session structure with a strong emphasis on coaching, while the other team adopts a more relaxed and casual approach during their sessions. This would be something to consider in the initiation or retention of participants, as knowing how your session structure influences people would benefit knowing how to best deliver to those involved within a club (Cholerton, 2021). There are also many other differences such as the time they meet and play. The newer groups session is an evening, they train, play, and then usually leave. In contrast to this, the group that have been around

for longer have midday sessions, play a few games, and then have an hour to socialise with a drink in the clubhouse.

As mentioned previously, the teams included in this study both play at the same location, and both noted positives about the facilities they were able to use. In both of the teams, they stated things in relation to the facilities:

“... You're in the open air, and you know, you're on a proper football pitch. And... There are very good facilities here! And, you know, if you want to have a shower afterwards, you can have a shower, you can have tea and biscuits after, you socialise...”

Which indicates how important having the space is to this Walking Football group, suggesting there is more to Walking Football than simply playing on a pitch. The facilities people are able to use within their community is something that should, consequently, be taken into account in the future when implementing Walking Football sessions (Sallis *et al.*, 1997; Cohen-Mansfield *et al.*, 2003; Schutzer & B. Sue Graves, 2004).

The final subgrouping within the “details and descriptions” theme, was the differences in participants themselves. There were some variations in the age between groups, notable between the men and women. Women’s Walking Football starts at 40+ years, whereas the men’s start at 50+, which likely affects who the groups attract (Welsh Walking Football Federation, 2023). However, both groups spoke about people playing Walking Football who were in their 70s. Walking Football, at current, is aimed at the older adult, but within these age limits, there are still people at both the higher, and lower ranges.

Similarly, there were variations between people’s previous experiences of sport, with lots of those involved in Walking Football, and in the focus groups, having been sportspeople in some capacity. Some, on the other hand, were engaging for the first time, or had never played football, and were finding new experiences. As stated previously, one member of the focus groups had experience of a variety sport at an international standard. This was not limited to this member however, with other

participants stating that they had been involved at international, or high standards within their respective sports. There were people that had played football, rugby, hockey, netball, cricket, etc., suggesting Walking Football has an appeal to all ex-sportspeople, or having access to an adapted sport (Cholerton, 2021). On the other hand, participants made mention to having the opportunity to play at all.

“I couldn't play football, when I was younger, because we weren't allowed”

“... played football in school, not for the team, played in the yard with the boys, played in the street with the boys, on the local fields with the boys, but as I said, wasn't allowed to play for the school team...”

This refers to the difference in gender of previous sporting experiences, with women's football being banned up until 1970 in Wales, and women not being allowed to partake in sport, such as football, within schools (Jones, 2021). This would potentially give Walking Football the opportunity to provide some people, specifically older women, the chance to be involved in a format of the game, which they may not have been able to have before.

On a different note, many people within the discussions highlighted their nostalgia in playing or being involved within Walking Football, getting to relive part of the life, through sport:

“And it probably takes you back to when you were kids... When you used to play with your mates on a piece of grass.”

Overall, this emphasises the depth of the Walking Footballer. The adapted sport has newcomers to sport or football, as well as high performing sportspeople finding an alternative to continue playing. Different age groups or genders, have access to competition opportunities across Wales (Welsh Walking Football Federation, 2023) or just to play casually within a club. Walking Football has been found to attract a diverse range of participants, encompassing individuals with varying levels of physical abilities, from those seeking to improve their fitness after experiencing health concerns, to

former international players who continue to engage in active pursuits such as climbing Mount Snowden.

The growing popularity of adapted sports, specifically Walking Sports (The WFA, 2018; The WRU, 2019; Yorkshire Cricket Foundation, 2019; Walking Sports, 2021) can be attributed to their inclusivity nature, as they cater to a diverse range of participants. Furthermore, the groups highlighted as being more prevalent within the Welsh Coalfields, such as the older adult, persons with disabilities, or people with mental health problems (Beatty *et al.*, 2019), are still able to access this form of sport. This could make it suitable to act as an initiative, promoting more activity in a deprived area (SportWales, 2021).

4.3.2 Physical Benefits

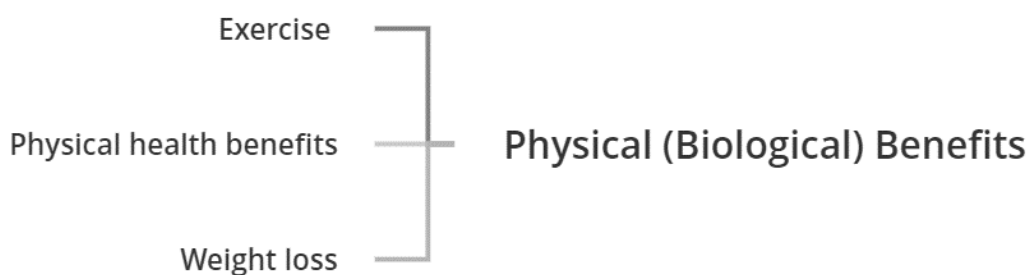


Figure 4: A thematic map, or flowchart, developed from the focus groups. It depicts the theme of “Physical or Biological Benefits”.

The next theme that was emergent from the focus groups was the physical benefit that they had perceived throughout taking part in Walking Football. This was something some participants were very keen on getting across throughout the discussions of Walking Football, and what it had done for them. Most participants expressed how much exercise Walking Football is, contrary to their initial opinions upon hearing about it.

“I was surprised about how tiring it was. As you said, we're all relatively quite fit, we do quite a lot of walking and exercise, but you don't realise how physically demanding it is. And I find, that it's not just an age thing.”

“... everyone gets good hours, and physical exercise and excursion, and it's very surprising the amount of exercise you do while you play those games . You know, lots of people have been, have played running football, for years, and they make a bit of a joke about Walking Football, but once they play it, they realise the amount of ground you cover, and the amount of touch you have on the ball...”

The participants perceived Walking Football as a means to maintain or improve their fitness. As mentioned here, they found that the activity helped them gain fitness, as well as strength throughout their time playing. Walking Football has been shown to have some physical benefits through previous research as a form of exercise already in other population groups (Arnold *et al.*, 2015; Jaafar *et al.*, 2018; Capela *et al.*, 2021; Kammoun *et al.*, 2022).

The participants also noted a plethora of physical health benefits more generally, not limited to fitness or strength. A participant noted how it had improved their breathing after having a medical issue relating to their lungs. Another participant started Walking Football as an alternative to medication, and after playing for 12 months, they had noted that they had improved significantly enough that he no longer needed the medication. Many participants said that they had noticed improvements regarding their general health after being involved in Walking Football and having the exercise. An increased activity level which is shown to improve a variety of health-related outcomes (Warburton, 2006; Earnest *et al.*, 2013; Gillespie *et al.*, 2012; Franco *et al.*, 2013; Feldman *et al.*, 2015; McPhee *et al.*, 2016), therefore Walking Football seems to remain consistent in this regard. Furthermore, one participant voiced an improvement in the body's resilience.

“I tore a tendon in my shoulder, rotator cuff, in Dublin, and my consultant said, last week or the week before, if I wasn't as fit and strong as I am, I wouldn't have healed. So, I've now healed,

and I was waiting for him to say, "for your age", but he never said that, he just said, if there was somebody else, who wasn't as active as you, so..."

This type of positive outcome is also shown through previous research, that more activity benefits the durability of a person's body (Ireland *et al.*, 2014; McPhee *et al.*, 2016).

Within the male group predominantly, there were also references to Walking Football assisting them with weight loss. With Walking Football having been shown to be a moderate-to-vigorous intensity of activity (Heil *et al.*, 2018; Harper *et al.*, 2019; Salle *et al.*, 2020) the low impact of the exercise makes it more accessible to the older adult, however, they are still able to gain benefits from this level of intensity (McPhee *et al.*, 2016). In one of the women's groups, they considered Walking Football to have helped with weight loss, but stated this in relation to menopause more specifically:

"I don't know whether you ask questions about menopause or somethings, but I find, I can't get rid of the weight since being on the menopause, and that's a big factor, with tiredness, with putting weight on, you can't get rid of it, and general lethargy really, I suppose, but yeah, I find it is helping, the Walking Football, with that."

This supports the research that indicates that a moderate-level intensity exercise can have positive results for postmenopausal women (Earnest *et al.*, 2013). Relating to female older adult, exploring Walking Football in this context in further detail may be valuable.

4.3.3 Psychological Benefits

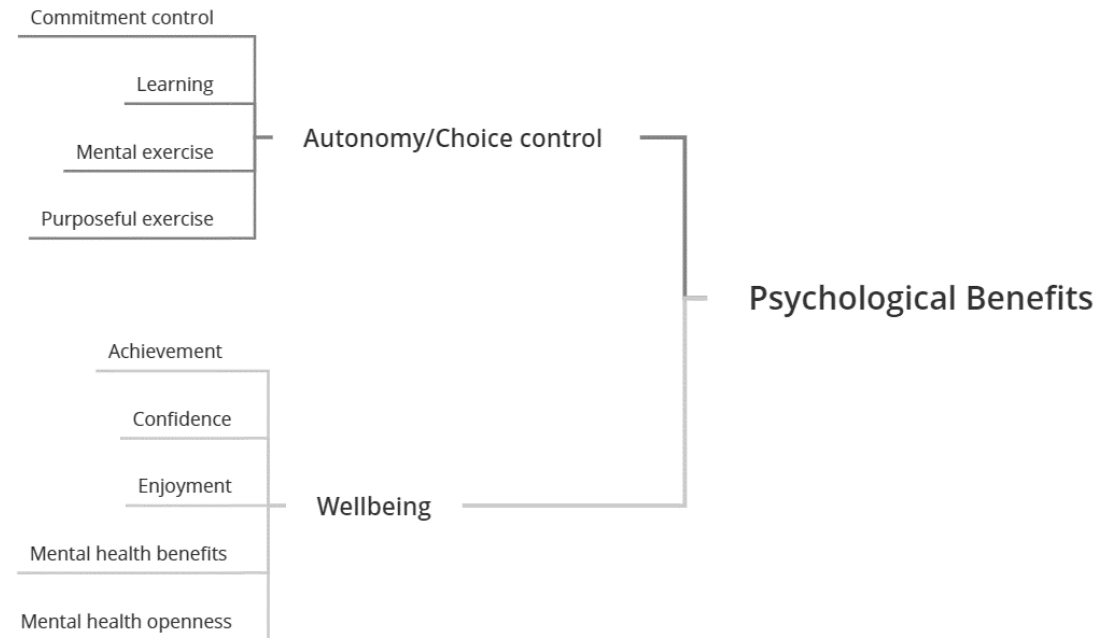


Figure 5: A thematic map, or flowchart, developed from the focus groups. It depicts the theme of “Psychological Benefits”.

Throughout the focus groups, one of key findings was the theme of ‘Psychological Benefits’ with an abundance of differing advantages of Walking Football being found from the perspective of the participants. The first subgrouping of the initial codes (Tesch, 1990) was autonomy, the participants feeling Walking Football gave them some control, or choice over their life. The first way they felt this is through how committed they had to be in order to partake in the adapted sport. Compared to their previous experiences of sport, at certain points, there became a pressure to take part, turn up, or get involved. Through this, it made individuals struggle to continue enjoying the activity for the reasons they chose to play in the first place. The difference many had noticed about Walking Football, that because of its more casual nature, or the environment at the team they played for, there was a lot less pressure to turn up every week for sessions. In this instance, the players felt they were in control of

how much they wanted to commit to Walking Football, and therefore, could focus more on the reasons they chose to go, contrasting perhaps the reasons they 'had' to.

"I've only played in one tournament, and I really enjoyed it, but if you want to participate you can, but if you don't want to participate, then they don't mind... If you just want to come for the enjoyment, and just basically try and lose weight and enjoy yourself, they're quite happy with..."

This supports the theory about older adults favouring a maintenance of internal and external structures that bear resemblance to their earlier life. It suggests that individuals that continue sociable leisure will likely be happier during ageing, with an increased sense of wellbeing (Kelly, Steinkamp, & Kelly, 1987; Atchley, 1989; Fernandes-Ballesteros *et al.*, 2001; Nimrod, 2007). This may be exaggerated, because the participants get the continuity of the structure, but without the pressure, or anxiety that may have come with participating in sport when they were younger, especially those who took part in higher level, or elite sport.

Another thing discussed by participants was the learning involved with them playing or being involved within Walking Football. They were impressed with how they were able to develop their skill through a slower format of the game, or the coaching involved, depending on which team they played with.

"So, we're learning stuff before we going to play football we're learning new drills, new movements. So, it's not just playing..."

This statement relates to the women's team, where they receive coaching and are always looking to improve, as they noted frequently during their discussions, although this was not limited to the women's groups. One of the participants then spoke about the mental exercise he had observed through Walking Football, and how having to slow down the movements had helped him in his other sport:

“... it's a surprisingly skilful game as well... because you've got to be passing the ball to feet, you can't pass it 10 yards in front of someone, for example, because they can't run on to it. I still play running football myself, veterans' football, but it's helped my skill level... because you've got to be really good at controlling the ball.”

Another participant from the men's group encapsulates this viewpoint by stating:

“there's also mental exercise playing the game. You have to think about what you're doing, or at least, you should do.”

Learning skills and having mental challenges during sport has positive implications as perceived by this group of individuals. Taylor & Pringle, (2021) also noted the development of skills and a sense of achievement Walking Football provided, moreover Cholerton *et al.*, (2020) expressed the chance to improve cognitively in older age. This was not the limit, however, of people's perceived autonomy within Walking Football. Another benefit participants had taken from their engagement, was the purposefulness of the exercise had increased their motivation, or their maintenance of Walking Football.

“I'll take the dog for a walk... up round the forestry... go in the river for a swim... I've always done that, but the football gives you, so although I've done it, I was doing it and thinking, why am I doing it? Because although fitness is good for you, and exercise is good for you, there was no goal, to that exercise... So now, I have a goal... The exercise is more important.”

There has been research into the initiation and retention of people, tendency-wise, in regard to Walking Football (Cholerton *et al.*, 2020a; Cholerton *et al.*, 2020b). During these focus groups, this is an important consideration for individuals, perceiving there is a goal, or purpose to doing the activity, in order to commence and maintain interest.

The other subtheme that was grouped into the overarching theme relating to positive outcomes of a psychological nature, was a perceived sense of wellbeing that was achieved via involvement in Walking

Football. Incidentally, the first mentioned outcome that the participants had felt the advantage of, was the opportunity to achieve something. The sense of achievement people involved within Walking Football experienced came in a variety of different ways. Most players described things along the lines of personal achievement of small goals, such as losing weight, or feeling fitter, but also just improving their game. The most notable sense of achievement discussed, however, was during the women's group, referring to one of their teammates.

In a segment of their discussion, individuals detailed an opportunity for them to achieve something meaningful, in playing international Walking Football for Wales. The discussion stressed the importance of the timing of engagement within individuals' lives, specifically highlighting the age at which they had the opportunity to participate. With activity levels being lower for the Welsh older adult (SportWales, 2017), a way to encourage more participation would potentially be to show that the activity is about more than health, and there is a chance continue to play competitively or even gain international honours. Walking Football already has been shown to give participants a sense of achievements alongside other positives (Taylor & Pringle, 2021).

Furthermore, there were statements from people within this study advocating for the confidence building Walking Football provides.

"It's quite big, to see people gaining confidence at 68 years of ages is... There's not many sports you can keep getting those experiences, Walking Football..."

Similar to the sense of achievement, the gaining of confidence as an older adult was clearly stated from the groups, and how this meant a lot to them.

One of the most recognisable themes throughout the focus groups was the general enjoyment the participants had experienced throughout their time playing or being involved. This is very consistent with previous research, with most studies noting that the people involved, enjoyed participating (Lamont *et al.*, 2017; Loadman, 2019; Barbosa *et al.*, 2020; Cholerton, *et al.*, 2020a; Cholerton, *et al.*, 2020b; MacRae, *et al.*, 2020; Taylor & Pringle, 2021). While in this case, it could be considered bias, as the individuals consulted were part of existing clubs, and therefore would likely not attend if they did

not enjoy participating. Consequently, the possibility of experiencing enjoyment in Walking Football within the Welsh Coalfields remains significant, as evidenced by the prominent repetition of this initial code was.

“I can virtually guarantee that they will begin to love it almost from the word go, and that's why we have such a thriving group here.”

Enjoyment, confidence, and achievement could greatly improve a person's self-perception, and as a result, influence their mental health in a positive way (Folkins & Sime, 1981). Exercise more generally helps to illicit positive outcomes from a range of populations (Giacobbi *et al.*, 2008; Archer & Kostrzewa, 2011; Malone *et al.*, 2012; Martin, 2012; Sowa & Meulenbroek, 2012; Martin, 2013) with Walking Football also being shown to have psychologically favourable responses. Mental health as a more general topic was also discussed frequently within the groups.

“I think, you know, when people have worked all their lives, and they've reached that period when they retire, then they ask themselves the question, you know, what am I going to do with my time? And lot of people, I think men in particular, struggle really badly with when they finish work... when you see the interaction that goes on when we have a cup of tea afterwards, you can see smiles on people's faces, everyone's laughing, and there's absolutely no doubt whatsoever, that it's improved my own emotional and mental health, and I'm sure it has a benefit for other people...”

Exercise generally can provide benefits for people with anxiety (Jayakody *et al.*, 2013), or depression (Cooney *et al.*, 2013), as it can relieve symptoms (Mikkelsen *et al.*, 2017). While exercise benefits people generally, the benefits are more prominent in people with anxiety, depression, and the elderly (Berger, 1996). Research suggests that the older adults tend to prioritise mental health over physical health (Giumarra *et al.*, 2007), and throughout the UK there is a disparity in treatment seen for older adults with mental health issues (The Royal College of Psychiatrists, 2018). The Coalfield regions also have a high percentage of people who have mental health difficulties (Beatty *et al.*, 2019). Walking

Football, evidently, has shown to address this within these participants, with this being another of the most frequent topics throughout all the groups. Walking Football is, therefore, a good way to deliver these positive responses, and tackle the disparities seen.

The final wellbeing subject considered within the focus groups was the likelihood of persons playing Walking Football to be more open, and willing to discuss mental health. The people found that during their involvement, there was a tendency for those to be progressively more willing to discuss their mental health or reach out if they needed to.

“I think it takes, it only takes 1 person, to speak about it and then, you know, if it's good enough for him... Yeah, yeah. I think people are more open about things today, I think they are, people are not afraid to talk, they want to get it out of their system... I certainly wouldn't be afraid to tell somebody I'm feeling a bit down or whatever... that way you get a bit more support off people then, you know.”

In a previous study, they found that within the Walking Football setting, people were more willing to discuss their mental health with mental health professionals (McKeown *et al.*, 2015). While there were not mental health professionals in this group, their willingness to discuss mental health is still evident. With players being more likely to talk about mental health and reach out, and the Walking Football providing numerous benefits for mental health within this group and in other populations, this shows the adapted sport to have key desirable outcomes that could provide opportunities moving forward.

4.3.4 Social Benefits

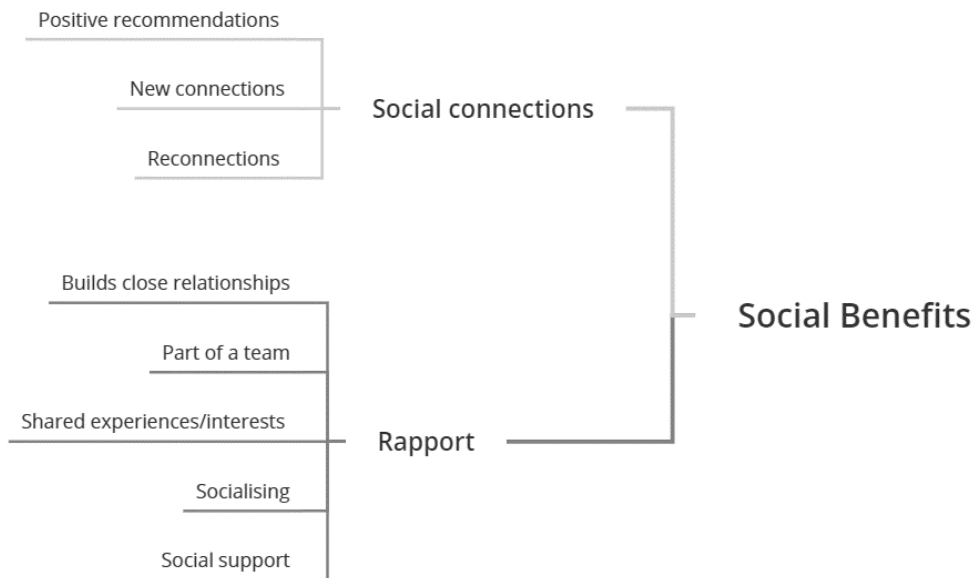


Figure 6: A thematic map, or flowchart, developed from the focus groups. It depicts the theme of “Social Benefits”.

The social section was the most prominent of the themes, with it being mentioned by all during the focus groups. This section, as shown, was split into two subthemes, social connections and rapport. The social connections section included positive recommendations, new connections, and reconnections.

One of the concluding questions people were asked, was simply, if they would recommend it to people, or who they would recommend Walking Football to. In most cases, before the questions was asked, at least one of the participants had noted that they had suggested it to others, planned to, or would.

“I would recommend it to anyone, I don't think the age matters. I think they could come, and join, and they would enjoy it, obviously they're restricted a little bit... I think, would be important to anybody, to take part. It's just joining in!”

This comment presents their active discussion and promotion of the concept to seemingly, all prospective groups. The participants involved were then asked if they would recommend it to any specific group, for example, younger players, but the general consensus was that it was appropriate for anyone, given the adaptability of the sport (McPhee *et al.*, 2016; Jenkin *et al.*, 2017; Jenkin *et al.*, 2018; Cholerton, 2021).

Another benefit that individuals discovered in terms of social connections was the opportunity to form new relationships. Walking Football is usually played at around 6aside, with a maximum of 10 players being allowed to attend an event in Wales (Welsh Walking Football Federation, 2023). This shows that the very nature of the game involves more than one person, making it a social venture. As previously stated, the Coalfields in Wales have a variety of disparities in health-related areas (Beatty *et al.*, 2019). Improving health disparities is shown to be most effective when undertaken within the community (Bravata *et al.*, 2007). Physical activity is also shown to improve social skills of a variety of populations (Bluehardt & Shephard, 1995; Giacobbi *et al.*, 2008; Cleland *et al.*, 2012; Martin, 2012; Sowa & Meulenbroek, 2012; Martin, 2013). As Walking Football is inherently social, this has the potential for all of the benefits associated with physical activity and socialisation to occur. As noted within the focus groups, the social domain was found to be very apparent, not only through those new connections, but also reconnections of people.

“To be quite honest, there's a lot of the people I'd never met until a couple minutes ago, and ye, everyone has just gelled, it's great!”

“... I saw people that I haven't seen for a very long time. Plus, a couple of them, I knew from when I was young, from when I was a teenager, and they were in their late 20s or something like that, early 30s, and I enjoyed it.”

Each quote outlines the new, or old connections people have been able to have through the medium of Walking Football.

The second subtheme contained by the higher-arching social benefits theme, was rapport. In this context, individuals were grouped based on the expressed convictions, specifically focusing on the more advantageous social aspects. The first of these was the ability to build close relationships with the people that attended Walking Football. Productive activities have been theorised to be better than consumptive activities due to an increase in cooperation, encouraging more connection, and reducing feelings of isolation (Putnam, 2000).

“And, you know, as a result of the friendships we've built up... we have regular functions, you know, at Christmas, and in the Summertime, so we, it carries on the friendships as well...”

The close relationships formed is therefore evident in both the teams consulted. The relationships formed extended beyond this, with an important emphasis on the sense of identity and belonging experienced by individuals. They valued the concept of being part of a team.

“You've got a club, and an identity, so you can say, we're “South Wales' club name”, and people know what you mean, but it was the acceptance of the men, and everybody, the whole club, are so friendly, and engaging, that I hadn't... In all my life of 11aside, 11aside football, I'd never felt that feeling of home.”

“I think we all feel a very close affinity with our town, and this club in particular...”

The first quoted was from one of women's discussions, and the last from one of the men's meetings. The team aspect of sport is suggested to enable wellbeing through socialisation due to an increase identification between the team and fans, with social connection impacting the psychological wellbeing. Groups and team identification is more closely related when compared to social and personal wellbeing, which is why it is theorised to create a greater effect (Wann, 2006).

Walking Football research with other participants has also shown to have perceived social consequences. Lamont *et al.*, 2017 stated that individuals felt an improvement in their relationships, while Cholerton *et al.*, 2020, indicated the benefit of 'social connection' expressed by individuals. The

next notable periods of discussion in this case, however, are similar to the results found by McEwan *et al.*, 2019, who discovered participants communicating ‘increased social interaction with similar people’. This was also proposed by the teams consulted with, with a number of them sharing interests with other Walking Footballers, or being able to bond, or support one another with shared experiences. In some cases, the shared interest was simply an opportunity to talk about football.

However, in the women’s group, they detailed shared experiences of menopause, and dealing with menopause. As the women’s group included individuals who are 40 years and above, and some of their member being younger than 40, them being able to help one another out, or speak about any issue they were having, or had dealt with.

“... but I find, I can't get rid of the weight since being on the menopause, and that's a big factor, with tiredness, with putting weight on, you can't get rid of it, and general lethargy really, I suppose, but yeah, I find it is helping, the Walking Football, with that”

Please see appendix 1.2 for the full exert (page 28)

Although lengthy, this exert from one of the focus groups elucidates the personal experiences of individuals and emphasises the potential for sharing and in turn benefiting others who engage with Walking Football. There is the physical benefit that comes with the exercise (Earnest *et al.*, 2013), however, in this case, the social support, and shared experience seem to be the key concept, especially within this women’s group, and arguably for future women’s Walking Football groups. Exploring this in more detail would be worth the investment. This was not the limit of the social support experienced, as within the building of relationships, the connections made, and the shared experiences, friendships of a positive nature were also acquired within these groups.

“For me, it's like, I've been through a marriage break up this year, and if I hadn't had been with these guys, I don't know where I'd be now... without their support, they've been like

phenomenal, and the thing is, this is so important to me now, the football is my release... I'm in a better place"

These quotes are, again, from the women's group, but the social support was not limited to just their team, with the men's group also noting very similar things. The entire team's environment, in this case, seems to be built on the idea of being welcoming and supportive.

"...the welcome we give to anyone, no matter how old, no matter what ability, male, female, whatever, the welcome is so, there are more positives than negatives, I think...

- You know, it's always an anxiety provoking thing to join a well-established group, of people that's been coming for years. But, you know, so, the most difficult thing when someone comes for the first time is for them to want to come the second, and third time... and he loved it, and he's coming again next week, and everyone was, you know, extremely friendly towards him, and then it's up to him then, whether he wants to continue. So, you know, we're a very welcoming club I think... the original idea, was to, for mass participation, and to encourage anyone that wants to come, and I would like to hope that we've still got that, you know, ethos."

This seems to have successfully continued throughout both teams, with the friendships being built therefore providing a conduit for people to socialise outside of Walking Football itself.

"I've been a regular fan for 'South Wales club' for donkey's years, I mean, but I've noticed now this last year or so, how many of the Walking Football lads are come here now to the games... I must've counted 10, which is lovely you know, it's great that they are getting out and about more, I mean, it's not just the Walking Football, it's because of the Walking Football obviously they made friends..."

Prior research has shown that physical activity, when completed socially, has more benefit than activity completed alone. In the context of interventions, this means that an intervention in a group setting is more likely to provide benefits, and it supports long-term adherence to the intervention (Beauchamp

et al., 2018; Craike *et al.*, 2018; Corepal *et al.*, 2020). The theory on behaviour change, indicates that the motivation, of an intrinsic nature, is enabled by the influence of gratification, including things such as social opportunity, social support, social comparison, and relatability with others (Bandura, 1997; Michie *et al.*, 2011; Ryan & Deci, 2017; Corepal *et al.*, 2020). Through these focus groups, this has been found in abundance, with the exercise even going a step further, and being a facilitator of further social events. This is likely to mitigate feelings of isolation and enhancing social and mental well-being, which, consequently, could be expected to address the challenges faced by older adults in the Welsh Coalfields region (Bowling *et al.*, 2003; Giummarra *et al.*, 2007; Cornwell *et al.*, 2008; The Royal College of Psychiatrists, 2018; Beatty *et al.*, 2019).

4.3.5 Inclusivity



Figure 7: A thematic map, or flowchart, developed from the focus groups. It depicts the theme of “Inclusivity”.

The theme of inclusivity outlined and collated all the meaningful periods of text (Tesch, 1990) that referred to the range and equity provided to each person that wanted to be involved in Walking

Football. Inclusivity could otherwise be described as the deliberate and purposefulness of including each individual possible (Oxford University Press, 2023). Within the 2 teams spoken to, they were passionate advocates of their willingness, and desire to welcome each and every individual, and this was evident in a variety of ways. Participants addressed simply how accessible Walking Football was, more generally, adapted sport (Cholerton, 2020).

"I think that's the beauty of it though, because it's accessible to anyone."

"Until I heard about the Walking Football and decided to join then because I wanted to do some sort of sport, but I knew, I wasn't physically fit enough to do the full type of football thing, if you know what I mean, so I joined the walking team then."

"... the welcome we give to anyone, no matter how old, no matter what ability, male, female, whatever, the welcome is so, there are more positives than negatives, I think."

As discussed during the beginning of the focus group analysis, there are a variety of barriers to sport, work, physical health, age, etc. (McPhee *et al.*, 2016; Jenkin *et al.*, 2017; Jenkin *et al.*, 2018). An adapted sport, as defined in Cholerton, 2020, as a sport or physical activity which is modified for those who require it, in order to participate. As Walking Football is a slower paced, non-contact, alternative provision of the 11aside predecessor (The WFA, 2021), its very design is modified in a way, in which to assist more people be able to participate. The participants within the 2 teams in South Wales noted this in particular.

To retrospectively examine the encountered barriers to sport and interpret why Walking Football, in this instance, emerged as a more suitable sporting activity, the first comment examined is age. As individuals got older, they found that age was becoming an issue in the context of physical activity, with increased injuries, less energy, and so on. This has also been supported by research (McPhee *et al.*, 2016; Jenkin *et al.*, 2017; Jenkin *et al.*, 2018). The reasons Walking Football provided a better alternative was expressed through participants during their dialogues.

“As you are getting older, you know, you still go out and do things, but you do different things. You know, do I really want to be sat with my husband five nights a week, or do I want to go out for two hours on a Wednesday and have a laugh with the girls - a bit of fun.”

“I'm in my 70s, we're all in our 70s, and to think, they'd have laughed at us years ago, you know what I mean, when we were like 20 years of age, I wouldn't think I'd be playing football in your 70s, people would've laughed... But it's brilliant that we can do it now, and people are so much fitter now...”

An issue for physical activity for the ex-Coalfield's areas, or perhaps something to consider given the socio-economic climate in the regions (Beatty *et al.*, 2019) is the affordability of the intervention provided. The practicality of Walking Football in these locations is attributed not only to its accessibility but also to its cost-effectiveness in terms of operation. In response to the focus group interview inquiries regarding the affordability of Walking Football, all participants tended to agree when discussing the cost at club level. Some conversed further about the affordability.

“I'd say it's affordable... 5aside, if you think that power league place, down in “a place in South Wales”, for an hour, on one of those pitches, it's £55, isn't it? ... so, we're paying £4 at the moment, per training session, most people live close by, I only live in “a place in South Wales”, so it takes me 15 minutes to get here, it's hardly any petrol, you'd pay more than that if you played 5aside, or you'd pay more than that if you played for a women's 11aside team... so if you're paying £5 a week, you can get like a latte at costa, a bottle of wine, a costa, a sandwich, you know, that's not really... If you're balancing out your fitness and your health, and your wellbeing, it's not a lot to pay out is it really?”

This quote in particular sums up the views around affordability, as agreed upon by all focus group members. This passage also compares Walking Football, to its benefit, to other variations of the game regarding this element. As well as this, the ‘value for money’ is deemed to be advantageous to all partaking. A cost benefit analysis of a Walking Football program was completed for type 2 diabetes

patients in Portugal and found it to be an affordable intervention (Barbosa *et al.*, 2022). Therefore, the research prior, and the focus groups support the use of Walking Sports, Walking Football precisely, in these areas.

The women in their respective groups discussed the significant support they received from their team members, the background staff, and the overall setup, emphasising the encouraging atmosphere fostered by everyone at their club. Discussing the historical aspects of football within the Welsh Coalfield's, a previously highlighted point was the theory concerning the connection between older adults' continuity of activity, and their well-being (Kelly, *et al.*, 1987; Atchley, 1989; Fernandes-Ballesteros *et al.*, 2001; Nimrod, 2007). In the case of men, the historical continuity of football holds significance, particularly considering the strong connection between the rise in football's popularity in regions like Merthyr Tydfil and the influx of football enthusiasts from England who migrated to the Coalfields for employment (Johnes, 2021; Johnes, 2023a; Johnes, 2023b). Women, however, do not have that opportunity for continuity in the same way, as mentioned in passing previously, due to the sports' ban of their participation (Jones, 2021). However, with the current growth of women's football, and the Welsh backing (FAW Trust, 2020a; Pawb Cymru, 2021; Game On Wales, 2022), having the chance to start football, or continue football as the aging population increases, is something that will benefit future participants. Walking Football within these teams however has already seen support and encouragement, adding to the inclusivity and accessibility of Walking Football as an adapted sport.

"- Yeah, and just, to be honest, people who like, you know you watch football on TV, and you always thought, awh, I'd love to have had a go at football, but being female, we struggled to play football growing up because it was frowned upon..."

"... You've got a club, and an identity, so you can say, we're "South Wales club name", and people know what you mean, but it was the acceptance of the men, and everybody, the whole club, are so friendly, and engaging, that I hadn't... In all my life of 11aside, 11aside football, I'd never felt that feeling of home."

While the comments do express the acceptance, and active encouragement of the women's team, the pursuit of inclusivity for these groups is still apparent. The definition of inclusivity is the active, or deliberate attempt to include people from all backgrounds, from all parts of society (Oxford University Press, 2023). This is evidently this team's aim. Physical exercise has benefits for a large range of populations in a physical (Warburton, 2006; Earnest *et al.*, 2013; Gillespie *et al.*, 2012; Franco *et al.*, 2013; Feldman *et al.*, 2015; McPhee *et al.*, 2016), psychological (Giacobbi *et al.*, 2008; Archer & Kostrzewa, 2011; Malone *et al.*, 2012; Martin, 2012; Sowa & Meulenbroek, 2012; Martin, 2013), and social (Bluechardt & Shephard, 1995; Giacobbi *et al.*, 2008; Cleland *et al.*, 2012; Martin, 2012; Sowa & Meulenbroek, 2012; Martin, 2013) domain. Given the wide-ranging benefits for wellbeing across various populations, it is reasonable to ascertain that it should be accessible and inclusive for all populations, ensuring that everyone has the opportunity to experience the associated benefits. Walking Football within the Welsh Coalfield regions is showcasing this inclusive approach to sport.

Within Walking Football, there is further opportunity to be involved, even if you are unable to 'play' the sport, adding to this inclusive aspect. The final notable section to this theme was the ability of Walking Football to surpass the confines of physical activity, and to provide roles external to simply playing, to allow for even greater participation, and inclusion.

"If you went through the whole team, there would be a whole vast variety of different jobs and why you're here and its that's why it's so good, I think. It just covers and ticks all the boxes."

"... even if I couldn't play anymore, I'd want to be in it. So, I'd find something else to do. So, like, I'd coach or I'd, I say, I'll carry the bottles, do you know? Because you want to be part of..."

"Oh yeah! We've got somebody else that does, she trains, but she comes for more the, she does look after us physio-wise as well, but it's not about the playing for her, it's about being a part of the team in a different way. That's come in the last, what? 2 months..."

Older adults that maintain social leisure as they age are more likely to have a better sense of wellbeing, so providing an environment that is able to provide that is important (Kelly, *et al.*, 1987; Atchley, 1989; Fernandes-Ballesteros *et al.*, 2001; Nimrod, 2007). Walking Football goes beyond offering physical activity by encompassing various other positive outcomes and creating an inclusive environment that extends beyond active participation. This inclusivity holds tremendous potential for benefiting diverse populations.

4.3.6 Growing the Game

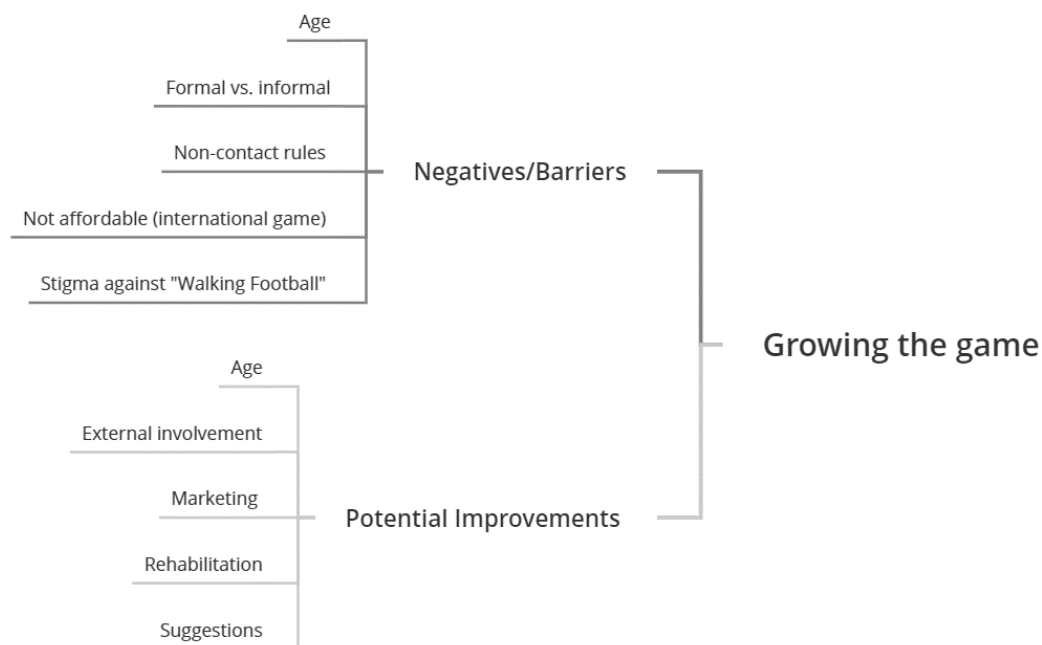


Figure 8: A thematic map, or flowchart, developed from the focus groups. It depicts the theme of “Growing the game”.

The final section explores participants' concerns and suggestions regarding Walking Football, encompassing potential solutions and recommendations for future interventions and the overall development of the sport. It provides valuable insights for future practice within Walking Sport, particularly within the Welsh Coalfields. This can be considered as part of the implications, or applications of the research.

The first grouping of initial code was the negatives or barriers some people has noticed in relation to Walking Football at current, or that could potentially become problematic during the development and growth of the game. The first of these issues related to the age of participants going forward. The majority noted that, based on the inclusivity, and accessibility, Walking Football should be open to all age groups where possible, as anyone could benefit. One individual, in this case, was apprehensive in relation to this idea.

“But because we have competitive 40-year-olds, I would say, more than the others, it is physical, so you'd have to be careful... I would maybe encourage people of over 35 to play with us, at the moment, because they would be mature enough to understand, you know, that you've got like older people, who, you know, aren't strong... Fragile is the word I was going to use...”

Whilst is important to note that this was only stated by one person of the 16 involved, it is a valid concern. Categorising groups by age to prevent this issue moving forward may be something to consider. Walking Football has shown success in the Welsh Coalfields due to the adaptations made, enabling older participants to engage in physical activity in a lower impact setting. However, it is important to note that the benefit of this low impact approach is not exclusive to this specific population (Jaafar *et al.*, 2018; Barbosa *et al.*, 2020). Introducing higher impacts may act as a barrier for older adult participation in the future if this is not deliberated.

Another issue discussed between participants was the formality, or competitiveness of the adapted sport and its development. Some individuals were very pro-competitive, and enjoyed that aspect of Walking Football, as well as the potential to play internationally, and for it to develop in that way. Others, however, were pessimistic in regard to the competitiveness progressing, thinking that would take away from the games' atmosphere, specifically the inclusive aspects. This was debated throughout all the groups, with them having differing opinions.

“Yeah, so it has lost its way, in the meaning of it... it is great to be competitive, I mean, you know, we love a bit, I mean, all of us have played football, or sport, we're all, you know, it's in our blood, that we're competitive, and, but I just wish they could get more people who really need it, you know, health reasons, or...”

“I used to coach at the “a club in Wales”, so, they had a coach, exactly like what they, that we do here now, so, that's 2 clubs that have got coaches, and coaching, sessions, not just a kick around... When we won the Welsh league, it just showed...”

This has also been found to be a debate in previous Walking Football research (Cholerton *et al.*, 2020a), and in Walking Rugby (Goodison & Paval, 2022). It is important to understand the preferences of the participant group and tailor the approach accordingly. Trying to balance between offering competitive play and providing a more relaxed and casual experience will be crucial moving forward.

In addition to age and competitive concerns, there were also worries about the contact aspect of Walking Football. It is important to note that Walking Football is intended to be a non-contact sport, as specified by the rules (The WFA, 2021). People within these groups were anxious that the contact aspect was not being made clear enough or being officiated appropriately.

“On the other side of that though right, so they can't, you've got to be careful because you've got players of a certain age, and, it can get physical, it's not supposed to, is it?”

“It's supposed to be non-contact...”

“I love the physical side of football if I'm being honest like, I know you're not supposed to tackle and things like that but there's quite a bit of it that goes on, in games, especially in tournaments, and, I mean, which is great, I mean, we've been brought up with it haven't we”

Participant views on the contact aspect varied, suggesting a need to consider individual preferences and group dynamics when enforcing the non-contact rule in future interventions. This was mentioned 4 times throughout the women's groups in comparison to only one mention in the men's group.

There were two agreed upon negatives among all participants in the groups, the cost of the international game and the stigma associated with Walking Football. While everyone appreciated the affordability of Walking Football at a club level, the step up also seems to come with a cost.

“As in, playing WF weekly, is affordable? But I'd say, if you go up a level, it becomes as affordable as you would want to participate in. It is a barrier, because obviously, if you went on every trip, you know, it's hundreds of pounds, almost every month, because they're playing in France, next month.

- That's a huge barrier, a lot of people I would say, can't do that. You will only get, a smaller team going.”

The international Walking Football phenomenon was generally perceived in a positive light, being regarded as an aspirational goal that offered various benefits. This being said, the cost associated with playing at that level, all agreed was not in line with the values of the game – inclusivity and accessibility. While the international game seems to have positive correlations, finding a balance between maintaining the positive aspects and moving towards aligning it more with the core values may be worth considering. This holds significance when taking into account the socioeconomic disparities prevalent in the Coalfields areas, as participants noted, a number of individuals who represented the international Welsh Walking Football team, hail from Coalfield regions. Ensuring the accessibility for the more socio-economically disadvantaged (Beatty *et al.*, 2019) would consequently be necessary.

The stigma around Walking Football related to the perception people outside of the game have of the adapted sport. The participants believed that a majority of people that have not played Walking Football held negative preconceptions pertaining to the age, speed, enjoyment, and so on, of participation. The name itself, or the concept, was a barrier for some people when trying to gain wider engagement.

“You know, lots of people have been, have played running football, for years, and they make a bit of a joke about WF...”

“What I've found, is that particularly people of my generation... quite a few seemed to think it was beneath them... they just think it's for old people, and we're not 'old'.

- Yeah. when you say WALKING football, it's almost like derogatory, because it's this, 'How can you walk?!... 'Pfft, WF, you know, what's the point of it?!', and I say, I find it marvellous...

- There's a bit of stigma there is...”

As discussed, there has been research into the initiation and maintenance of Walking participants within the UK, which support this notion of a negative initial perception towards the adapted sport (Cholerton *et al.*, 2020a; Cholerton *et al.*, 2020b; Cholerton, 2021). Considering the findings of this research, conducting further investigation within the Welsh Coalfields would contribute to the development, and understanding of initiation, and maintenance behaviours of individuals' participation in Walking Football.

Further suggestions for the future of Walking Football from the participants were also given. As mentioned briefly, most participants thought that Walking Football should expand, and offer sessions for a wider range of individuals, specifically, increasing the age ranges involved. Most wished to further increase the inclusivity of this adapted sport.

“... I suppose, just to encourage other people, you know, from different age groups, or different genders, to come, so it's not just seen as a male only group, and now, we have overcome that obstacle, with the enthusiasm of the ladies' group, and the women's group, and just, I suppose, you know, to make it a sport for all, because it's a, football is probably the most enjoyable game, participants team game, and to try and get you know, different sections of society coming as well”

“Everyone! ...I'd say, come along! Because it is that, being part of it, it's a huge thing, and having an identity.

- I deliver Walking Netball, and Walking Sports, and we have, so we say, come to Walking Netball, and we might have a 20-year-old, doing Walking Netball, just for rehab, and we haven't picked that up yet, but I don't know if any of the ladies' team would ever train with us, maybe just for a bit of rehab?”

Linking to this, people also thought that using Walking Football as rehabilitation may be useful for a variety of different people and organisations. Participants had the idea of using the adapted sport to help people with any injuries or medical conditions to recover, such as cardiac-rehabilitation, or simply injured football players. On this note, having links to outside organisations to either refer people, or to assist people within Walking Football program could be advantageous.

“I just wish we could go back to like when we started and encourage more people, perhaps with mental health issues, or you know, fitness issues, you know, and I think it needs to go back to that as well, there's space for everybody, you know, and we could still have our bit, but I'd like to see groups of other people with problems, you know, with health and whatever..

- I don't know if those rehabilitation programmes are still going or, I don't know, I don't hear anything...

- I was just going to ask if, it's all very well us who are amateurs in terms of helping people with mental health etc., but are the various clinics, doctors, surgeries, etc., are they aware of this? You know, and the, they could be signposted towards us?”

Mental health agencies, and health organisations such as MIND, or general practitioners, and more were also suggested by the Walking Footballers to get involved with Walking Football and utilise it. Moreover, marketing the sport more, as well as other general suggestions were also expressed. These are things that will be especially considered during the later study, and the opportunities in relation to

social prescribing which will be explored at that point (NHS Wales & Public Health Wales, 2019; Rees *et al.*, 2021).

“Because not every team has a physio, not every team has first aid, and we’ve got plenty of those, so that’s good as well. Especially with the age group we’ve got.

- The funders were saying actually that they’re very unlikely to fund us a physio bag, and oils, and I went back to them to say, if you come and see us, we need a physio, and oils, we don’t need footballs, we need stuff to look after us after, so hopefully we’ll get that.”

“Do other southern league clubs have WF as part of their community department so to speak? I’m not sure how they get round it, do they advertise places?”

Funding especially was linked to external involvement of companies, marketing the sport, and gaining participation, and supporting current involvement. In line with the current research in maintaining participation, as well as suggestions for future practice within Walking Football with Wales, and the Welsh Coalfields, considerations should be contemplated during the development and implementation of the sport as it grows (Cholerton *et al.*, 2020a; Cholerton *et al.*, 2020b; Cholerton, 2021). This is to ensure inclusivity, the values reflected, and limit barriers to participation (McPhee *et al.*, 2016; Jenkin *et al.*, 2017; Jenkin *et al.*, 2018).

4.4 Implications, Limitations, and Recommendations

The qualitative data within this study outlines positive outcomes perceived for psychological, social, and physical aspects by individuals partaking in Walking Football within the Welsh Coalfield regions. Previous research has shown potential benefits to participants, but has not investigated Wales, or the more deprived regions. Through the focus groups, the experiences of these individual suggest Walking Football would provide a useful intervention for a variety of people. In terms of the development of Walking Football within Wales, the “Growing the game” theme outlines several interesting considerations for the Welsh Walking Football Federation, the FAW and other governing bodies

involved, moving forward. The study has looked to understand the experience of Walking Football from the perspective of the people involved, and in the target population, and therefore, this should be recognised by the organisers (Cholerton, 2021).

Limitations of the study include the sampling method. All participants were from 2 teams in South Wales, both playing at the same location, a club in the Welsh Coalfields. Due to the closeness, and likely similar experiences of participants between teams, the themes and data collected may not resonate with participants of Walking Football in different areas of the Welsh Coalfields, or Wales more generally. A larger sample size, or range of locations would have likely improved the insights discovered. An additional limitation regarding the sample is the variability in the duration of involvement. Regrettably, the emergence of female Walking Football teams is relatively recent, resulting in a shorter duration of involvement among female participants compared to their male counterparts. It is, consequently, imperative to contextualise this discrepancy when interpreting the findings. This may restrict direct comparisons between the two groups, despite the congruence in the observed outcomes. Another potential limitation of the study was the timeframe that the research took place. The research took place over the course of a year, being the first stage of the mixed method approach. Completing this study in a timely manner was therefore crucial to the progression of the research. Due to this, the sampling, despite being purposeful, was likely more convenient than truly representative. Using sampling to provide comparability would likely improve the results (Hadi *et al.*, 2023). However, incorporating this particular population facilitated rich qualitative data, improving the understanding of participants' perspectives, viewpoints, and lived experiences. This enhanced ability to synthesise and interpret the results, enabling the delivery of meaningful contextualisation (Lewin, 2019).

To further the research in Walking Football within the Welsh Coalfield regions, the knowledge elicited by this study should be expanded upon. Benefits to individuals psychological, social, and physical wellbeing was found. Potentially using an intervention study, or Randomised control trial design,

determining the extent of these benefits for the target population would be of benefit. Furthermore, a comparison between participants across Wales would provide insight, especially being able to determine any differences between the individuals from more deprived areas, such as the Coalfields. Age, gender, and previous activity levels may also affect a person perception of Walking Football, and therefore this should be explored. As details from participants such as their postcode, was not collected, ensure participants lived in the Coalfield areas was not possible. The teams themselves were in a Coalfields area, but as noted in a previous Walking Football study, this does not guarantee the participants live within the area (Cholerton, 2021). Collecting such data moving forward would definitely improve the comparison between affluent areas, and areas of deprivation, such as the Welsh Coalfields.

A distinct benefit was also found specifically within the women's group, and in regard to the older adult, and menopause. Further investigating Walking Football within this population, and in the context of potential benefits to post-menopausal women could provide better understanding of this.

This research was only conducted with participants of the sport itself. Investigating the experiences of people that deliver the sport, officiate Walking Football, and people otherwise involved may add more clarity to research, and how Walking Football in Wales should expand or develop.

Finally, research into more adapted or Walking Sports within Wales, and within the Welsh Coalfields would have potential applications, and further understand any benefits to participation. Investigating the experiences of Walking Rugby, Walking Netball, Walking Cricket, etc., could be helpful in this regard. Some comparisons between Walking Sport may also be elicited.

4.5 Conclusion

The research aim was to gain a comprehensive understanding of Walking Football and the experiences of participants involved in established sessions based in the Welsh Coalfields regions. Whilst some debate was had about how the sport should develop, little negatives were found, with a clear and

distinct range of positive outcomes being expressed. This study has shown the diverse scope of participant amassed by Walking Football within Wales and the ex-coal mining regions. This conveyed the differing backgrounds, experience, ability, while also suggesting barriers to physical activity shown by the older adult. Walking Football was then able to produce positive outcomes for individuals mental and psychological wellbeing, their social welfare, and their physical health. The adapted sport was especially suggestive of inclusivity, with the positives being heavily advocated. Suggestions around the development of Walking Football included funding, marketing, growth, and collaborations with organisations to share the outcomes more widely for the necessary individuals. There were some disagreements on the competitiveness, so considering this during future practice, and applying the learnings to the appropriate individuals will be necessary. Further research is needed to clarify the extent of the benefits found, providing comparisons, and exploring the effects on more specific groups of individuals, such as people with mental health issues, menopausal or post-menopausal women, etc. Gaining additional information from a variety of people in the Walking Football environment will also support the development of the game in Wales, obtained from the people themselves, and their experiences.

5: Concluding Remarks

5.1 Reflexivity: Reflecting on the Research Process

As noted within the thesis methodology, reflexivity entails the researcher's continuous acknowledgment of their own influence and the contextual factors that shape the research. It promotes transparency and provides a deeper understanding of the work (Dodgson, 2019; Davis, 2020). Thus, this section serves as a reflective account of the journey through the research.

The research project was supported by the Knowledge Economy Skills Scholarship (KESS 2) and the Coalfields Regeneration Trust.

Industry-academic collaboration offers mutual benefits, such as higher impacts in academic papers co-authored with industry partners, positive correlations between academic success and collaboration, knowledge transfer, access to technology, and engagement with experts. It also aids in recruiting potential hires and mitigating risks in testing new ideas for the industry partners (Rees *et al.*, 2020). KESS 2 facilitates collaborative research between small to medium sized enterprises and academic experts in Wales, promoting innovation and industry-academia partnerships, with the support from the European Social Funds through the Welsh Government. The Coalfields Regeneration Trust also contributed to the funding, similarly to KESS 2, as the project aligned with their pursuit to improve conditions in former coal mining areas, and Wales respectively. While industry collaboration offers significant advantages, it is crucial to address potential concerns, such as bias, through the reflexive lens. The researcher's pursuit of a Master's degree was facilitated by financial support, including coverage of fees, stipend, equipment expenses, and conference attendance. This support was a direct outcome of the collaboration established for this project. As noted by Martin and Reynolds, (2002), while such collaborations offer advantages, they may also introduce challenges such as ethical concerns, conflicts of interest, and potential personal or institutional gain that could compromise the validity of research findings.

Despite the potential challenges associated with this partnership, the concerns were successfully mitigated through regular meetings, discussions, and inclusive decision-making processes. Additionally, to guarantee that precautions were taken to alleviate any unrealised issues, certain methods were employed. The methods included the involvement of independent researchers as noted throughout the studies, transparent communication regarding the company's involvement, and obtaining approval from the university ethics committee. These techniques ensured ethical integrity, validity, and reliability of findings, minimising bias or undue influence during the research. This proactive approach, therefore aimed to minimise the likelihood of problems occurring. The research project itself encompassed 3 studies: a systematic literature review, focus group interviews, and a large-scale survey (which was removed due to post-viva recommendations). From the project's commencement in June 2022 until its conclusion in June 2023, regular weekly meetings were held involving the researcher, 3 academic supervisors, and a representative from the Coalfields Regeneration Trust, the industry partner. The industry partner actively participated in the decision-making process, providing input and suggestions, but the final decisions rested with the researcher, who served as the project lead. To maintain research integrity, these processes were put in place in order to restrict any potential conflicts of interest and personal/institutional gain that may have compromised validity. The industry partner, consequently, played a supervisory role, similar to the academic supervisors, offering support and guidance throughout the project. The team of academic supervisors consisted of 3 individuals with relevant expertise: a lecturer in Community Football Development and an FAW tutor (LJ), an associate professor and health psychologist (DL), and an associate professor in research and development, and lead (PT). The prior experience of all three supervisors in collaborating with industry partners facilitated effective project relationships. This experience was instrumental in preventing challenges related to ethics, conflicts of interest, and potential biases that could undermine the validity of research findings, as mentioned.

One difficulty of the research project was the restricted timeframe of a year, in which 3 studies were completed. Consequently, this time constraint resulted in certain data limitations. Specifically, the

qualitative and quantitative data collection approaches involved smaller participant groups than initially intended, with four participants per focus group instead of the planned six, and 107 survey respondents instead of the anticipated 315. In the focus group interviews, this restriction was effectively addressed through the inclusion of talkative and passionate participants. Their active engagement assisted the collection of rich and in-depth data, compensating for the smaller sample. The researcher found the collaboration with participants significantly beneficial. Their support in the initial stages of the project was invaluable, as potential barriers were efficiently overcome. This prevented any potential hindrance to the project's progression. The lead researcher felt relieved and appreciative of the open and productive subject group, which facilitated a smooth transition to the next project stage.

The survey phase, conversely, presented significant challenge. Irrespective of the support received from research connections, such as the Welsh Walking Football Federation and the Coalfields Regeneration Trust, the survey encountered limitations in online engagement. Efforts to share the survey and employ snowball sampling fell short of the target. Only one invitation was shared, to avoid overwhelming Walking Football participants who were not interested. To increase responses, paper surveys were distributed at 3 Walking Football events, resulting in 40 additional surveys. A passive recruitment approach was used during this data collection method. This involved setting up a stand at the Walking Football events letting prospective participants volunteer and limiting attendance to only 3 events. The analysis of the collected data acknowledged the limited sample and accounted for this by avoiding excessive analysis and reporting context. Findings were then shared with the Welsh Coalfield Walking Football community at an event, providing feedback and demonstrating the value of the collaborative work. The lead researcher encountered significant frustration during this stage of the study. Balancing participant consideration while attracting prospective individuals to participate proved challenging. Despite falling short of the target, the smaller sample's meaningful contributions provided valuable insights for the growth and development of Walking Football. Uncovering overlooked aspects was crucial, remaining the primary focus. The potential impact on the future of the

adapted sport was beneficial to participants, providing relief despite the initial disappointment for the lead researcher. However, upon recommendation of the viva review, this study was removed due to its limitations.

This research has made contributions to the knowledge base of Walking Football and potentially Walking Sports by establishing theoretical connections with the biopsychosocial model of health (Engel, 1977). It also investigated Welsh Walking Football, providing novel insights and understanding of a previously unexplored field. The study's findings have the potential to influence the development of Walking Football and other adapted sports, as they reflect the perspectives of the participants, supporting growth and direction. The focus on the Welsh Coalfield regions and the potential of modified physical activity to address disparities in this population adds importance to the research. Additionally, this project has facilitated the researcher's professional growth providing valuable development in research methods, effective dissemination of findings, and increased academic confidence. These acquired skills will not only benefit the researcher's ongoing development but also hold potential to make positive contributions in areas experiencing distinct disadvantages related to health and wellbeing, influencing the growing and developing adapted sport field, something which incites pride in the lead researcher.

5.2 Thesis Conclusion

Ultimately, the thesis aimed to understand Walking Football as experienced in the Welsh Coalfield regions, and explore perspectives on a wider scale, throughout Wales. The majority of participants expressed agreement regarding the positive outcomes in psychological, social, and physical wellbeing, suggesting the widespread benefits of Walking Football. Participants provided valuable insights and recommendations, including renaming the sport, establishing partnerships with external organisations, and increasing coaching and officiating resources. Further suggestions for development included the need for funding, increased marketing, and collaborations with organisations such as GPs,

MIND, the FAW, and more. Although additional data would have been beneficial, the findings support the use of Walking Football as an intervention to address disparities in the Welsh Coalfield population.

To conclude, the research presented a consensus on the perceived benefits of Walking Football, with reported improvements in psychological, social, and physical wellbeing, aligned with the biopsychosocial theoretical model of health (Engel, 1977). Nonetheless, limitations were identified, such as the project's timeframe and the absence of longitudinal comparisons. To address these limitations, future research should employ randomised control trials to establish causal relationships and determine the extent of the benefits, as per the gold standard for evaluating complex interventions (Campbell, 2000; Craig *et al.*, 2008; Skivington *et al.*, 2021). Furthermore, it is recommended that further research be conducted to investigate the experiences of diverse populations. This proposition particularly relates to female participants, and the exploration of the effects of adapted physical activity during the menopausal period. Additionally, incorporating the perspectives of coaches, officials, and non-playing participants would provide a more thorough understanding. Further research is warranted to explore additional adapted or Walking Sports, such as Walking Rugby, Walking Netball, and Walking Cricket, in order to gain insights into their potential benefits and considerations for diverse populations, as there exists a gap in the current literature. By expanding the research scope, an improved understanding of the benefits and considerations associated with adapted sports can be realised and implemented.

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7: Appendices

Please see Supporting Documents