An evaluation of the Warrington Wolves Charitable Foundation Walking Rugby Project

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Background

Despite the well-established benefits for maintaining health, wellbeing and reduced disease risk (Blair & Connelly, 1996), physical activity declines with age. Current data indicate that ~38% of 55-74year-olds and 58% of those >75 years do not currently meet recommended UK guidelines for 150 minutes of moderate or 75 minutes of vigorous weekly physical activity (Sport England, 2024). The consequences of such actions are more older adults seeking medical intervention and an increased burden on public health resources.

Walking is a moderate intensity low impact lifestyle activity that is familiar, accessible, convenient and suitable for many people. Walking can improve physical fitness (Murphy et al., 2002) and reduce several risk factors associated with cardiovascular disease and type II diabetes (Karstoft et al., 2013; Sung & Bae, 2012). Moreover, regular walking also provides psychological benefits such as improved mood and more pleasant affective states (Ekkekakis et al., 2000), particularly when performed outdoors (Olafsdottir et al., 2020).

Unlike traditional rugby, walking rugby focuses on inclusivity, accessibility, and safety while preserving some of the fundamental elements of the sport. Limited to walking only (i.e., no running), the sport promotes a low-impact, non-contact style of play that reduces the risk of injury.

Purpose of the project

Warrington Wolves Charitable Foundation has pioneered walking rugby, quickly becoming a popular element of its community provision. The Foundation sought a deeper understanding of the health benefits associated with the activity and its potential to improve physical fitness, mental and social well-being. By adopting a mixed-methods case study approach, this report provides a nuanced understanding of the impact of walking rugby on the health of older adults. In doing so, we hope to inform policymakers, healthcare professionals, and the public about the potential role of this innovative sport in promoting physical activity, enhancing quality of life, and mitigating the burden of chronic disease.

Group characteristics

An overview of the walking rugby group characteristics is shown in Figure 1.



Figure 1. Walking group characteristics.

Physical health benefits of walking rugby

Data revealed that walking rugby is a moderate to vigorous intensity activity that can contribute to participants' weekly target of 150 minutes of moderate or 75 minutes of vigorous physical activity. In a 60-minute walking rugby session, players were typically active for ~48 min comprising four activity bouts of ~12 min each. Players covered, on average, 2.5 km per session (range of 1.2 to 3.5 km) at an average speed of 3 km/h that included between 0.2 and 1.7 km of brisk walking (i.e., >4.8 km/h). Sessions elicited an average heart rate of ~128 b/min, which was equivalent to ~84% maximum heart rate. Despite variations in the distance covered being influenced by a player's position and proximity to the ball, a player's freedom to self-regulate their involvement and work within physical limits to avoid overexertion appears to be a strong feature of walking rugby. Participants also reported being surprised by the higher than anticipated volume of movement performed during walking rugby, which might be helpful in reducing perception of effort and helping individuals engage more in physical activity.

The intermittent nature of walking rugby means players can cover ~150 changes of direction that incorporate multiple low intensity accelerations and decelerations. In addition, walking rugby enables players to engage with ~14 passes and catches per minute that involves hand-eye-coordination and upper limb involvement. Together these actions are likely to increase the mechanical, physiological and cognitive load compared to that of normal walking (see section below comparing Walking Rugby and Club Heritage Walk) and could contribute to important additional physical and mental benefits for participants. Indeed, participants recognised the stop-start nature of walking rugby that made the activity more

demanding than anticipated but saw the varied tempo as a positive feature that differentiated the activity from steady paced walking/running.

Data revealed 91% of participants reported improved physical fitness and 77% were more active after prolonged participation in walking rugby. These data were confirmed in interviews with several participants reporting improved fitness, health, motor skills, hand-eye-co-ordination and better flexibility. Continued participation in walking rugby also seems to help participants engage in other physical activities either by improved fitness or confidence.

Walking rugby vs. The Heritage Walk

A small number of participants completed a Walking Rugby session and The Foundation's Heritage Walk around the town to compare the demand of each. Participants covered twice as much distance at a faster average walking speed during the Heritage Walk compared to a Walking Rugby session. However, Walking Rugby provided more exposure to brisk walking (>4.8 km/h) per minute of activity time than the Heritage Walk and included more accelerations and decelerations that resulted in a higher average heart rate. Data are shown in Figure 2. These data confirm that walking rugby provides a low volume form of moderate to vigorous physical activity that would complement other forms of exercise, such as walking.



Figure 2. Movement and heart rate data from a group of participants who completed a walking rugby session and the Warrington Wolves Heritage Walk.

Social and mental benefits of walking rugby

Such is the enthusiasm and perceived benefits; participants report prioritising walking rugby within their weekly schedules. Data revealed that 96% of those attending walking rugby sessions had made new friends with a supportive and encouraging community offered by the group. This sense of community also extends beyond walking rugby with participants reporting members looking out for each other in daily life and engaging in social activities together. Group members reported the importance of exercising and interacting with others within the group that helps to encourage participation.

Participants reported improved mood, lower stress, increased confidence, and a sense of achievement after walking rugby sessions. Moreover, 73% reported improved mental health after taking part in walking rugby.

Taken together, these data suggest walking rugby is likely to promote sustained involvement in moderate to vigorous physical activity because of the opportunity to engage with others and the social wellbeing created as a result.

Conclusion

The walking rugby offered by Warrington Wolves Charitable Foundation is a transformative activity that offers extensive physical, mental and social benefits to its participants. This moderate to vigorous physical activity contributes to participants' weekly targets and is also encouraging participants to become more active as part of their daily lives. By taking part participants feel physically and mentally fitter as well as a sense of enhanced social wellbeing. Taken together, walking rugby can serve as a powerful tool for improving the overall quality of life within older communities. An infographic of the benefits of walking rugby is provided in Appendix 1.

Future recommendations

The following suggestions are based on the data collected as part of this project.

- 1. *Promotion and awareness*: Increase awareness through community events, local media, and social media campaigns to increase participant numbers, particularly those from underrepresented groups, e.g., women, ethnic minorities.
- 2. Resource and training development: Develop appropriate coach education material and invest in staffing to support extended delivery and succession planning. Consider developing a group of walking rugby coaches from university students and local community clubs.
- 3. *Partnerships*: Collaborate with healthcare providers, care homes, service veterans, former player charities and amateur clubs to integrate walking rugby into broader wellness programmes. Consider 'taster events' as part of existing health and wellbeing delivery within and outside of the club.
- 4. *Participant wellbeing*: Develop a structured warm-up for use before walking rugby sessions that can also target key modifiable risk factors for injury in older participants, e.g., fall-risk.
- 5. *Extended offer*: Physical activity offers for participants during the winter period, e.g., indoor walking rugby sessions.
- 6. *Competition*: Explore future opportunities to have competitive fixtures with other clubs or groups.

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Appendix 1

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Health benefits of walking rugby

PHYSICAL BENEFITS

In a 60 min session players do **~48 min of exercise** performed as ~12 min bouts with a short break in between.

Players self-regulate their involvement in games to ♀ cover between 1.5-3.5 km at an average speed of 3 km/h, which includes 0.2-1.7 km of brisk walking (≥4.8 km/h).

Average heart rate of ~128 b/min or ~84% maximum heart rate.

Teams are involved in ~14 passes and catches per minute that can help improve hand-eye co-ordination and upper body muscle function.

Multiple low intensitychanges of direction and accelerations/decelerations provide an intermittent walking tempo that increases the exercise intensity compared to steady paced walking.

After taking part in walking rugby:

91% of players report improved physical fitness
77% report being more active and having more

confidence to participate in other physical activities.

MENTAL AND SOCIAL BENEFITS

Excellent opportunity tomeet new people (96% reported making new friends), socialise and develop new friendship groups.

Walking rugby provides a safe and supportive community for all members.

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Everyone welcome - no previous rugby experience is necessaryto join in and enjoy the benefits.

73% of walking rugby participants reported improved mental health, including improved mood, reduced stress, a sense of achievement and more confidence.



Sessions are organised, delivered by qualified staff in a safe environment.



Sessions are exciting, with the right level of competition and fun.

Data are based on collaborative research by Liverpool JohnMoores University and Warrington Wolves Community Foundation