

Investigating the participation motives of women rugby union players in Canada and Wales

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Previous interview research has indicated that women's rugby union participation is multi-faceted, with most players providing several different motives for getting involved in the sport. The aim of this study was to further examine participation motivation in women's rugby by replicating and extending the findings of the earlier research (Kerr, 2021) using a different approach to data collection and a larger sample size. Snowball sampling was used to recruit rugby playing female participants. A qualitative study focusing on participant responses to open-ended questions on participation motivation from an online survey was then undertaken. Thematic analysis was utilized to identify sub-themes and major themes from the data. These were found to be common to both Canadian and Welsh female rugby players. Four major themes were identified from the survey data. These were: *Intrinsic motivation*; *Unique culture*; *Barriers to participation*; and *Acknowledgment of future generations*. These major themes subsumed a number of sub-themes with overlapping characteristics. *Empowerment* and *sense of challenge* were included under the major theme *Intrinsic motivation*, and *counterculture* and *stereotypes* included under the major theme *Barriers to participation*. The current study replicated a number of findings from the original study, but there were two new findings. The first was that some players experienced a strong sense of empowerment through playing rugby. The second was the desire to give something back and help to continue to grow the sport. Reversal theory was used to interpret the findings and explain the psychological background to the players' participation motives.

Keywords: participation motivation, women's rugby union, Reversal Theory

Introduction

Reports in both Canada and Wales have indicated a rising trend of sedentary lifestyle behaviors at the expense of physical activity (Government of Canada, 2018; Welsh Government, 2021). Insufficient physical activity has been associated with chronic health conditions, such as coronary heart disease, type 2 diabetes and other obesity-related disorders (e.g., Booth et al., 2002). This trend in lifestyle behavior is of particular concern for women. An earlier Canadian report indicated that 84% of women in Canada did not participate in sport at all and that, if a girl had not participated in a sport by the age of 10, there was only a 10% chance that she would be physically active as an adult (Women and Sport, 2016). With the exception of swimming and volleyball, no sports reported higher participation rates for women than men. Among the top 10 sports for Canadian women in 2010, golf was highest at 15%, with rugby union not included in the top 10

(Statistics Canada, 2013).¹ Meanwhile, it was reported in Wales that 54% of adult women participated in sport less than once a week (Sport Wales, 2020). In Wales, where rugby union is the national sport, only 25% of female secondary pupils participated in rugby union, compared to 55% of male pupils (Sport Wales School Sport Survey, 2018). Nevertheless, world-wide participation in women's rugby appears to be surging. In 2021 there were an estimated 2.7 million registered female players, with a 28% increase in the number of players since 2017 (World Rugby, 2021). If rugby union participation for women is increasing, then it would appear that the sport could be a new attractive source of physical activity and exercise for women. Participation in rugby might act to help mitigate the development of chronic health conditions. As a consequence, the current study investigated the motives that women players have for participation in rugby to gain an understanding of the reasons why participation is increasing.

The Present Study

The study reported here is about women's motivation for participating in rugby union, a part of a larger investigation

¹There has been little statistical data on Canadian sport participation since 2010.

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Table 1
Motivational state pair characteristics in reversal theory.

Serious (telic) <i>planning, goal, and outcome-oriented, arousal-avoiding</i>	Playful (paratelic) <i>spontaneous, process-oriented, arousal-seeking</i>
Conformist <i>compliant, agreeable, rule-abiding</i>	Negativistic <i>rebellious, unconventional, defiant</i>
Mastery <i>competitive, dominating</i>	Sympathy <i>relationship-oriented, desire for harmony</i>
Self-focused (autic) <i>egoistic, concern for self</i>	Other-focused (alloic) <i>altruistic, concern for others</i>

focused on sport policy and women's rugby union in Canada and Wales (Kim, 2021). The rationale for the present study was to gain an insight into participation motivation by examining the individual perceptions and experiences of Canadian and Welsh women rugby players and identifying any possible differences.

There has been no previous published research in psychology journals on participation motivation among Welsh women rugby players, but a recent interview study explored Canadian women rugby players' participation motivation (Kerr, 2021). The present study was both a replication and extension of that study using both a larger player sample of Canadian and Welsh players and an alternative data collection methodology utilizing an online survey.

Kerr's (2021) study examined the nature of participation motivation among 10 elite Canadian women rugby union players using open-ended, semi-structured interviews. Reasons for participating in rugby, which took the form of motivational themes and sub-themes identified from the thematic data analysis, were: *Getting started with rugby; Physical aspects (physicality and aggression; physical challenge); Achievement and success (learning a new sport; sport suitable for my body type); and On- and off-field player interaction (teammates/team environment; friendship and rugby community; being non-conformist)*. Players' rugby experiences were found to be generally positive and players' motivation was found to be multifaceted, with each player providing several motives for participation. Kerr's (2021) findings are generally in accord with the findings of previous studies based mostly in other academic disciplines and/or using other nationalities (e.g., Chase, 2006 – US; Chu et al., 2003 – New Zealand; Fields & Comstock, 2008 – US; Gill, 2007 – UK).

The psychological approach used to interpret the findings of Kerr's (2021) study was reversal theory (Apter, 1982, 2001, 2018). The theory's comprehensive approach for explaining motivation in sport (e.g., Kerr, 1997, 1999) was thought to be the most appropriate for explaining the range of motives associated with the experience of women rugby players in the original Kerr (2021) study. Reversal theory was chosen over other theories, such as Achievement Goal

theory (Dweck, 1986; Nicholls, 1984), or Self-determination theory (Deci & Ryan, 1985, 2000) because to a large extent reversal theory incorporates these approaches within its conceptual structure.

Reversal theory proposes eight basic motives related to four pairs of opposing mental or motivational states. These motivational states are concerned with the way in which people interpret their own motives at a particular time. Opposing states can exist in combinations, but each state has its own characteristics. As shown in Table 1, people tend to be serious, goal-oriented and arousal avoidant in the *serious (telic) state*; spontaneous, playful and arousal seeking in the *playful (paratelic) state*; compliant and agreeable in the *conformist state*; rebellious, unconventional and defiant in the *negativistic state*; competitive and dominating in the *mastery state*; cooperative with a desire for harmony and unity in the *sympathy state*; egoistic, concerned with self in the *self-focused (autic) state*; altruistic, concerned with others in the *other-focused (alloic) state*. The somatic states (i.e., serious-playful, negativistic-conformist) reflect people's experience of bodily arousal and the transactional states (i.e., mastery-sympathy, self-focused-other-focused) with the perceived outcome (gain or loss) of transactions with other people or objects. Changes in people's motivation and emotional experience are caused by reversals between paired motivational states as a result of *environmental stimuli, frustration, or satiation* (Apter, 1982, 2001, 2018). The usefulness of reversal theory's concept of motivational states has been established in published sport-based research (e.g., Hudson & Day, 2012; Hudson & Walker, 2002; Kerr & Males, 2010; Kuroda et al., 2015; Males et al., 2006).

Method

Participants

The opportunistic sample was comprised of 24 volunteer senior-level, current, women rugby union players from Canada (15; age range 18-29) and Wales (9; age range 18-37). Half the sample were elite Canadian and Welsh national team players and some sub-elite players playing professionally in the UK or France, and half were amateur players. The

Table 2

The ten questions from the questionnaire addressing aspects of women rugby players' participation motivation

Does the amount of coverage of women in this sport impact your motivation to play?
Has society's perception of women in sport ever impacted your willingness to play and why?
Have your friends and family ever had an impact on your participation in rugby? Explain.
Do you believe women's rugby is perceived in the same way as men's rugby? Please give details.
Has this perception influenced your willingness to participate?
Have stereotypes ever impacted your decision to participate in a sport? If so how?
Does success impact your willingness to participate in rugby?
Do you feel a sense of achievement when participating in rugby?
Please explain in depth your motivation to participate in women's rugby.
What other factors not covered here have ever limited your participation in rugby?

first participants (3 in Canada, 2 in Wales) were recruited from mutual connections in both Canada and Wales. Contact was made by email. Further participants were recruited using a snowball sampling technique (Noy, 2008).

Materials

Government restrictions imposed on gatherings because of the COVID-19 pandemic necessitated the use of an online questionnaire for data collection. A survey questionnaire was built on Qualtrics, a survey software platform (Qualtrics, 2021). It was decided to utilize the Qualtrics software platform because of its practical advantages (easy distribution and response capability among a widespread participant sample) when conducting research during the COVID-19 pandemic. Using this platform made it possible to separate participant information from data by automatic anonymization, thus maximizing participants' anonymity and ensuring confidentiality (Miola, 2008). There were ten open-ended questions in the section addressing participation motivation, shown in Table 2. The key participation motivation question from the questionnaire was: "Please explain in depth your motivation to participate in women's rugby", but others explored the role of success and achievement, friends and family, female stereotypes, and society's perception of women in sport generally, and specifically in rugby. Participants took 22 minutes on average to complete the online questionnaire.

Procedure

The research was conducted in accordance with ethical guidelines outlined by a UK university School of Sport and Health Sciences research ethics board and adhered to the Data Protection Act (1998). It ensured that participants were treated with respect and their rights protected during the research procedure.

Following the completion of their questionnaires, to start the snowball sampling procedure the first five participants were asked if they knew anyone else who might be interested in taking part in the study. Email inquiries were then

sent to nominated prospective participants, stating the purpose of the research along with a consent form. Upon return of the signed consent forms, these additional participants were invited to complete the online questionnaire. All participants were also informed about the confidentiality of any sensitive information and made aware of their right to not answer questions without detriment, or withdraw from the study at any time. Participants were informed of available support and contact information should the questionnaire cause them psychological distress. Reminder emails were sent a week before the closing date for data collection to those participants who had opened the questionnaire but had not completed it. Further emails were sent to participants post-questionnaire completion, and at the end of the data gathering period. On completion of the research project the findings were also sent to participants. No feedback responses were received.

Data Analysis

Although data was collected using a questionnaire, the open-ended nature of the questions encouraged participants to expand on their responses, providing rich qualitative data (Allen, 2017). Hence, an inductive-type thematic analysis was used to analyze the research data. This method was useful for examining the different perspectives of individuals, as well as identifying possible similarities and/or differences between individuals. Thematic analysis typically involves several stages where questionnaire response statements are first familiarized by repeated reading and then participant statements coded. This is followed by the development of different emerging themes as similarly coded statements are drawn together. These are then revised and appropriately named. The analysis process takes time and requires reflection by those doing the analysis. The process is complete when subthemes and themes have been considered and the major themes are finalized (Attride-Stirling, 2001; Braun & Clarke, 2006; Braun et al., 2019). In this case, data collected was initially separated into Canadian and Welsh groups. However, when these groups were compared, it be-

came apparent that the emerging themes were common to both Canadian and Welsh participants. Therefore, the groups were combined and considered as one data source.

The first author, who has an extensive knowledge of rugby union, analyzed and interpreted the participant questionnaire response data, including the development of the major themes and subthemes. This involved repeated reading of the data for familiarization. He then re-read the data and coded comparable participant statements using color highlighting. He repeated this process twice until he was satisfied that the coding was complete. Next, without referring back to the relevant questions, he allocated the color highlighted participant statements into broader categories from which subthemes and major themes started to emerge. These were then assigned tentative names. At this stage, an academic auxiliary familiar with the study became involved acting as a “devil’s advocate” or “critical friend” (Hassmén et al., 2016). After she became engaged with the data, she and the first author debated and discussed the proposed subthemes and major themes back and forth and worked out which labels would best describe the contents. A number of sub-themes with overlapping characteristics were then encompassed into the four finalized major themes. These were: *Intrinsic motivation; unique culture; acknowledgment of future generations, and barriers to participation*. These major themes subsumed a number of sub-themes with overlapping characteristics. *Empowerment, and sense of challenge* were subthemes included in the major theme *Intrinsic motivation*, and *counterculture, and stereotypes* were included under the major theme *barriers to participation*.

The second author, an experienced researcher with a good understanding of team contact sports, provided professional supervision and evaluation of the overall research process, including data analysis (Kim, 2021). The third author, experienced in qualitative research and also very familiar with rugby union, scrutinized the research procedures, re-examined the data analysis and, after careful consideration and reflection, subsequently concurred with the interpretation of response data (Smith & McGannon, 2017). These two researchers provided an additional level of review which helped to ensure trustworthiness of the data interpretations. The inclusion of example player statements in this manuscript also adds to the quality of the research and validity of the findings (Biddle et al., 2001; Cresswell, 2007).

Validity in any qualitative data research can be established using four major criteria (Whitemore et al., 2001). These criteria are: *credibility, authenticity, criticality, and integrity*. Credibility refers to the accuracy of the data analysis and interpretation of players’ statements and was accomplished in the current data analysis by researchers very familiar with both rugby and players’ colloquial language, as well as knowledgeable in qualitative research methods, applying themselves with diligence and sensitivity to data analysis.

Authenticity refers to the conduct and evaluation of research as being genuine, worthwhile (and making a contribution to sport psychology). This was achieved here by prolonged engagement with the data, the inclusion of thick description of player statements in the manuscript, triangulation between three researchers working independently, and email communication with the participants as a form of member check. Criticality refers to subjecting the whole research process to critical appraisal/audit and this was carried out in this instance by the second and third authors, independently. Integrity involves the data analysts being self-critical. In this case, this formed part of the careful consideration and reflection that took place in the data analysis process (Sparkes & Smith, 2014). For example, it was important to be especially vigilant for any possible bias the analysts may have had, perhaps as a result of previous experience, which could have influenced data analysis.

Results and Discussion

In this section, major themes and subthemes representing the varied forms of participation motivation are described, supported by example statements from Canadian and Welsh players (randomly assigned numbers, e.g., C1 or W4). Since the themes and sub-themes identified from the data analysis were common across both Canadian and Welsh female rugby players, it could be inferred that motives for women’s participation in rugby union are shared regardless of nationality. Based on only two nationalities, further confirmation of this suggestion is needed. Lastly, study findings are discussed from the viewpoint of reversal theory. Participation motivation was an individual and variable experience for each player. Consequently, not all the motives for participation were reported by all the players. However, as reported below, there was enough common ground among the player responses to provide the basis for the identification of sub-themes and major themes.

Intrinsic Motivation (major theme)

All 24 participants recorded participation motives that could be classified under the *Intrinsic motivation* theme. Some were related to health goals e.g., “*a more productive and healthier person when I play rugby*” (C13); “*... the opportunity to improve (my) own skills, techniques and the health benefits...*” (W2). Other motives included feelings of achievement, such as “*enjoyment and fulfillment*” (C1); a tool which “*allows me to express myself*” (W4); or something which “*gives my life a sense of meaning*” (W8). One player explained that her ability to develop and maintain strong values and commitment shared with other players brought her a strong sense of belonging (C6).

Sense of empowerment (subtheme)

The subtheme *sense of empowerment* is included in the major theme of *Intrinsic motivation*. It was clear from questionnaire response statements that some players experienced a strong sense of empowerment through playing rugby: e.g., “[Rugby] makes me feel empowered, confident and in control of my life” (W5); “[I] feel empowered that whatever men can do, so can women” (W9); “I am motivated to show the strength we have as women” (C11); “People . . . see rugby as an empowering sport. They see it as a sport that pushes limits in a good way. It shows the strength (physical, mental, skill, etc.) of individuals of all sizes” (C13).

Challenge (subtheme)

Participants also identified the challenge associated with rugby as a strong motivator: e.g., “The physicality, relentlessness and knowledge required to be successful in the sport is what always keep me pushing to be better. It’s such a challenge” (C5); “I feel that I’m challenging my body which is rewarding. I feel strong, which is also rewarding” (C7). For one Welsh participant, the physical challenge was beneficial to her mental health: “I’m very much someone who relishes the physical challenge that rugby gives me. I love pushing my body to be able to play the game and it has also been a saviour for my mental health” (W5).

As these example quotes show, participants were often motivated by the physicality of the sport.

Unique Culture (major theme)

Half the participants mentioned the unique nature of the women’s rugby culture as a strong reason for participation: e.g., “Culture and team atmosphere is one of my main motivations and I value this very much” (C3); “. . . rugby has by far the most accepting team culture” (C12); “The team spirit within rugby is second to none and the main reason I encourage so many women to play” (W5).

One participant described the unique culture and the feeling of camaraderie in more depth:

It was totally different to any other team sport that I had previously been involved in! There was a real sense of closeness and togetherness despite initially being strangers. . . . The mental cohesion and sisterhood (from my experience) is my biggest motivation. (W1)

Participants perceived the women’s rugby culture to be unique when compared to other sports. Consequently, being accepted within this culture was important to them and also acted as a strong motivator.

Barriers to Participation (major theme)

There were two related subthemes included under *Barriers to participation* that appeared to be opposite sides of the same coin. One was a negative influence, and the other a positive influence on motivation.

Stereotypes (subtheme). Several participants were concerned that the stereotypes associated with women’s rugby were a major barrier to young girls becoming interested in playing the game. These two example quotes aptly describe the problem:

People give the perception that people who take part in sports can’t be feminine or must be gay, so immediately you are alienating certain parts of the female population that don’t want to be assumed to be butch or gay. It adds additional barriers to women’s sports, when there are already plenty! (W5)

Women’s rugby is constantly compared to men’s, and therefore we’ll never be respected! . . . However, because of ignorance and uneducated comments, individuals who have never had direct understanding and involvement with the women’s game easily pass judgment which can be damaging. (C5)

While some participants noted that the negative connotations associated with women’s rugby, other players below stated that they served to reinforce their desire to play,

Counter culture (subtheme)

A recurring reason for participating was players’ willingness to go against society’s stereotypical attitude to women playing rugby described above: e.g., “I often do not tell people I play rugby right off the bat as it carries a lot of negative connotations. They have never stopped me from playing” (W8); “My character doesn’t let what other people think stop me from doing something I enjoy” (W1); “. . . we can change the perception of the sport by playing it. If anything, it motivates me to play” (C4).

Finally, another Canadian participant linked her motivation to participate in rugby with her desire to prove others wrong: “I think knowing that rugby holds stereotypes like being tough, rough, powerful, strong etc. . . . It brings me a higher sense of achievement knowing that I can ‘prove’ others wrong regardless of my size and height” (C6). For many players, the “fringe culture” of women’s rugby is what drew them to the sport in the first place and breaking barriers was seen as a driving force in their participation.

Difficulties in gaining access to playing rugby and a lack of representation in the media, especially the difference between male and female rugby television coverage, were perceived by a few players as barriers to participation for young

girls. Player statements (C10 & W5) in the next section sum up the problem.

Acknowledgement of Future Generations (major theme)

The desire to give something back and to help continue and grow the sport was observed among some Canadian and Welsh participants and is typified by the following two statements:

The women's rugby program at my club is slowly dying, as less girls and women are joining, so now I'm motivated as a coach just as much as a player to help grow the sport in our community, and give the young girls a great experience, like I received, to help motivate them to continue playing! (C10)

As previously stated, since having a severe lack of opportunities as a young girl wanting to play, providing opportunities for young girls is a huge motivation of mine. I'm not worried about how far I go personally within the game but if my participation and work within the community can create a pathway for girls that is the same for boys, then I will be happy... It makes you want to help create more opportunities for future generations. (W5)

While the Canadian player wanted to ensure that young players received the great experience that she had encountered, the Welsh player was determined to correct the lack of possibilities that she had experienced, by working to provide equal opportunities for young girls to progress in rugby in the same way as boys.

In comparing the findings of the current study with (Kerr's 2021) results, the themes and subthemes identified in the current study were categorized differently, but basically aligned with the original study results. The motivation to obtain feelings of achievement was a powerful feature of women's participation in rugby in the current study. Whether to improve personal skills and techniques, provide feelings of enjoyment and fun, for health benefits, or gaining a sense of meaning in life and self-fulfillment, rugby provided women players with the opportunity to achieve their goals. Achieving goals and being successful was also an important aspect of motivation in the original study where these goals were achieved by some players by learning a new sport and developing the skills and knowledge that were required to play successfully.

Kerr's original study also identified that both the physicality of the game and the physical challenge required to play and train for rugby was attractive to players and strongly influenced their participation motivation. These findings were confirmed in the current study. In addition, Kerr found that by becoming part of the unique culture of women's rugby,

players were going against society's stereotypical attitudes to women playing rugby. In the current study, this was voiced as a the desire to be part of a fringe or counter culture and, as in the original study, this was reflected in players' willingness to be non-conformist.

There were two findings from the current study which came through more strongly than in Kerr's original study. The first concerned the strong sense of empowerment that some players experienced through playing rugby. The second was the desire to give something back and help to grow the sport that was observed among some Canadian and Welsh participants. Also, the enjoyment and self-fulfillment that some players gained from finding a sport that suited their body type featured in the original study, but did not feature as strongly here.

Interpreting the Findings Through Reversal Theory

The subthemes and major themes identified in the present study can be encompassed within reversal theory's eight somatic and transactional motivational states (Apter, 2001; Kerr, 1999). For example, players strove to improve their health, skills and techniques, pushing their bodies to meet the challenges presented by playing rugby (major theme *Intrinsic motivation*). Having the motivation to successfully meet these challenges rewarded players with the feeling that they had achieved their goals and, as a result, perceived themselves as strong, competitive and empowered. Planned behavior, goal achievement and being strong and competitive are reflected in many of the intrinsic motives reported in the players' statements under this theme and are associated with the serious, self-focused, and mastery motivational states from reversal theory in combination.

The study findings also indicated that there is a special quality attached to women's rugby which provides players with a sense of acceptance, friendship and togetherness that act as a powerful motive for participation (major theme *Unique culture*). In reversal theory terms, these transactional interactions are associated with the combination of the other-focused and sympathy motivational states. When these states are operative, players experience pleasant feelings from their social relationships with others and from being an accepted member of a unique group (Apter, 2001; Kerr, 2021).

Traditional, conventional, or stereotypical views of the nature of women's rugby still exist to some extent (major theme *Barriers to participation*; subtheme *stereotypes*). In reversal theory, having conventional views about the role of women playing rugby would be characteristic of telic-conformist motivation where the emphasis is on maintaining societal expectations and "established rules of behavior" for women. Some players perceived that "pushing back" against the perception that rugby is not a sport for women was a strong motivator to play the game (subtheme *counter culture*). Thus, some players considered themselves to be

breaking barriers which could change what they considered to be the status quo. In reversal theory, rebelling against an apparent injustice or unfairness is characteristic of negativistic motivation, where pleasurable satisfaction comes from a player's perception that she is defying convention (Klabbers et al., 2009; McDermott, 2001).

The desire to make things easier for future young female players and/or wanting to contribute to their development by coaching was also an element in some players' participation motivation (major theme *Acknowledgement of future generations*). According to reversal theory, this would be considered to be predominately other-oriented sympathy-based motivation, where a player's focus is on the needs of others. Other examples of this type of motivation in rugby could likely be found among the doctors who attend to the needs of players when injured during play and the physiotherapists who are involved with injured players during injury rehabilitation.

The concepts of reversal theory allow useful explanations of different types of participation motivation and an understanding of the underlying psychological mechanisms (e.g., Lloyd & Apter, 2006). The subthemes and themes identified above can be linked to certain somatic and transactional motivational states and combinations postulated in the theory. These motivational state combinations provide women players with opportunities to satisfy their motivational needs through different aspects of playing rugby. For example, having the the other-focused and sympathy motivational states operative when socially interacting with other female rugby players provides a contrast with the self-focused-mastery state combination motives associated with mastering skills and goal achievement during training for and playing matches. This allows women players to engage in cooperative, altruistic and empathetic behavior rather than competitive, egoistic and dominating behavior. It is important for players to reverse frequently and spend time in different motivational states and state combinations as this will enhance the pleasure and satisfaction that comes from rugby as well as benefit overall psychological health (Svebak & Apter, 1977).

Finally, it is worth pointing out that both studies found that women players experienced more than one motivating influence for engaging in rugby. From the current study, an example statement shows how a player's core set of values, which included four different motives (*health, challenge, fun and acceptance*), provided the main driving force behind her participation in rugby:

My motivation comes from some of my core values. Health, challenge, fun and acceptance. I gravitate towards activities and events that challenge me and with rugby I'm always learning something new and there's certainly always room for improvement. ...Being active and

healthy is important to me as it allows me to live a more balanced life. I also thrive off being in a fun and accepting environment. For me, rugby drills and competitiveness and team spirit are always fun and accepting. (C5)

Taken along with the evidence provided above, this quotation epitomizes how multiple aspects of participation motivation contribute to involvement in women's rugby. Replicating the study on women's rugby participation motivation by Kerr (2021), the current findings corroborated the finding that participation motivation is multifaceted with players generally providing several different motives for participation. In addition, the current results extended Kerr's (2021) previous reversal theory study-based research findings by identifying two novel results. These were: providing some players with a sense of empowerment and the desire to provide conducive and equal opportunities for future generations of young female players. Lastly, the study findings fit well within the motivational framework of reversal theory and in a small way serve to affirm the theory's usefulness in explaining human behavior in meaningful terms.

Limitations, Applications and Future Directions

With a degree of caution, the modest findings of the current study contribute to the relatively detailed picture being built up of what it is that drives women to be a part of this fast-growing women's sport of rugby. Conducting research in the context of the COVID-19 pandemic posed many challenges and using an on-line questionnaire in the current study provided several practical advantages. These included distribution across a large geographical area covering a wide pool of participants and the cost-effective nature of online data collection and storage. However, there were also some limitations associated with the use of an online questionnaire. These were the time required to build the tool and the necessity of obtaining an adequate number of responses. Other study limitations concerned the fact that the findings were limited to women's rugby union and specifically to Canadian and Welsh players. Also, by using a snowball sampling method, few participants were contacted past a first or second seed contact. This led to the make up of the participant sample being somewhat homogeneous and may have introduced some bias to the research, given that participants were largely from within the same women's rugby circles. Therefore, the results of the current research may not be truly representative of the wider population of women rugby players in Canada and Wales.

Nonetheless, one possible practical application arising from the study findings worth considering, concerns the way women's rugby is presented to players by teachers and coaches. Given that there are a variety of motives for women's participation that have been identified here, the

rugby playing environment (both on and off-field) needs to provide for the fact that different motives are likely to be attractive to different players. It should be part of the role of teachers and coaches to help create an environment that can accommodate different players' motivational needs. A second possible application relates to promotional campaigns for attracting new girl and women players. To be effective, any such campaigns need to endorse the idea that the motivational rewards associated with playing rugby are multi-dimensional and therefore likely to be attractive to different individuals for different reasons. Advertising campaigns that publicize only one characteristic of the game (e.g., a tough physical contact sport) are likely to miss out on new potential players who would be most attracted by other aspects of participation motivation.

Further research with the goal of including additional female participants from the broader Canadian and Welsh playing population may be warranted, as would further expansion of the research to examine participation motivation in elite and sub-elite women rugby players from other countries. Additionally, studying participation motivation in male players could provide useful gender comparison.

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