1 Mental Health Literacy Intervention to Reduce Stigma toward Mental Health
2 Symptoms and Disorders in Women Rugby Players: A Feasibility Study
Abstract

This feasibility study aimed to evaluate the effectiveness of an educational intervention on stigma toward mental health symptoms and disorders, mental health literacy, and help-seeking intentions among UK semi-elite women rugby players. Seven semi-elite women rugby players participated. An A-B-A single-case experimental research design was used to assess stigma toward mental health symptoms and disorders, mental health literacy, and help-seeking intentions at baseline, intervention, and follow-up phases. The intervention was successful in enhancing the player’s mental health literacy and reducing stigmatising attitudes towards seeking professional psychological help. Acknowledging the study’s small sample size, the findings revealed that there is a need for scaffolding to support future developments, advancements and maintenance of mental health support within women’s rugby. Practical implications of future findings from a larger scale study may lead to policy reformation across the game to inform and improve systemic mental health support for women rugby players.

Key words: help-seeking, mental health, well-being, female athletes, contact sports, gender
Introduction

An increasing number of scholars have explored the prevalence and treatment of mental health symptoms and disorders in athletes (Rice et al., 2016; Reardon et al., 2019), concluding that athletes are subjected to both career-specific and general factors that may lead to mental health symptoms and disorders (Reardon et al., 2019). A meta-analysis, which selected data symptoms of distress, sleep disturbance, anxiety/depression and alcohol misuse, identified a prevalence of anxiety and depression symptoms in elite athletes as 34% (Gouttebarge et al., 2019), which is more than double that identified in the general population (15.7%; McManus et al., 2016). If left untreated, mental health symptoms and disorders can lead to physical, psychological, social, functional and occupational difficulties (Zivin et al., 2015). Consequently, seeking professional psychological help is essential for the prevention, early detection and treatment of (and recovery from) mental health symptoms and disorders (Gulliver et al., 2012a).

Despite the aforementioned negative outcomes, mental health help-seeking is low among athletic populations (Wahto et al., 2016). There are myriad factors which may contribute to athletes’ lack of engagement in help-seeking. Athletes may be fearful of their teammates’ and coaches’ negative reactions upon seeking mental health help, and appearing “weak” (Gulliver et al., 2012b; Lopez & Levy, 2013). There may be concerns about losing their place in a starting team or the removal of their contract altogether (Bauman, 2016). Athletes may even mask their insecurities due to the constant pressures of performing to a high standard (Breslin et al., 2019). Public and self-stigma have also been reported to act as barriers to help-seeking among athletes (Bauman et al., 2016; Castaldelli-Maia et al., 2019). On top of these factors, other barriers include low levels of mental health literacy (MHL; Gulliver at al., 2012b), denial of any mental health symptom difficulties (Uphill et al., 2016),...
a lack of accessible mental health services (Lopez & Levy, 2013), and a lack of willingness to express emotions (Gulliver et al., 2012b).

A recent systematic review by Oftadeh-Moghadam and Gorczynski (2022) revealed that the prevalence of mental health symptoms in rugby players ranged from 6% for depression to 68.8% for alcohol use/misuse, with one study comprising of women rugby players. Cross-sectional research has shown that 60% of semi-elite women rugby players experience high levels of distress in their careers (Oftadeh-Moghadam & Gorczynski, 2021). Given high levels of distress amongst women rugby players, mental health promotion strategies may be required to aid players in seeking guidance from healthcare professionals and better understand their mental health. One strategy to help raise awareness of mental health is in the form MHL training, which may enable rugby players to have a better understanding of mental health, increase their awareness of symptoms of mental disorders and address players’ intentions to seek professional help (Oftadeh-Moghadam & Gorczynski, 2022).

MHL refers to an individual’s knowledge and beliefs about mental health and mental health symptoms and disorders and may influence one’s intentions to seek support (Jorm et al., 1997). Research has shown that improvements in MHL may be associated with improved help-seeking intentions amongst women rugby players (Oftadeh-Moghadam & Gorczynski, 2021). Kola-Palmer et al. (2020) also noted that help-seeking was associated with better MHL and higher perceived psychological stress in professional male rugby players. In a series of interviews with women rugby players, Oftadeh-Moghadam et al. (2022) explained that players noted the importance of raising awareness about mental health symptoms and disorders, treatment and self-awareness through educational routes. In other words, the rugby players noted the importance of increasing players’ MHL. MHL interventions have proven successful within other sporting settings. For example, Vella et al.’s (2021) study with male
adolescents who participated in community-based sports clubs revealed that their MHL focused intervention showed significant benefits in depression literacy, anxiety literacy, intentions to seek help from formal sources, confidence to seek mental health information, resilience, and well-being, as well as a decrease in stigmatising attitudes towards mental health symptoms and disorders. Similarly, Liddle et al.’s (2021) MHL intervention (Help Out a Mate) with male adolescents from a community football club reported significant increases in knowledge of signs and symptoms of mental illness, intentions to provide help to a friend who may be experiencing a mental health problem, and attitudes that promote problem recognition and help-seeking. However, Ojio et al.’s (2021) cross-sectional study with Japanese male rugby players revealed that although the players needed mental health support, educational approaches encouraging players to seek support did not necessarily increase help-seeking. Nonetheless, such evidence is currently limited, if not absent, with women athletes, particularly women rugby players and thus warrants investigation.

Rugby is fundamentally considered as a masculine sport. It portrays the masculine virtues of physicality, competitiveness and ingenuity (Tovia, 2014). Women’s involvement in rugby contradicts these values as the concept of femininity comprises cooperativeness, emotional responses, gentleness, and passivity, all qualities that are not considered in rugby (Crawley et al., 2008). To date, rugby is considered as a patriarchal, male-dominated sport that represents the values and elements of male culture (Tovia, 2014), and depicts women rugby players as non-conformists in the eyes of society. Various aspects of rugby (e.g., contact sport) and the culture of rugby encourage the violation of traditional feminine gender roles (Fallon & Jome, 2007), which may place women rugby players in a predicament. Women rugby players are not only exposed to the abovementioned risks of participating in rugby (e.g., high rates of injury, concussion), however, the added pressures of societal expectations, and fighting for their existence in a male-dominated sport is a further gender-
specific burden, which may lead to feelings of isolation and distress. With that said, further contemporary research is needed to provide a more current understanding of women rugby players’ experiences in a male-dominated sport.

The lack of understanding about women athletes is likely to impact athletes’ responses to mental health symptoms and disorders, their intentions to engage in help-seeking, as well as, researchers’ understanding of gender-specific barriers in sports (Currie et al., 2021). Despite ongoing evidence suggesting the lack of MHL in athletic populations, and the benefits of MHL focused interventions (Gulliver et al., 2012b; Gorczynski et al., 2019), the implementation of MHL interventions in sports, specifically women’s rugby, remains non-existent. Currently, most interventions in sports, particularly in rugby, are designed and implemented with cis male athletes. The dominance of male athletes in research has created an inequitable approach to intervention design and one that has led to a lack of information and data pertaining to women athletes. Given this lack of evidence, the aim of this study was to evaluate the effectiveness of an educational intervention on stigma toward mental health symptoms and disorders, MHL, and help-seeking intentions among semi-elite women rugby players.

**Method**

**Intervention Design**

Based on the work of Chow et al. (2020), an A-B-A single case experimental research design was used to assess the following factors at baseline, intervention, and follow-up: mental health literacy; attitudes toward seeking professional psychological help, social stigma for receiving psychological help; and self-stigma of seeking help. Due to the uncertainties of the COVID-19 pandemic and associated restrictions, this intervention was conducted on an online meeting platform (Zoom) and implemented via four 60-minute weekly individual sessions with each participant. The sessions mirrored the same topics as Chow et al.’s (2020)
intervention, where session one focused on MHL, session two focused on the concept of empathy, session three focused on counter stereotyping, and session four focused on contact with another player’s experience with mental health symptoms and disorders. The tasks outlined in Chow et al.’s (2020) sessions were also used within this intervention; however, they were tailored to suit the context of rugby. Oftadeh-Moghadam and Gorczynski’s (2021) work with semi-elite women rugby players was also used to help guide the intervention. Ultimately, the intervention delivered information on mental health symptoms and disorders, challenged beliefs and attitudes about mental health symptoms and disorders and aimed to remove barriers to help-seeking (Gorczynski et al., 2021). This intervention was educational in nature, not therapeutic.

Study Design

The A-B-A single case experimental research design method was chosen to examine the feasibility and acceptability of the MHL intervention in this population before proceeding to conduct a larger-scale study. By utilising a small sample size, single case experimental designs enable researchers to examine the efficacy, feasibility and acceptability of a particular intervention and its components in a rigorous and resource-efficient manner before employing a larger randomised controlled design (Gorczynski, 2013). Feasibility studies are conducted with flexible methods and help assess the research and the intervention process (Arain et al., 2010). Essentially, the main objectives of a feasibility study, such as the current study, focus on the (a) evaluation of recruitment capability and resulting sample characteristics, (b) evaluation and refinement of data collection procedures and outcome measures, (c) evaluation of the acceptability and suitability of the intervention and study procedures, (d) evaluation of the resources and ability to manage and implement the study and intervention, and (e) evaluation of participant responses to the intervention through primary measures (Orsmond & Cohn, 2015). Following a feasibility study, researchers are
then able to identify strategies to address any noted challenges, address the specific needs of participants, and revise components of the intervention prior to designing a larger scale study to formally evaluate intervention outcomes (Orsmond & Cohn, 2015).

**Pedagogical Approach**

Due to the online nature of the intervention, the creation of engaging material was essential. In line with e-learning pedagogy, the intervention was designed and driven with purpose and clear achievable objectives (Clark & Mayer, 2016). With this in mind, Violante and Vezzetti (2015) suggested that material should be visually stimulating, and designed to support the learners’ purpose and objectives. Additionally, the content of e-learning platforms was designed with convenience in mind (e.g., accessed across multiple devices). This allowed participants to download and engage with learning and the materials when it was convenient, and feel autonomous and confident with their learning process. Consequently, the aforementioned points were factored in during the proposal of the intervention. Moreover, informed by constructivist pedagogy (von Glasersfeld, 1990), which depicts learning as creating knowledge rather than receiving it, and facilitating learning through discourse (Holt-Reynolds, 2000), the primary researcher centred learning around educational discussions with the participants. In this sense, participants became “active learners” and were invited to discuss topics/questions and engage in informative discourse. This approach provided autonomy to the learner and helped increase their confidence in their knowledge base and understanding of taught topics (Holt-Reynolds, 2000).

**Theoretical Underpinning of Content Design**

Alongside a pedagogical approach which instilled confidence, behaviour change was critical to this intervention. Essentially, the intervention aimed to improve the participant’s MHL and their attitudes towards seeking/receiving professional psychological help.

Consequently, the intervention was planned with the four-pillars of Bandura’s (1977) self-
efficacy theory in mind. Self-efficacy theory refers to an individual’s belief in their own
capacity to execute a behaviour necessary to produce a specific outcome (Bandura, 1977).
This theory conceptualises four experiences critical to the development of an individual’s
self-efficacy: performance accomplishments (e.g., past performances in a specific
activity/previous engagement in a particular behaviour), vicarious experiences (e.g.,
visualisation of self, observation of others, specifically those who are demographically
similar to one’s self), forms of social persuasion (e.g., self-talk, feedback, persuasion from
others), and physiological and emotional states (e.g., aspects of cognitive and somatic
anxiety, feeling anxious or relaxed in a given situation, rapid heart rate, sweating; Schunk,
2012).

In addition to concentrating on self-efficacy, it was important to address participants’
attitudes towards seeking and receiving professional psychological help. According to
the theory of reasoned action (Ajzen & Fishbein, 1977) a person’s behaviour is determined
by their intention to perform the behaviour and this intention is, in turn, a function of their
attitude toward the behaviour and subjective norms. The best predictor of behaviour is
intention or instrumentality (the belief that behaviour will lead to the intended outcome).
Instrumentality is determined by three factors: 1) their attitude toward the specific behaviour,
2) their subjective norms, and 3) their perceived behavioural control (Silverman et al., 2016).
The more favourable the attitude and the subjective norms, and the greater the perceived
control an individual possesses, the stronger the person’s intention to perform a given
behaviour (e.g., in this case, seeking/receiving professional psychological help; Breslin et al.,
2019). Each intervention session was designed with these two theories in mind. The
description of each intervention session can be accessed by contacting the corresponding
author.
Participants

Convenience sampling was used to recruit participants for this study. The primary researcher emailed 15 women, semi-elite rugby players, through personal contacts. Out of the 15 rugby players contacted, 14 replied, and seven agreed to participate in the study. The remaining seven were unable to attend the intervention sessions due to other commitments.

All participants were able to withdraw from the intervention at any given point during the 10 weeks. Missing a session would have resulted in rescheduling whenever it suited the participant.

Individuals had to meet the following criteria to participate in the study: (i) identity as a woman, (ii) 18 years or older, and (iii) compete at a semi-elite level for a UK based and affiliated rugby club (i.e., club’s first team or at a higher level at the premiership level). The term semi-elite was derived from Swann et al. (2015, p.11) whereby “semi-elite athletes are those whose highest level of participation is below the top standard possible in their sport (e.g., in talent-development programmes, competing at second-tier standard or below, etc.)”.

All participants provided their consent to partake in the study. Ethical approval was obtained from the lead author’s institutional Science and Health Faculty Ethics Committee.

In total, seven semi-elite women rugby players participated in the study with a mean age of 26 years ($SD = 5.39$ years, Range = 18 – 33 years) from various UK based affiliated rugby clubs. Four participants self-identified as bisexual, whilst one identified as a gay woman/lesbian and the remaining two participants identified as heterosexual/straight. In terms of ethnicity, three participants were from Mixed/Multiple ethnic groups, while another three participants were White, and one participant was Asian/Asian British. All participants were educated to an A-level/High school level with three participants graduating with an undergraduate degree, and two had obtained Master’s degrees. All participants had competed
in semi-elite rugby for two years or more. Regarding previous medical diagnosis of a mental disorder, five participants indicated no medical diagnosis of a mental disorder, while two participants indicated a previous medical diagnosis of a mental disorder. Pseudonyms were created for all participants to protect their identities. Participant demographic information is presented in Table 1.

Table 1
Participant Demographic Information

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Sexual orientation</th>
<th>Ethnicity</th>
<th>Level of education</th>
<th>Years competing in semi-elite rugby</th>
<th>Previous medical diagnosis of a mental disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saffi</td>
<td>26</td>
<td>Bisexual</td>
<td>White (English)</td>
<td>Masters</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>Rachel</td>
<td>33</td>
<td>Heterosexual/Straight</td>
<td>Asian/Asian British (Indian)</td>
<td>Masters</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>Marjan</td>
<td>32</td>
<td>Bisexual</td>
<td>White (English)</td>
<td>Undergraduate</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>Emily</td>
<td>26</td>
<td>Bisexual</td>
<td>Mixed/Multiple ethnic group (White and Asian)</td>
<td>Undergraduate</td>
<td>6</td>
<td>No</td>
</tr>
<tr>
<td>Sarah</td>
<td>26</td>
<td>Gay Woman/Lesbian</td>
<td>Mixed/Multiple ethnic group (White and Asian)</td>
<td>Undergraduate</td>
<td>4</td>
<td>No</td>
</tr>
<tr>
<td>Layla</td>
<td>18</td>
<td>Bisexual</td>
<td>White (English)</td>
<td>A level/ High School</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>Catherine</td>
<td>21</td>
<td>Heterosexual/Straight</td>
<td>Mixed/Multiple ethnic groups (White and Black Caribbean)</td>
<td>A level/ High School</td>
<td>4</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Measures

Participants had to complete the following scales one week before the start of the intervention (baseline phase), on the last intervention session (intervention phase) and four weeks after the end of the intervention (follow-up phase): Mental Health Literacy Scale (MHLS; O'Connor & Casey, 2015); The Attitudes Toward Seeking Professional Psychological Help Scale–Short Form (ATSPPH-SF; Fischer & Farina, 1995); Social Stigma for Receiving Psychological Help scale (SSRPH; Komiya et al., 2000); The Self-Stigma of Seeking Help Scale (SSOSH; Vogel et al., 2005).

MHLS

The MHLS is a 35-item MHL questionnaire (O'Connor & Casey, 2015), which assesses the following six aspects of MHL: disorder recognition, knowledge of help-seeking information, knowledge of risk factors and causes, understanding of self-treatment, awareness of professional treatments available, and attitudes toward promoting positive mental health or help-seeking behaviour. The lowest score on the MHLS is 35 and the highest is 160 with higher scores indicating greater MHL. The MHLS has good internal consistency and test-retest reliability (r = .80; O’Connor & Casey, 2015). The MHLS has been used in a similar context in Oftadeh-Moghadam and Gorczynski’s (2021) cross-sectional study with UK women rugby players. Cronbach’s alpha in the current sample was .871. Questions nine and 10 in the MHLS were modified to be specific to the UK context, where “Australia” was switched with “UK.”

ATSPPH-SF

The ATSPPH-SF relies on 10 items scored on a 4-point scale (from 0 ‘strongly disagree’ to 3 ‘strongly agree’) to examine attitudes toward seeking psychological help from a professional (e.g., ‘I would want to get psychological help if I were worried or upset for a long period of time’; Fischer & Farina, 1995). Based on the score of each item (reversed
scoring for negatively worded items), a total score ranges from 0 to 30. Higher scores indicate more positive attitudes to professional psychological help-seeking (Wilson et al., 2005). The ATSPPH-SF has been validated in English, and displays good psychometric properties (test–retest reliability: 0.80; Elhai et al., 2008; Fischer & Farina, 1995; Hackler et al., 2010). Cronbach’s alpha in the current sample was .822.

**SSRPH**

Items on this measure are rated on a 4-point Likert-type scale, ranging from 0 (strongly disagree) to 3 (strongly agree; Komiya et al., 2000). Total scores on the SSRPH range from 0 to 12, with higher scores representing a greater perception of public stigma (i.e., a belief that society perceives seeking help for mental health treatment as undesirable and individuals who seek help are socially unacceptable; Corrigan, 2004). Cronbach’s alpha in the current sample was .79.

**SSOSH**

Items on this measure are rated on a 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree; Vogel et al., 2005). Total scores on the SSOSH range from 10 to 50, with higher scores representing greater self-stigma (i.e., an individual believes he or she is socially undesirable for seeking mental health treatment; Corrigan, 2004). Vogel et al. (2005) found that SSOSH scores were related to measures of public stigma (from .46 to .48), attitudes toward seeking professional psychological help (from −.54 to −.63), and willingness to seek counselling (from −.34 to −.38), thus supporting the convergent validity of the measure. Cronbach’s alpha in the current sample was .84.

**Session Evaluation Questionnaires**

In line with Chow et al.’s study (2020), participants in this study were also asked to complete a brief evaluation questionnaire at the end of every session to examine intervention acceptability. The evaluation questionnaires comprised three questions assessing levels of
engagement, helpfulness and effectiveness of each session and their respective content. Each component was rated on a scale of 1 to 5, where 1 = very unengaging/unhelpful/ineffective and 5 = very engaging/helpful/effective. Mean scores were calculated for each question at the end of the intervention.

**Data Collection**

This study occurred over 10 weeks. The first week consisted of collecting demographic information (age, sexual orientation, ethnicity, level of education, years competing in semi-elite rugby and previous medical diagnosis of a mental disorder) and participants’ responses to all questionnaires. The second week consisted of collecting participants’ responses to all questionnaires again. Baseline measures therefore occurred over the first two weeks. The intervention started on the third week and continued through weeks four, five and six. In week six (the last intervention session), participants completed all questionnaires again. Week 10 marked the follow-up period and participants were required to complete all questionnaires. Table 2 illustrates the data collection and intervention schedule.

**Table 2**

*Data Collection and Intervention Schedule*

<table>
<thead>
<tr>
<th>Week</th>
<th>Baseline</th>
<th>Intervention</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic information</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MHLS</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
The primary researcher conducted all the necessary sessions and recruited all participants. The primary researcher was a doctorate student, with an MSc in Sport and Exercise Psychology, and had previous experience in conducting research as well as teaching within higher education (Associate Fellow of the Higher Education Academy).

Data Analysis

In line with the data analysis approach adopted by Gabana et al. (2022), repeated measures analysis of variance (ANOVA) was used to compare each measure’s mean scores across each study phase. An alpha level of 0.05 was used for statistical tests. A post hoc Bonferroni correction test was employed for results that yielded significance. An adjusted p-value of 0.017 was used to reduce the chance of making a Type I error (Howell, 1992). The magnitude of effect sizes was evaluated using the partial eta squared ($\eta_p^2$; small = 0.01; medium = 0.06; large = 0.14; Richardson, 2011).

Results

Feasibility

Attendance

Participants attended all designated intervention sessions and fulfilled each session’s objectives. The results for all measures are outlined below. Table 3 shows mean scores and standard deviations across each intervention phase.
Mental Health Literacy Scale (MHLS)

A repeated measures ANOVA determined that overall MHLS mean scores differed significantly across the three phases $F(2, 12) = 7.70, p = .007, \eta^2_p = .56$. Post hoc Bonferroni correction showed no further significant results between baseline to intervention ($p = .053$), baseline to follow-up ($p = .138$), and intervention to follow-up ($p = .702$). However, mean scores increased from baseline to intervention and baseline to follow-up but decreased from intervention to follow-up.

The Attitudes Toward Seeking Professional Psychological Help Scale–Short Form (ATSPPH-SF)

A repeated measures ANOVA showed that overall ATSPPH-SF mean scores differed significantly across the three phases $F(2, 12) = 14.66, p = .001, \eta^2_p = .71$. Post hoc Bonferroni correction highlighted a significant increase in scores from baseline to intervention ($p = .017$), and baseline to follow-up ($p = .010$), but a decrease in scores from intervention to follow-up.

Social Stigma for Receiving Psychological Help (SSRPH)

A repeated measures ANOVA showed that overall SSRPH mean scores differed significantly across the three phases $F(2, 12) = 11.92, p = .001, \eta^2_p = .67$. Post hoc Bonferroni correction determined that mean scores decreased significantly from baseline to intervention ($p = .013$). Mean scores also decreased from baseline to follow-up ($p = .069$), and intervention to follow-up ($p = .599$), however, these results were not significant.

The Self-Stigma of Seeking Help (SSOSH)

A repeated measures ANOVA determined that overall SSOSH mean scores differed across the three phases, as means scores decreased from baseline to intervention, and from baseline
to follow-up. Mean scores increased slightly from intervention to follow-up. However, these results were not significant $F(2, 12) = 3.66, p = .058, \eta^2_p = .38$.

**Acceptability**

**Session Evaluation Questionnaires**

All session evaluation questionnaires were completed by the participants. Overall, the mean score for the level of intervention engagement in each session was rated 5, whilst the helpfulness and effectiveness of the intervention sessions were rated as 4.5.

**Table 3**

Mean Scores Across each Intervention Phase

<table>
<thead>
<tr>
<th></th>
<th>Baseline (SD)</th>
<th>Intervention (SD)</th>
<th>Follow-up (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MHLS</td>
<td>127.90 (9.80)</td>
<td>140.00 (13.59)</td>
<td>137.71 (15.34)</td>
</tr>
<tr>
<td>ATSPPH-SF</td>
<td>15.14 (4.16)</td>
<td>20.00 (5.57)*</td>
<td>19.57 (5.41)*</td>
</tr>
<tr>
<td>SSRPH</td>
<td>11.93 (2.35)</td>
<td>9.86 (3.08)*</td>
<td>10.29 (3.54)</td>
</tr>
<tr>
<td>SSOSH</td>
<td>28.71 (6.85)</td>
<td>25.43 (4.83)</td>
<td>25.86 (4.45)</td>
</tr>
</tbody>
</table>

*Note. * Reached significance from baseline ($p < .017$)

**Discussion**

This feasibility study evaluated the impact of an educational intervention on stigma toward mental health symptoms and disorders, MHL, and help-seeking intentions among semi-elite women rugby players. This brief, educational intervention was successful in enhancing the player’s MHL and reducing stigmatising attitudes towards seeking professional psychological help. These findings are crucial as increasing MHL has been identified as a determinant of help-seeking, whilst mental health stigmatisation was noted as a barrier to help-seeking among women rugby players (Oftadeh-Moghadam et al., 2022). The results also
revealed that the intervention improved attitudes toward seeking and receiving professional psychological help. This is notable as help-seeking intentions have been acknowledged as one of the strongest predictors of help-seeking behaviour (Fishbein & Ajzen, 2010).

Improvements in participants’ attitudes and intentions may have resulted from an increase in their MHL (Taylor-Rodgers & Batterham, 2014). The results indicate that participants perceived the intervention to be helpful and effective thereby justifying the need for a larger, randomised controlled trial study to fully examine the intervention’s effectiveness with a broader sample size.

**MHL Interventions**

Research examining MHL interventions in athletic and sporting populations has found increases in knowledge of mental health symptoms and disorders, as well as improvements in attitudes and stigma towards those diagnosed with a mental disorder (Bapat et al., 2009; Kern et al., 2017, Gulliver et al., 2012b). Our findings are consistent with Chow et al.’s (2020) results who found that their four-week programme was successful in enhancing MHL, attitudes toward seeking help, and intentions to seek counselling among student-athletes. The findings are also similar to Gulliver et al.’s (2012b) findings with young elite athletes, where a brief MHL and de-stigmatisation intervention improved mental health knowledge and reduction in stigma towards mental health symptoms and disorders. Similarly, Liddle et al.’s (2021) brief MHL programme (Help Out a Mate) with male adolescent football club players showed improvements in MHL for depression and anxiety and intentions to provide help along with sustained improvements in attitudes that promote help-seeking and reduce stigma. They concluded that a brief intervention can be effective at improving MHL when delivered within a sporting context. These components were also implemented within this study’s intervention and were also effective as participants scored each session highly on the acceptability questionnaires (average score of 4.5 out of 5) on levels of engagement,
helpfulness and effectiveness. More recently, Vella et al.’s (2021) MHL and resilience intervention in organised sports revealed significant benefits on depression literacy, anxiety literacy, intentions to seek help from formal sources, confidence to seek mental health information, resilience, and well-being among a sample of adolescent male sport participants. Vella et al. (2021) highlighted the importance of centring such programs on equipping participants with the skills to recognise the warning signs of mental health symptoms and disorders.

**Mental Health Support and Help-Seeking**

Previous research has revealed that there is a lack of mental health support in the women’s game, as well as the scarcity of academic research examining women rugby player’s mental health in comparison to their male counterparts (Oftadeh-Moghadam et al., 2022; Oftadeh-Moghadam & Gorczynski, 2022). Addressing these factors was critical in this study as the intervention was designed and based on detailed knowledge of social issues related to women rugby players and systemic challenges within the sport setting (Gorczynski et al., 2021). Brijnath et al.’s (2016) meta-analysis revealed that MHL programs were most successful when there were structured, tailored to specific populations (e.g., rugby players), incorporated activities and experiential learning, and delivered evidence-based content. Our intervention incorporated all the aforementioned aspects and it is likely that the combination of the four empirically supported sessions impacted the overall results of the intervention.

Session one specifically targeted MHL and various components of MHL such as mental health symptom recognition, information on seeking mental health information, professional help resources and attitudes that promote recognition and appropriate help-seeking. The subsequent sessions also included factors that likely contributed to MHL and mental health stigmatisation. For example, experiencing empathy (via perspective taking) and then expressing empathy exposed participants to particular information regarding professional
mental health support and targeted attitudes that promoted recognition and appropriate help-seeking. Consequently, our findings suggest that brief, online interventions that are tailored, interactive and educational can be beneficial in improving MHL and attitudes and intentions toward seeking professional help. Moreover, our findings are in line with Kern et al.’s (2017) Athletes Connected project which addressed knowledge and attitudes about mental health among college student-athletes. Their findings indicated significant increases in knowledge and positive attitudes toward mental health and help-seeking, with the results suggesting that a brief in-person, educational intervention may be helpful in reducing stigma and promoting help-seeking behaviours.

**Participant Engagement and Awareness**

Alongside these findings, there was also a notable shift in participants’ confidence regarding professional help-seeking, and their intentions to engage in help-seeking behaviours. Throughout the course of the intervention, the participants became more aware of professional psychological support (e.g., sport psychologist) that did not necessarily include seeking guidance from a general practitioner (GP). Similar findings have been reported by Bird et al.’s (2020) student-athletes, who noted that self-efficacy to seek treatment is an important factor in engaging in help-seeking behaviours. There was also a shift in narrative when participants discussed their intentions of help-seeking, where help-seeking was viewed in a positive light. Throughout the course of the intervention, participants became more aware of the causes of mental health symptoms and disorders, the stigma associated with help-seeking and the importance of help-seeking, which in turn resulted in promoting positive attitudes towards help-seeking behaviours. This shift mirrors Breslin et al.’s (2019) results which demonstrated that knowledge and exposure to mental health symptoms and disorders, their treatments and discussion of prevalence rates can contribute to the reduction of mental health stigma in athletes. Based on the theory of reasoned action constructs (Ajzen &
Fishbein, 1977), future research should consider framing mental health using a positive perspective, and recruit socially relatable role models to encourage and champion mental health awareness messages (Breslin et al., 2019). These efforts may increase athlete willingness to participate and engage with a mental health awareness programme, and ultimately contribute to addressing common misconceptions and stereotypes about mental health symptoms and disorders (Clement et al., 2015).

Strengths and Limitations

This is the first feasibility study that has evaluated an educational intervention on stigma toward mental health symptoms and disorders, MHL, and help-seeking intentions among semi-elite women rugby players. The online component of the programme increased the potential of the intervention to reach women rugby players across the UK regardless of their geographic location, due to being easily accessible. This is notable as a lack of easily accessible mental health support was identified as a barrier to help-seeking among women rugby players (Oftadeh-Moghadam et al., 2022). The online intervention also eliminated travel expenses and was the most appropriate tool during and post the first wave of the COVID-19 pandemic. A strength of this feasibility study was the recruitment of participants from diverse ethnicities, mental health statuses, sexuality, age, generational diversity, educational diversity as well as diversity in their rugby careers. The intervention demonstrated a broad appeal across these demographics as well as intergenerationally as the intervention was feasible and accessible to a very diverse audience. Additionally, given the educational nature of this intervention, it was crucial that the language used to disseminate the information was easy to digest and acceptable across a range of diverse educational attainments. These are noteworthy points for future research to consider, given the importance of diversity and inclusion in any intervention.
However, this study also had several limitations that must be noted. Firstly, this study comprised a small sample of women rugby players, recruited via convenience sampling by the primary researcher, which may not be representative of all UK women rugby players at the semi-elite level. Future research should consider recruiting a larger, international sample of women rugby players with separate studies examining interventions at different levels of play (i.e., grassroots, semi-elite and elite). Particular consideration should be given to recruiting from various demographics such as age, sex, gender, sexuality, class, race, ethnicity, (dis)ability and geographic location to continue the theme of participant diversity. Additionally, a longer follow-up period may help determine the effectiveness of the intervention and detect behavioural patterns (e.g., an increase/decrease in stigmatising attitudes) over a longer time scale. Secondly, access to the intervention was dependent on electronic devices, which excluded participants who had limited or no such access to electronic devices. With more funding, such interventions may be able to provide electronic devices to the participants. Thirdly, participants’ experiences with the intervention are based on results from self-report measures. Future research should consider implementing qualitative questions to evaluate how helpful and useful the participant found the intervention, particularly in phases where a significant change did not occur. Fourthly, a limitation of any educational focused intervention is the resource intensity. Such interventions require lengthy hours of delivering content to a small cohort of participants and require at least one person to deliver the content. However, an online, ‘complete at your own pace’ learning platform would not require intensive delivery of content and would allow the participant to complete the content in their own time. This is a noteworthy point for future researchers who may be considering creating similar educational interventions. Future research should also consider a comparison between a practitioner-led intervention versus a self-guided intervention versus a combination of both approaches to explore which is more
effective and preferable. Finally, this feasibility study did not include a control group and did not measure mechanisms of change (e.g., self-efficacy). A control group would have made the results stronger as it would have helped determine which outcomes were due to the intervention (as opposed to other variables). Future studies should consider utilising a randomised controlled trial research design with a longer follow-up phase (e.g., 12 months) and mechanisms of behaviour change need to be measured and evaluated accordingly.

**Practical Implications**

Practical implications from this study could be useful for rugby players, coaches and professional governing bodies. This study suggests that practitioners delivering online training using the present design, could enhance athletes’ MHL and reduce stigmatising attitudes towards seeking professional psychological help. The findings may encourage women rugby players to challenge the lack of support systems available to them, as well as demand for equal access to healthcare professionals as their male counterparts. From a coach’s perspective, the findings may help them create a dialogue with their rugby players with the aim of confidently signposting them to mental health support systems. Professional rugby governing bodies should utilise the findings to inform their strategic planning towards mental health support provision within the women’s game. Governing bodies should explore the development of online synchronous and/or asynchronous training materials to improve their athletes’, coaches’ and wider staffs’ MHL. Additionally, they should pay specific attention to recruiting mental health professionals as experts within their boards of governance to provide tailored advice and support.

**Conclusion**

This feasibility study is the first of its kind to evaluate the impact of an online educational intervention on stigma toward mental health symptoms and disorders, MHL, and
help-seeking intentions among semi-elite women rugby players. The findings indicate that
using a brief, internet-based, evidence driven educational intervention supplemented with
interactive activities and open discussions about mental health among women rugby players
can be effective in enhancing players’ MHL and reducing stigmatising attitudes towards
seeking professional psychological help. Given the scarcity of MHL focused interventions in
women’s sports, it’s only logical and appropriate to start small and explore the fundamentals
and scalability of such interventions. Consequently, this feasibility study will support larger
scale experimental research that can provide generalisable results with a larger sample size.

References


Arain, M., Campbell, M. J., Cooper, C. L., & Lancaster, G. A. (2010). What is a pilot or
feasibility study? A review of current practice and editorial policy. *BMC Medical
Research Methodology, 10*(1), 1-7.


learning of mathematics, National Council of Teachers of Mathematics, Reston, VA (pp. 229-238). Springer.


Hensen, B., Mackworth-Young, C. R. S., Simwinga, M., Abdelmagid, N., Banda, J.,
for public health research in a COVID-19 era: ethical implications, challenges and
opportunities. Health Policy and Planning, 36(3), 360-368.

Holt-Reynolds, D. (2000). Prospective teachers as learners: Intellectual development and
learning to teach [Poster presentation]. The Annual Meeting of American Education
Research Association, New Orleans, LA.


Mental health literacy: A survey of the public's ability to recognize mental disorders
and their beliefs about the effectiveness of treatment. The Medical Journal of
Australia, 182-186.

settings. Oxford University Press.

Kern, A., Heininger, W., Klueh, E., Salazar, S., Hansen, B., Meyer, T., & Eisenberg, D.
(2017). Athletes connected: Results from a pilot project to address knowledge and
attitudes about mental health among college student-athletes. Journal of Clinical

mental health issues in professional rugby league players. Frontiers in Psychology,


