Examining mental health literacy, depressive symptoms, help seeking behaviors, and wellbeing in soccer match officials in the UK

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This study examined the levels of mental health literacy, depressive symptoms, help seeking behaviors, and wellbeing of UK soccer match officials. A total of 313 participants were recruited and asked to fill out online questionnaires. Twelve percent of individuals indicated that they have experienced at least possible depressive episodes. The average mental health literacy score was 98.8 (SD=11.1) and was lower than found in previous studies with other athletic populations. Mental health literacy was significantly positively correlated with help seeking behaviors and wellbeing and significantly negatively correlated with depressive symptoms, meaning those with greater knowledge and more positive attitudes of mental health were more likely to experience better mental health and seek support for poor mental health. Strategies are needed to improve the knowledge and awareness of poor mental health in soccer match officials in the UK and provide them pathways to professional support.

KEY WORDS: Mental health, Mental health literacy, Match officialls Soccer.

Introduction

Although the poor mental health of elite athletes has received considerable attention as of late (Gorczynski, Coyle, & Gibson, 2017; Reardon et al., 2019), little empirical work has examined the poor mental health of soccer match officials. Match officials play an important role in the overall construct of a match; they ensure rules are understood and that the game is executed in an equitable manner. But research shows that match officials face considerable stress performing their duties (Baldwin, 2013; Cleland, O'Gorman, &

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Webb, 2018). The pressure placed on soccer match officials to ensure that they make the right call, every time, is immense, and something that stresses match officials before, during, and after a match (Baldwin, 2013). When they miss a call, or simply make a mistake, the consequences may be severe. On a regular basis, at any level of play, soccer match officials deal with abuse and real and perceived threats of violence (Cleland et al., 2018). Reports have shown that soccer match officials have been killed as a result of their work (e.g., Jose Valdemar Hernandez Capetillo, Otávio Jordão da Silva, Richard Nieuwenhuizen, Ricardo Portillo) and some have killed themselves (e.g., Babak Rafati). Furthermore, especially at the elite levels of play, match officials are expected to maintain high standards of physical health fitness in order to maintain their jobs (e.g., Football Association, 2008). This expectation of fitness only compounds the stress already experienced by match officials. The level of scrutiny from sporting associations and from players, coaches, and fans, is extremely high and can lead to the mental health, as well as the safety, of match officials being constantly under threat (Kruger, Ellis, Emekci, & Strydom, 2012).

Currently, limited literature exists around what we know about the mental health of match officials, let alone what support can be offered to these individuals. Two prospective studies of soccer match officials show high rates of poor mental health, especially for symptoms of anxiety, depression, eating disorders, and alcohol use (Gouttebarge, Johnson, Rochcongar, Rosier, & Kerkhoffs, 2017; Kilic, Johnson, Kerkhoffs, Rosier, & Gouttebarge, 2018). Such findings are also supported by further epidemiological research conducted with Egyptian soccer match officials that have illustrated high rates of anxiety and depressive symptoms (El Bakry, 2013). Consistently, these studies have made calls for strategies to better understand and address poor mental health by examining individual, cultural and environmental determinants of poor mental health as well as equipping match officials with knowledge of mental health services. As noted by Gorczynski and Webb (2020), a lack of research on the mental health of match officials currently exists. Specifically, through their exclusion in research, the current epidemiological evidence regarding mental health symptoms and disorders has created a knowledge deficit that limits an evidence-based approach to addressing poor mental health in this population. One potential strategy to address poor mental health in match officials is to offer mental health literacy programming (e.g., Webb & Gorczynski, 2020), as has been offered to other populations like athletes (e.g., Gorczynski et al., in press; Reardon et al., 2019) and coaches (e.g., Gorczynski, Gibson, Clarke, Mensah, & Summers, 2020). The use of mental health literacy, with specific help seeking support, has been advo-

cated for by numerous recent expert and consensus statements on the topic of mental health sport (e.g., Breslin et al., 2019; Gorczvnski et al., 2019; Reardon et al., 2019) and through empirical research with match officials (e.g., Webb, 2020; Webb, Dicks, Thelwell, van der Kamp, & Rix- Lievre, 2020). Mental health literacy is the knowledge and beliefs of symptoms of poor mental health which may help with the recognition of poor mental health, its prevention, and if necessary, its management (Jorm et al., 1997). Mental health literacy also addresses the attitudes individuals have toward others living with poor mental health, themselves, and mental health professional services. The aims of mental health literacy are to 1) improve knowledge of symptoms of poor mental health, including risk factors, causes, and self-care practices, 2) improve attitudes towards others living with poor mental health and help seeking services, and 3) increase knowledge and intentions to seek support. Furthermore, mental health literacy is an equity building tool that helps empower individuals and communities by identifying determinants of poor mental health and creating strategies to address them (Gorczvnski et al., in press). Although research has shown mental health literacy can increase knowledge of symptom recognition, increased professional support referral knowledge, reduced stigma, and increased referral confidence, research has focused almost exclusively on athletes and has involved non-rigorous evaluation methods (Breslin, Shannon, Haughey, Donnelly, & Leavey, 2017; Gorczynski, 2019; Gorczynski, Gibson, Thelwell, Papathomas, Harwood, & Kinnafick, 2019). As such the purpose of this study was to examine the levels of mental health literacy, depressive symptoms, wellbeing, and help seeking behaviors of soccer match officials in the UK. An additional aim of the study was to evaluate relationships that exists between these variables.

Methods

SAMPLE

The study participants included individuals who were 18 years or older and soccer match officials in the UK. After ethical approval was obtained, participants were recruited to the study through social media and word of mouth. Such methods provided a manner to recruit broadly and in an anonymous manner. Research has shown that anonymity is a major concern with respect to participating in research and mental health help seeking in sport (Reardon et al., 2019). After granting informed consent, participants filled out online questionnaires through Google Forms. A total of 45 females and 268 males took part in the study. The mean age of the participants was 27.4 years (SD=8.7). The majority of individuals identified as heterosexual (n=286, 91.4%), at level 7 (n=133, 42.5%), and refereed 1-3 hours per week (n=166, 53.0%). The methods employed in this study, including methods of recruitment, were based on previous research on mental health literacy conducted by Gorczynski,

Sims-Schouten, Wilson, and Hill (2017), which investigated mental health literacy, distress, help-seeking, and wellbeing in university students.

MATERIALS

Demographic data. Demographic data that were collected included: age; sex (male, female); sexuality (heterosexual, bisexual, gay, lesbian); officiating level (3, 4, 5, 6, 7); and hours of officiating per week (1-3, 4 or more).

Mental Health Literacy Scale (MHLS). The MHLS is a 35-item measure of mental health literacy (O'Connor & Casey, 2015). The scale assesses disorder recognition, knowledge of help seeking, information, knowledge of risk factors and causes, knowledge of self-treatment, knowledge of professional treatments available, and attitudes towards promoting positive mental health or help-seeking behavior. The MHLS has a minimum score of 35 and a maximum score of 160, where higher scores indicate greater mental health literacy. The MHLS has good internal consistency with a Cronbach's α of 0.873 and test-retest reliability (r=0.797, p<0.001) (O'Connor & Casey, 2015). Questions nine and ten in the MHLS were modified to be specific to the UK context, where "Australia" was changed with "UK". In the this study, the MHLS had a Cronbach's of 0.852, indicating good internal consistency.

Centre for Epidemiological Studies Depression Scale Revised (CESD-R). The CESD-R is a 20-item measure of depressive symptoms, as indicated by nine different categories defined by the American Psychiatric Association Diagnostic and Statistical Manual (DSM), fifth edition (Eaton, Muntaner, Smith, Tien, & Ybarra, 2004). Participants rated their symptoms in the past week on a scale, indicating whether their symptoms were present: "not at all, less than 1 day", "1-2 days", "3-4 days", "5-7 days", or "Nearly every day for 2 weeks". Scores for the CESD-R ranged from 0 to 60, where higher scores indicated a greater severity of depressive symptoms. Additionally, an algorithm was used to determine whether participants met the criteria for major depressive episodes (anhedonia or dysphoria occurred nearly every day for the past two weeks, including symptoms in an additional 4 DSM symptom groups noted as occurring nearly every day for the past two weeks), probable major depressive episodes (anhedonia or dysphoria occurred nearly every day for the past two weeks, including symptoms in an additional 3 DSM symptom groups noted as occurring either nearly every day for the past two weeks, or 5-7 days in the past week), possible major depressive episodes (anhedonia or dysphoria occurred nearly every day for the past two weeks, including symptoms in an additional 2 DSM symptom groups noted as occurring either nearly every day for the past two weeks, or 5-7 days in the past week), subthreshold depression symptoms (>16 but not meeting criteria of other categories), and no clinical symptoms (<16 on all 20 questions). In this study, the CESD-R had a Cronbach's of 0.950, indicating excellent internal consistency.

General Help Seeking Questionnaire (GHSQ). For this study, one question from the GHSQ was used to examine intentions to seek help for mental health problems (Wilson, Deane, Ciarrochi, & Rickwood, 2007). The question used was: "If you were having a personal or emotional problem, how likely is it that you would seek help from the following people?" Participants indicated their level of intention to seek help from a variety of individuals (e.g. intimate partner, friend, mental healthcare professional, religious leaders) on a scale of 1 (extremely unlikely) to 7 (extremely likely). A higher score indicated a higher intention to seek help for mental health problems. The GHSQ has good test-retest reliability (r=0.92) (Wilson et al., 2007).

Warwick-Edinburgh Mental Well-being Scale (WEMWBS). The WEMWBS is a 14item measure of mental well-being (Tennant et al., 2007). Participants indicated how often they felt aspects of positive mental health on a scale of 1 (none of the time) to 5 (all of the time), where higher scores indicated higher levels of mental well-being. Scores for the WEMWBS range from 14 to 70. The WEMWBS has good test-retest reliability (r=0.83) (Tennant et al., 2007). In this study, the WEMWBS had a Cronbach's α of 0.940, indicating excellent internal consistency.

DATA ANALYSIS

Given the non-parametric nature of the data, differences in mental health variables for sex, sexuality, level, and hours of officiating were examined through Kruskal-Wallis H and Mann-Whitney U tests. Relationships amongst variables were examined through Spearman correlations. An alpha level of .05 was used for all analyses.

Results

MHLS

The mean score for the MHLS was 98.81 (SD=11.10, range=81.00-122.00, 95% CI=97.57-100.04). Females (M=102.82, SD=1.68) had significantly higher MHLS scores than males (M=98.13, SD=.67) ($\chi^2(1) = 5.517 p = 0.019$). No statistical differences in MHLS scores were found between sexualities ($\chi^2(3) = 5.696 p = 0.127$). Level 6 officials (M=96.72, SD=10.86) had significantly lower MHLS scores than level 7 officials (M=100.42, SD=11.12) (U=6136.50, p=0.003), but were not significantly different than officials at other levels (p>0.05). Scores for MHLS were significantly higher for those who officiated 1-3 hours per week (M=100.56, SD=11.68) than those who officiated 4 or more hours per week (M=96.71, SD=10.03) ($\chi^2(1) = 8.338 p = 0.004$).

CESD-R

The mean score for CESD-R was 33.80 (SD=10.16, range=20-54, 95% CI=32.67-34.95). A total of 7 (2%) individuals had indicated symptoms for a probable depressive episodes, 23 (7%) individuals presented symptoms for a possible depressive episode, 7 (2%) individuals presented symptoms for a possible depressive episode, and 276 (88%) individuals scored subthresh old. Females (M=40.11, SD=12.15) had statistically higher CESD-R scores than males (M=32.73, SD=9.41) ($\chi^2(1) = 17.348 p = 0.000$). There was no statistical difference in CESD-R scores between gay, lesbian, and bisexual individuals ($\chi^2(2) = 5.803p = 0.055$). Heterosexual individuals (M=32.86, SD=9.97) had significantly lower CESD-R scores than lesbians (M=45.33, SD=9.47) ($\chi^2(1) = 17.348 p = 0.000$).

SD=10.42, U=443.00, p=0.001) and bisexuals (M=42.65, SD=2.57, U=889.50, p=.000). No statistical differences existed between levels ($\chi^2(4) = 2.692 \ p = 0.611$). Scores for CESD-R were significantly lower for those who officiated 1-3 hours per week (M=32.20, SD=11.98) than those who officiated 4 or more hours per week (M=35.60, SD=7.24) ($\chi^2(1) = 10.850 \ p = 0.001$).

GHSQ

The mean score for GHSQ was 26.30 (SD=6.53, range=15-42, 95% CI=25.56-27.10). Individuals indicated they would be most likely to seek support from an intimate partner (M=4.76, SD=.09) and a mental health professional (M=4.05, SD=.08) and least likely from a religious leader (M=1.62, SD=.05) or over the phone (M=2.30, SD=.08). No statistical differences existed between sexes ($\chi^2(1) = .180 \ p = 0.672$). There was no statistical difference in GHSQ scores between gay, lesbian, and bisexual individuals ($\chi^2(2) = 5.175 \ p = 0.075$). Heterosexual individuals (M=26.81, SD=6.51) had significantly higher GHSQ scores than lesbians (M=21.11, SD=6.17, U=688.50, p=0.018) and bisexuals (M=20.88, SD=2.06, U=1078.00, p=.000). No statistical differences existed between levels ($\chi^2(4) = 6.429 \ p = 0.169$). Scores for GHSQ were significantly higher for those who officiated 1-3 hours per week (M=28.44, SD=6.30) than those who officiated 4 or more hours per week (M=23.88, SD=5.94) ($\chi^2(1) = 41.80 \ p = 0.000$).

WEMWBS

The mean score for WEMWBS was 43.40 (SD=7.60, range=28-58, 95% CI=42.53-44.24). Males (M=43.88, SD=7.28) had significantly higher scores of WEMWBS than females (M=40.51, SD=8.80, ($\chi^2(1) = 4.455 \ p = 0.035$). There was no statistical difference in WEMWBS scores between gay, lesbian, and bisexual individuals ($\chi^2(2) = 5.889p = 0.053$). Heterosexual individuals (M=44.12, SD=7.25) had significantly higher WEMWBS scores than lesbians (M=33.56, SD=11.02, U=503.50, p=0.002) and bisexuals (M=37.23, SD=4.63, U=1133.00, p=0.000). No statistical differences existed between levels ($\chi^2(4) = 5.149 \ p = 0.272$). Scores for WEMWBS were significantly higher for those who officiated 1-3 hours per week (M=44.10, SD=8.47) than those who officiated 4 or more hours per week (M=42.61, SD=6.40) ($\chi^2(1) = 4.619 \ p = 0.032$).

COMPARISON OF MENTAL HEALTH VARIABLES

The scores for the MHLS were significantly positively correlated with GHSQ scores (r=.273, p=.000) and WEMWBS scores (r=.451, p=.000) and significantly negatively correlated with CESD-R scores (r=-.177, p=.002), indicating that those with greater levels of mental health literacy were more likely to seek support and have higher levels of wellbeing and have lower levels of depressive symptoms. Scores for GHSQ were significantly positively correlated with WEMWBS scores (r=.501, p=.000) and significantly negatively correlated with CESD-R (r=-.458, p=.000), indicating that those who had higher intentions to seek support for poor mental health had higher levels of wellbeing and lower levels of depressive symptoms.

Discussion

The purpose of this study was to examine the levels of mental health literacy, depressive symptoms, help seeking behaviors, and wellbeing of soccer match officials in the UK. An additional aim of the study was to evaluate relationships between these variables. Overall, the level of MHLS scores for soccer match officials in the UK were lower than found in previous studies of other sports populations, like those of athletic staff (Sullivan Murphy, & Blacker, 2018) and coaches (Gorczynski, Gibson, Clarke, Mensah, & Summers, 2020). This lower score reflects poor symptom knowledge, negative attitudes towards others who are living with poor mental health, as well as negative attitudes towards seeking professional support services. Caution should be expressed as to this comparison of MHLS scores between match officials and athletic staff given that athletic staff are medical professionals specifically trained in the health and wellbeing of athletes, whereas match officials are not. With respect to coaches, a possible explanation is that they may have received training in mental health as part of their coaching qualifications. Given the positive relationships found in this study between mental health literacy, help seeking behaviors, and better overall mental health, mental health promotion strategies should be used to help match officials increase their knowledge of symptoms of poor mental health and their knowledge of environmental causes of poor mental health, like abuse of and violence in the sport (Gorczynski & Webb, 2020; Webb, 2020; Webb & Gorczynski (2020). Furthermore, mental health promotion strategies should aim to decrease the stigma that surrounds poor mental health and support services. Such recommendations have been made for elite athletes in previous research that has investigated poor mental health (Coyle, Gorczynski, & Gibson, 2017).

Prevalence results for depressive symptoms in this study were lower to those found in previous studies that have investigated poor mental health in soccer match officials (Gouttebarge et al., 2017; Kilic,et al., 2018). In their prospective study, Gouttebarge and colleagues (2017) found that approximately 16% of soccer match officials had experienced anxiety and depressive symptoms. In the current study, 37 (11.8%) participants indicated that they may have experienced depressive symptoms to potentially warrant a diagnosis of major depressive disorder. The lower prevalence levels of depressive symptoms may be due to the differences in populations explored (elite vs non-elite) and different instruments used to assess mental health symptoms (GHQ-12 vs CESD-R). Future research should directly compare the mental health of match officials at elite and non-elite levels using data from confirmed diagnoses of mental disorders rather than self-report scores from symptom scales.

The results of this study illustrate distinct sex differences in mental health in match officials. Results showed that although females had significantly higher mental health literacy scores, they indicated significantly lower levels of wellbeing and higher levels of depressive symptoms. Such sex differences have been noted in previous research that has investigated the depressive symptoms of elite athletes and those in the general population (Gorczynski, Coyle, & Gibson, 2017; Reardon et al., 2019). This is the first study to investigate the mental health literacy and mental health symptoms of female soccer match officials. Future sociological research is needed to better understand the contextual situations female soccer match officials encounter and what may be done to address environmental determinants of poor mental health in this population.

As noted for the collection of data on female soccer match officials, this is the first study of match officials to collect data on sexual orientation and how mental health varies by different orientations. This study follows the data collection recommendations on demographic data inclusivity as noted by Gorczynski and Brittain (2016) and Gorczynski and Fasoli (2020). The results of this study suggest that individuals who identify as lesbian and bisexual have significantly lower levels of wellbeing and higher levels of depressive symptoms. Previous research in mental health literacy and wellbeing has shown similar results for levels of wellbeing and distress and sexuality (See: Gorczynski, Sims-Schouten, Wilson, & Hill, 2017). Again, further research is needed to better understand this phenomenon and what can be done to address the environmental determinants of poor mental health in these populations. Furthermore, the results of this study suggest that the mental health of soccer match officials may be related to the number of hours they officiate. Participants who officiated 4 or more hours per week had significantly higher levels of depressive symptoms and lower levels of wellbeing than those individuals who officiated between 1 and 3 hours. The longer hours of work, possibly in addition to other labour performed by these individuals, may leave them susceptible to overwork and burnout as has been noted by Webb (2020).

There are several strengths and limitations that should be noted for this study. This is the first study to assess mental health literacy in match officials and provides information as to whom individuals in this population would seek professional support from. This is not only essential information to help match officials develop symptom knowledge, but information that may address the stigma that surrounds poor mental health (Gorczynski et al., 2019). Additionally, this provides information to help develop initiatives that also need to address systemic environmental problems with abuse and violence in the sport (Gorczynski & Webb, 2020). Secondly, detailed demographic information was captured for sex and sexual orientation, illustrating poor mental health in females and lesbian, gay, and bisexual individuals who are in need of support services. With regards to limitations, symptoms pertaining to only one mental disorder were obtained and this was done in a self-report manner. Secondly, no data was captured on race or ethnicity. This needs further study given that poor mental health and help seeking behavior varies by race and ethnicity (Chang et al., 2014). Lastly, this was a cross sectional study so only relationships can be assumed to exist between variables. Further prospective research is needed to better understand MHLS and how it relates to and may determine mental health outcomes. Overall, much remains to be studied in this population in order to better design mental health literacy strategies that not only help match officials recognize poor mental health and seek appropriate support services. but also challenge the environments in which they work so as to bring about an end to the abuse and violence they experience and affects their mental health.

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