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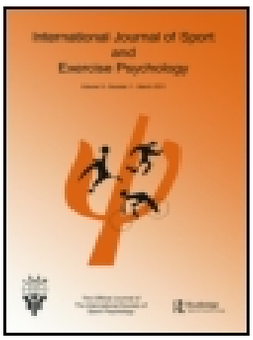

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Exploring perceptions of depression: a performer perspective

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Exploring perceptions of depression: a performer perspective

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ABSTRACT

Perceptions towards mental health symptoms and disorders seem to be shaped by societal, environmental, cultural, and personal beliefs. As such, differences may exist across different sub-groups or cultures which could, in turn, influence treatment and prevention. The present study considered performers', selected from different environments, knowledge, attitudes, and reactions towards a common mental health disorder; namely, depression. To do so, a vignette-method was employed with 197 participants ($n_{athletes} = 97$, $n_{performing\ artists} = 17$, $n_{military\ forces} = 26$, and $n_{general\ population} = 57$) to examine the groups' ability to discriminate between depression levels, together with their reactions and personal attitudes towards people presenting such symptomatology. Statistical analyses showed that the severity of depression, as depicted in the vignettes, exerted a significant influence on participants' recognition and reactions. Moreover, an age effect was observed on participants' reactions, whilst a between-group effect was identified regarding groups' attitudes and beliefs towards depression. Differences in knowledge, reactions, and attitudes towards symptoms of depression identified in relation to performance environments add to the literature stressing the need for context-specific mental health interventions.

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High-performance environments; mental health; recognition; reactions; attitudes

The mental health continuum encompasses "normal suffering and reactions to stressors, troublesome complaints and symptoms, subthreshold disorders, and *forme frustes*, as well as more clearly demarcated SMI [serious mental illness]" (Pierre, 2012, p. 656). Considering this, everyone may, at some point, experience mental health symptoms ranging from signs of psychological distress to mental health disorders. While mental health in the general population is of concern, scholars' attention has also been attracted to specific groups in society, more specifically groups of people confronted with high demands (e.g., notably physical and mental requirements) and focusing on performance (Nordin-Bates, 2012). However, despite the rising number of individuals experiencing mental health symptoms (WHO, 2017) and the growing body of research focused on mental

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health, experiencing sub-clinical and clinical symptoms remains stigmatised. Although this stigmatisation exists in the general population, it is especially prevalent in high-performance environments such as in elite sport where people are expected to be "mentally tough" (Bär & Markser, 2013; Delenardo & Terrion, 2014) and/or where a culture of suffering in silence tends to normalise pain and injuries (e.g., performance at all cost; Gucciardi et al., 2017; Henriksen et al., 2019; John et al., 2019). A lack of awareness and understanding often perpetuates the public's, the media's and sometimes even the sport's negative and stigmatised attitudes towards mental health symptoms and/or disorders (Bär & Markser, 2013). Despite the impact of psychosocial issues on people's perceptions of mental health, research investigating individuals' recognition, reactions, and attitudes towards a common mental health disorder like depression remains lacking in high-performance environments.

High-performing athletes are not immune to mental health symptoms or disorders (Bär & Markser, 2013; Rice et al., 2016) with 5% to 35% of high-performing athletes reporting experiencing sub-clinical and clinical symptoms of a mental health disorder over a 12-month period (Reardon et al., 2019). High prevalence of mental health symptoms and disorders was also found in other high-performance environments such as military (MOD, 2015; Sundin et al., 2011), and performing arts (e.g., musicians, dancers; Arcelus et al., 2014; Gross & Musgrave, 2016; Nordin-Bates, 2012; Voltmer et al., 2012). Yet, the ability to perform and, more specifically, perform well under adverse conditions (e.g., stress, pressure, competition) lies at the heart of these high-performance environments (Nordin-Bates, 2012). Military forces, for example, must stay sharp both physically and mentally to quickly adapt to the stress, changes, and challenges associated with their activity whilst enduring the rigours of combat exposure and deployment. In a similar way, high-performing athletes and performing artists must be able to demonstrate their knowledge and expertise (e.g., skills expertise, management of complex processes), deal with stress, and handle the competitiveness of performance settings (Nordin-Bates, 2012; Sanchez et al., 2021). Intense training load, identity foreclosure, injury and psychological pressure (Nordin-Bates, 2012) are only some of the challenges faced in these environments. All those performers, operating in high-performance environments, are expected to be committed and focused on their goals in order to achieve the highest standards of performance despite its costs (e.g., stress, work pressure, physical and emotional demands, pain, injury; Nordin-Bates, 2012; Sanchez et al., 2021).

Despite the growing body of research on mental health and the high prevalence of common mental health symptoms and disorders found in individuals involved in high-performing environments (e.g., depression, anxiety disorders, eating disorders; Gouttebarge et al., 2015; Gross & Musgrave, 2016; MOD, 2015; Reardon et al., 2019), false and internalised beliefs (e.g., to be "mentally strong", not show any sign of weakness; Delenardo & Terrion, 2014; Gulliver et al., 2012) have led many performers to perceive them as a sign of weakness or personal flaw (Armstrong et al., 2015; Castaldelli-Maia et al., 2019; Delenardo & Terrion, 2014). Such misrepresentations and the stigma associated with mental health symptoms and disorders are commonly reported in relation to elite athletes' reluctance to seek help (Castaldelli-Maia et al., 2019; Walton et al., 2019). In a similar fashion, and even though they often report being supportive about others and having positive attitudes regarding mental health in general, military personnel are

also often reluctant to seek help when they experience mental health symptoms (Langston et al., 2010). Athletes and military forces tend to avoid accessing support services due to the stigma associated with experiencing mental health symptoms and/or disorders (e.g., being seen as weak or not being able to cope) and concerns about the consequences it may have on their career (Castaldelli-Maia et al., 2019; Crone et al., 2020). The masculine norms (e.g., an idealised form of masculinity conveyed and societal norms; Gucciardi et al., 2017; Langston et al., 2010; Walton et al., 2019) and "sucking it up" attitude (Delenardo & Terrion, 2014, p. 51) with which athletes and highly trained soldiers often comply might partly explain their negative attitudes towards seeking help. Negative past experiences, lack of knowledge, concerns about others' reactions (Castaldelli-Maia et al., 2019; Gulliver et al., 2012) and concerns about confidentiality are additional barriers often associated with seeking help (Langston et al., 2010). Similarly, due to the stigma associated with experiencing mental health symptoms, "keeping up appearances" and "hiding problems" are sometimes perceived as an environmental requirement by performing artists such musicians (Pecen et al., 2018, p. 6). On the other hand, a culture of tolerance (Nordin-Bates, 2012) and the fact that professional emotional support is still in its infancy might also partly explain performing artists' attitudes towards help-seeking (John et al., 2019).

Unfortunately, myths and misinformation about mental health, mental health symptoms and disorders, the stigma associated with it and negative attitudes towards help-seeking are challenging barriers to the early identification of mental health symptoms and seeking help (e.g., referral process) which in turn inhibits and may even prevent the implementation of treatment (Andrade et al., 2014; Armstrong et al., 2015; Connery & Davidson, 2006; Delenardo & Terrion, 2014; Heim et al., 2005; Rickwood et al., 2005). Furthermore, although one's personal experience, age and gender can affect one's attitudes towards mental health symptoms and disorders (Connery & Davidson, 2006; Griffiths et al., 2008; Jorm & Wright, 2008) and the ability to identify sub-clinical and clinical symptoms of a mental health disorder is likely to facilitate subsequent help-seeking behaviours (Burns & Rapee, 2006), discriminating between normal reactions to perceived poor performance and signs of psychological distress in high-performance environments can be challenging (Burns & Rapee, 2006). This is especially important as early identification is likely to be followed by early interventions (Lauber et al., 2003; Reavley & Jorm, 2011). Adding to this complexity, the severity threshold and willingness to report and obtain help tend to differ across countries (Andrade et al., 2014; Kessler & Bromet, 2013). Such differences may also exist across different sub-groups or cultures, especially given that attitudes towards mental health symptoms and disorders seem to be shaped by societal, environmental, and cultural beliefs about mental health (Gorczynski et al., 2017; Link et al., 1999). Different performance-focused groups (e.g., sports, military, performing arts) involve specific and contrasting subcultures and norms (Williams, 2012). Accordingly, due to the emotional, social and financial impacts mental health symptoms and/or disorder(s) can have on one's life (Anderson & Pierce, 2012), it would be useful to examine differences in knowledge, awareness and attitude across high-performance groups and the general population.

Therefore, reflecting on these socially based perceptual issues, this preliminary study sought to explore and compare the knowledge, reactions and attitudes of performers selected from different settings towards symptoms of a common mental health disorder such as depression. The main argument for this was that recognition abilities, reactions

and attitudes towards mental health symptoms and/or disorder(s) are influenced by the context; namely the subculture and norms within which each protagonist is embedded (Williams, 2012). Furthermore, depression is currently known as the leading and still rising cause of ill-health worldwide (Kessler & Bromet, 2013; Sai & Furnham, 2013; WHO, 2018). Yet, despite the rising number of individuals experiencing depression (WHO, 2017) and the growing body of research and concerns on mental health, it remains stigmatised, both in the general population but especially in high-performance environments. Depression was, therefore, deemed to offer a good vehicle to better understand performers' representations – namely their influencing expectations and perceptions – of a common mental health disorder and the differences existing between individuals embedded in different high-performing environments and, consequently, in different sub-cultures. As a result, a sample of athletes, combat-experienced military, and artistic performers were chosen as examples of high-performers operating in different sub-cultures; whilst a sample form the general population was used as a reference sample. In order to complete this study, two methods were employed. First, a vignette method was used to discriminate between different groups' knowledge about and reactions towards symptoms of depression. Secondly, a stigma scale was run to compare respondents' personal attitudes towards depression. Finally, given that social distance and belief that a person with mental health symptoms and/or disorder(s) is weak rather than sick tended to decrease with age (Jorm & Wright, 2008), participants' age and its potential influence on stigma were also considered. The variable of age seemed especially relevant regarding high-level sport environments where athletes are often categorised in age classes (Sabato et al., 2016). Understanding performers' representation of a common mental health disorder such as depression and the differences which may exist between individuals operating in different high-performance settings is crucial for the design of optimally effective mental health interventions.

Method

The vignette method is one of the most common approaches in the study of stigma related to mental health symptoms and disorders (Link et al., 2004). Although this method has, so far, mostly been used to evaluate the knowledge and recognition rate of depression and schizophrenia (Burns & Rapee, 2006; Connery & Davidson, 2006; Kitchener & Jorm, 2004; Lauber et al., 2003; O'Dell et al., 2012; Sai & Furnham, 2013), the present study employed a vignette-method to examine performers' knowledge of depression through their ability to discriminate between different severity levels, together with their reactions and personal attitudes towards individuals presenting with such symptomatology.

Participants

Athletes, performing artists, and combat-experienced military forces were chosen as samples of high-performers sharing commonalities such as operating in highly demanding and competitive environments and being committed to intense training. To take part in the present study, English-speaking participants over 21 had to be currently or have recently been employed as either: a professional athlete having experienced success at an elite level (e.g., from competitive-elite athletes to world-class elite athletes; see

Swann et al., 2015), a professional performing artist (e.g., professional musicians or dancers with performing being their primary source of income), a high-level soldier (e.g., fighting forces with direct combat experience) or in a full-time employment (e.g., general population). English-speaking participants between 18 and 21 years old were sampled against the criteria described above or as currently part of a talent development environment such as a sport academy (e.g., young, developing elite athlete), a performing arts academy (e.g., aspiring elite musician or dancer), or enrolled in full-time education. The threshold for age was set at 21 years old for three reasons. First, while estimates of age for peak performance range from 20 to 39 depending on the sport (e.g., swimming versus distance cycling; Allen & Hopkins, 2015), athletes competing at national and international level, in youth competitions, do so in age categories going up to under-21 (Sabato et al., 2016). In addition, in the general population, most students complete their undergraduate studies by the age of 21. Finally, the first onset of most mental health disorders occur in late adolescence (Kessler et al., 2005).

Overall, 197 British and Irish participants ($n_{females} = 77$, $n_{males} = 119$, $n_{intersex} = 1$) took part in this study. Of the present sample, 97 participants were athletes (e.g., golfers, swimmers, hockey players, rugby men, soccers; 49.2%), 17 participants were performing artists (e.g., dancers or musicians; 8.6%), 26 participants were combat-experienced military forces (e.g., army, soldiers or officers; 13.2%) and 57 participants were from the general population (28.9%). Participants' age varied from 18 to 61 years old ($M_{age} = 28.31$; SD = 11.242) with 89 participants (45%) being between 18 and 21 years old at the point of data collection (labelled young adults) while 108 were older than 21 years old (labelled adults). Furthermore, 112 (61.5%) acknowledged knowing someone experiencing mild, moderate, or severe mental health mental health symptoms and/or disorder(s) (e.g., depression, eating disorders, anxiety disorders, etc.), whereas 25.4% of the sample reported having personally experienced some. More information about participant characteristics are presented in Table 1.

Procedure

Following ethical clearance from the University's Ethics Committee (BAHSS 439), participants were recruited using an opportunistic sample via the authors' professional contacts in sports, performing arts, the military, and the general population. An initial email invitation was sent to gatekeepers who were asked to circulate the project information sheet to participants meeting our selection criteria. The self-completed questionnaire was presented as an electronic version (Survey Monkey). Prior to their involvement in this project, participants were reminded that their participation was entirely voluntary, that their responses would be anonymised, and that completing the questionnaire would take approximately thirty minutes. Once consent was obtained and before starting the survey, participants were advised to carefully read each question and description before answering. They were encouraged to respond using their first impression (e.g., when evaluating the severity of depression; Heim et al., 2005).

Materials

Questionnaire. The questionnaire involved closed questions (e.g., multiple choice) based on themes and questions from previous studies investigating awareness and attitudes

Table 1. Participants' demographic characteristics by groups.

Characteristics *n* (%)	Athletes	Performing Artists	Military	General Population
Gender ($n_{total} = 197$)	97	17	26	57
Male	57	2 (11.8%)	23	37 (64.9%)
Female	(58.8%)	15 (88.2%)	(88.5%)	20 (35.1%)
Other/intersex	39	0 (0%)	3	0 (0%)
	(40.2%)		(11.5%)	
	1 (1%)		0 (0%)	
Age ($n_{total} = 197$)	97	17	26	57
Young adults (18–21)	66 (68%)	6 (64.7%)	0 (0%)	17 (29.8%)
Adults (21+)	31 (32%)	11 (35.3%)	26	40 (70.2%)
			(100%)	
Highest level of education($n_{total} = 197$)	97	17	26	57
School to age 16	15	1 (5.9%)	0 (0%)	3 (5.3%)
A levels/BTEC or equivalent	(15.5%)	3 (17.6%)	1 (3.8%)	13 (22.8%)
Further education	47	1 (5.9%)	2 (7.7%)	7 (12.3%)
Degree	(48.5%)	8 (47.1%)	5	16 (28.1%)
Postgraduate degree	8 (8.2%)	4 (23.5%)	(19.2%)	18 (31.6%)
	14		18	
	(14.4%)		(69.2%)	
	13			
	(13.4%)			
Familiarity with mental health disorder(s) ($n_{total} = 182$)				
Through contact ($n_{total} = 112$)	90	13	25	54
Depression	38	12 (92.3%)	20 (80%)	42 (77.8%)
Eating disorders	(42.2%)	10 (76.9%)	17 (68%)	34 (63%)
Anxiety disorders	32	11 (84.6%)	3 (12%)	11 (20.4%)
OCD	(35.6%)	9 (69.2%)	9 (36%)	27 (50%)
Bipolar and related disorders	16	8 (61.5%)	2 (8%)	10 (18.5)
PTSD	(17.8%)	8 (61.5%)	6 (24%)	12 (22.2)
Other (e.g., psychosis)	22	5 (38.5%)	10 (40%)	7 (13%)
	(24.4%)	2 (15.4%)	1 (4%)	3 (5.6%)
	7 (7.8%)			
	13			
	(14.4%)			
	3 (3.3%)			
	1 (1.1%)			
Own history ($n_{total} = 50$)				
Depression	17	9 (69.2%)	4 (16%)	20 (37%)
Eating disorders	(18.9%)	8 (61.5%)	1 (4%)	15 (27.8%)
Anxiety disorders	10	4 (30.8%)	1 (4%)	5 (9.3%)
OCD	(11.2%)	7 (53.8%)	1 (4%)	14 (25.9%)
Bipolar and related disorders	1 (1.1%)	2 (15.4%)	1 (4%)	1 (1.9%)
PTSD	7 (7.9%)	0 (0%)	0 (0%)	1 (1.0%)
Other (e.g., psychosis)	2 (2.2%)	3 (23.1%)	1 (4%)	2 (3.7%)
	0 (0%)	2 (15.4%)	0 (0%)	0 (0%)
	2 (2.2%)			
	0 (0%)			
Confidence in helping someone experiencing mental health symptoms and/or disorder(s) ($n_{total} = 182$)	90	13	25	54
	10	0 (0%)	2 (8%)	2 (3.7%)
Not at all confident	(11.1%)	2 (15.4%)	7 (28%)	19 (35.2)
A little bit confident	36 (40%)	6 (46.2%)	10 (40%)	25 (46.3%)
Moderately	27 (30%)	4 (30.8%)	5 (20%)	7 (13%)
Quite a bit	15	1 (7.7%)	1 (4%)	1 (1.9%)
Extremely confident	(16.7%)			
	2 (2.2%)			

towards mental health symptoms and disorders (e.g., Burns & Rapee, 2006; Connery & Davidson, 2006; Griffiths et al., 2004; Kitchener & Jorm, 2004; O'Dell et al., 2012; Sai & Furnham, 2013). The first part of the questionnaire was designed to collect demographic

information about participants (see Table 1), followed by questions related to their awareness and experience of mental health symptoms and disorders in their everyday life. Participants were asked about their previous contact or personal experience of mental health symptoms and/or disorder(s) (cf., Kitchener & Jorm, 2004). Questions, for example, asked about participants' own experience or previous contact with people having experienced mental health symptoms (e.g., depression, anxiety disorders, eating disorders, obsessional and compulsive disorder, etc.) to some degrees (e.g., mild, moderate, severe). A copy of the online questionnaire is available as supplementary material.

The second part of the survey included a vignette-style questionnaire using Likert scales. Vignettes were presented in a quasi-random, crossed order to reduce any potential order effect and subsequent bias. For each vignette, participants were asked to rate on a 5-point Likert scale their level of concern about the character portrayed (from 0 "not worried at all" to 4 "extremely worried"). They were then asked to:

(1) evaluate if those vignettes described people experiencing normal ups and downs (e.g., "Nothing, those are normal ups and downs"), some emotional distress (e.g., "S/he sounds emotionally low"), clinical depression (e.g., "S/he is suffering from depression") or suicidal ideation (e.g., "S/he sounds suicidal") and
(2) to provide a brief rationale for their answers. Questions investigating basic knowledge about depression (e.g., "would the person described benefit from professional help?"), and behaviours (e.g., "would it be difficult for you to talk with the character described in this vignette") followed.

These questions used dichotomous (e.g., Yes = 1, No and don't know = 0) or Likert-scale responses (e.g., from 0 "not difficult at all" to 4 "extremely difficult").

Finally, the third part of the questionnaire was based on the personal subscale of the Depression Stigma Scale (Griffiths et al., 2006). Acceptable internal consistency and test-retest reliability of this subscale were reported in the past (e.g., Griffiths et al., 2004; Griffiths et al., 2008). The items were rated on a five-point Likert scale (from 1 "strongly agree" to 5 "strongly disagree") with higher scores marking lesser personal stigma about depression with an overall score ranging from 9 to 45 (Griffiths et al., 2006).

Vignettes identification. Vignettes were used to firstly examine participants' ability to differentiate between four severity levels of depression – namely, normal ups and downs (no symptom of depression), some emotional distress (mild or sub-clinical symptoms of depression), moderate depression (clinical symptoms of depression), and severe symptoms of depression with suicidal ideation – then to examine participants' reactions towards those situations. To do so, four fictional short stories were created for the purpose of this study and were developed using the DSM-5 criteria for Major Depressive Disorder (APA, 2013). The vignettes were written carefully so they were easily understood by the participants, ranged between 128 and 165 words, and were subsequently tested through pilot work. Lack of details on either the characters or the context was deliberate in order to give participants the opportunity to "project their feelings, views and social norms onto the character in the vignette" (O'Dell et al., 2012, p. 704). Furthermore, a gender-neutral name was assigned to each character with no mention of their age to minimise the influence of those factors on participants' responses (Connery & Davidson, 2006; Sai & Furnham, 2013). Following Sai and Furnham's (2013) suggestion, the same number of symptoms were used

in each vignette to avoid any deduction regarding the severity of the diagnosis based on the quantity of symptoms described. Finally, while the vignettes detailing "normal ups and downs" and "some emotional distress" presented signs of sadness and distress, the clinical symptomatology of a depressive disorder was absent (Burns & Rapee, 2006). The vignettes were developed by two of the authors, a HCPC-registered Clinical Psychologist with over 30 years of clinical experience in the NHS as well as a registered HCPC Counselling Psychologist holding a European master's degree in Clinical Psychology and Psychopathology, to ensure that they were clinically appropriate.

Pilot. The vignettes and questionnaire were piloted with six individuals from the general population ($M_{age} = 43.17$, SD = 15.79; 5 females and 1 male). Having completed the survey, they were asked to give feedback on the clarity of the overall questionnaire (e.g., format, length, content; O'Dell et al., 2012). Following their feedback, no change was deemed necessary.

Analysis

Statistical analyses were performed on the quantitative variables whilst the sample characteristics were summarised using descriptive statistics. Following Norman's suggestion (2010) that "parametric statistics can be used with Likert data, with small sample sizes, with unequal variances, … with no fear of 'coming to the wrong conclusion'" (p. 631), post-hoc parametric tests were employed to assess whether participants differed on their abilities to discriminate between the four levels of depression as depicted in the vignettes (no symptom of depression, mild symptoms of depression, moderate symptoms of depression, and severe symptoms of depression), their attitudes and their reactions towards individuals in these situations according to which sub-groups they belonged (e.g., groups or age). Statistical analyses run on participants' recognition abilities and reactions were conducted by age, by group and as a function of the four levels of severity of the vignettes. Finally, participants' personal stigmatising attitudes towards depression were analysed overall, as well as at the item level, as a function of participants' groups and age. All data were examined using descriptive statistics and analysis of variance tests (ANOVA – controlling for sub-groups) on Likert scales or the correspondent non-parametric tests (Cochrane) on dichotomous variables. In order to control type I error at 5%, omnibus F tests (in this case MANOVA) were run on parametric data (1st level of analysis). Where appropriate, follow-up tests were then conducted using simple or repeated measures (One-Way or Two-Way) ANOVAs (2nd level of analysis). All statistical analyses were carried out using SPSS for Windows (Version 25) with the significance threshold initially tested at $p < .05$ level and effect sizes estimated using Cohen's (1992) values for partial eta squared (η^2) (i.e., 0.01 = small, 0.09 = medium, and 0.15 or greater = large effect size; cited in Sofronoff et al., 2015). Furthermore, to control for type I and type II errors, the significance level was adjusted ($p < .01$) and both significance level and effect size were used to interpret and discuss the following results.

Results

The main objective of the current study was to explore and compare the knowledge, reactions and attitudes of performers selected from different settings towards symptoms of a

common mental health disorder such as depression. As a result, this study sought to examine performers' knowledge and understanding by comparing participants' ability to discriminate between different levels of severity, together with their reactions and personal attitudes towards symptoms of depression. 138 out of the 197 participants who originally started the survey fully completed it. Therefore, a variation in the numbers can be noticed throughout the results with respondent numbers shown in the relevant tables. In discussing the results, it is important to bear in mind that statistical significance may or may not be associated with "real world" differences in terms of individuals' attitudes and behaviours (cf., Andersen et al., 2007). Accordingly, the magnitude and implication of differences must also be considered.

Examining participants' recognition abilities

An omnibus F test (in this case a $2 \times 4 \times 4$ MANOVA) was conducted to analyse participants' recognition abilities by age (i.e., younger (18–21 years old) and older (21+) groups) and by groups (i.e., athletes, performing artists, military, and general population) as a function of the four levels of severity of symptoms of depression as presented in the vignettes. A Cochrane's test was used to analyse the correct recognition rate (dichotomous variable). The values reported were adjusted using Greenhouse-Geisser correction when necessary.

Participants' ability to correctly respond to the vignette task increased with the severity level of symptoms of depression as described in the vignettes ($F_{(2.8,369)} = 138.9$; $p<.01$) and also evidenced by its large effect size (partial $\eta^2 = .51$; see Table 2). The more severe forms of depression (e.g., 84.1% for severe depression) were significantly more recognisable, while discriminating between less severe forms seemed more difficult with only 37.2% of the participants identifying "normal ups and downs" as portrayed in vignette 1. However, no group or age-related differences were noticeable regarding participants' recognition abilities.

Examining participants' reactions towards symptoms of depression

Similar to the examination of participants' recognition abilities, two omnibus F tests ($2 \times 4 \times 4$ MANOVAs) were conducted to analyse participants' level of concern and difficulty to talk with the character depicted in the vignettes. In addition, the dichotomous variable "help recommended" was analysed using Cochrane's test. As illustrated in Table 2 and as also shown by its large effect size (partial $\eta^2 = .45$), participants' level of concern significantly increased with the severity of the symptoms of depression portrayed in the vignettes ($F_{(2.92,385.2)} = 109.4$; $p < .01$). However, no group or age-related differences were observable.

Furthermore, participants seemed to perceive less difficulties in talking to someone with depression (see Table 2) than in feeling confident in helping someone experiencing mental health symptoms (see Table 1). Whilst most respondents expressed not having too many difficulties in talking with someone experiencing symptoms of depression (ranging from 0.51 regarding vignette 1–1.72 for vignette 4 with 0 meaning "not difficult at all" and 4 "extremely difficult"), their perceived difficulties increased, perhaps unsurprisingly, with the level of severity of the characters' symptoms ($F_{(2.77,\ 366.1)} = 20.45$; $p < .01$). This trend

Table 2. Mean (SD) and effect sizes depending on the severity for each vignette.

	Levels of severity of symptoms of depression						
Variables	Vignette 1 No symptom of depression ($n = 145$)	Vignette 2 Mild symptoms of depression ($n = 163$)	Vignette 3 Moderate symptoms of depression ($n = 139$)	Vignette 4 Severe symptoms of depression ($n = 151$)	F(df)	Partial η^2	Post hoc tests
Level of concern *M* (SD)	1.15 (.70)	2.05 (.81)	2.83 (.85)	3.60 (.71)	109.4 (2.92, 385.2)***	.45	V_4***>V_3***>V_2***>V_1***
- Not at all (%)	20 (13.8%)	1 (0.6%)	1 (0.7%)	0 (0%)			
- A little bit worried (%)	89 (61.4%)	41 (25.2%)	7 (5%)	3 (2%)			
- Worried (%)	30 (20.7%)	75 (46%)	36 (25.9%)	11 (7.3%)			
Very worried (%)	6 (4.1%)	41 (25.2%)	65 (46.8%)	30 (19.9%)			
- Extremely worried (%)	0 (0%)	5 (3.1%)	30 (21.6%)	107 (70.9%)			
Level of severity selected M (SD)	1.71 (.61)	2.45 (.60)	2.93 (.46)	3.79 (.52)	138.9 (2.8, 369)***	.51	V_4***>V_3***>V_2***>V_1***
- No symptom of depression (%)	54 (37.2%)	8 (4.9%)	2 (1.4%)	0 (0%)			
- Mild/sub-clinical symptoms of depression (%)	79 (54.4%)	74 (45.4%)	14 (10.1%)	8 (5.3%)			
- Moderate symptoms of depression (%)	12 (8.3%)	80 (49.1%)	115 (82.7%)	16 (10.6%)			
- Severe symptoms of depression (%)	0 (0%)	1 (0.6%)	8 (5.8%)	127 (84.1%)			
Vignette recognition (%)	37.2% (.48)	45.4% (.50)	82.7% (.38)	84.1% (.37)	Cochran's Q***		
Difficulty to talk with M (SD)	.51 (.84)	1.26 (1.06)	1.58 (1.18)	1.72 (1.33)	20.45 (2.77, 366.1)***	.13	V_4=V_3>V_2>V_1
- No problem at all (%)	96 (66.2%)	51 (31.3%)	35 (25.2%)	39 (25.8%)			
- Slightly awkward (%)	32 (22.1%)	42 (25.8%)	30 (21.6%)	28 (18.5%)			
- 50/50 (%)	9 (6.2%)	48 (29.4%)	36 (25.9%)	34 (22.5%)			
- Somewhat difficult (%)	8 (5.5%)	21 (12.9%)	35 (25.2%)	36 (23.8%)			
- Extremely difficult (%)	0 (0%)	1 (0.6%)	3 (2.2%)	14 (9.3%)			
Help recommended (%)	46% (.50)	77% (.42)	92% (.27)	97% (.16)	Cochran's Q***		

Note: Small (Partial $\eta^2 = 0.01$), medium (Partial $\eta^2 = 0.09$), large (Partial $\eta^2 = 0.15$ or greater) effect size (Cohen, 1992; cited in Sofronoff et al., 2015).
*p-value < .05.
**p-value < .01.
***p-value < .001.

was also supported by a medium effect size (partial $\eta^2 = .13$). In comparison, respondents expressed being, in general, less confident in helping someone experiencing mental health symptoms with 7.69% of the sample being "not at all confident", 34.16% feeling "a little bit confident", 17.03% stating being "quite a bit confident", 37.36% reporting to be "moderately confident" and 2.75% feeling "extremely confident" in such situations (see Table 1).

Age-related differences in participants' perceived difficulty to interact with the characters depicted in the vignette were also noticeable ($F_{(2.77,\ 366.1)} = 4.1$; $p < .01$) and were evidenced by a small effect size (partial $\eta^2 = .03$). As shown in Table 3, younger participants showed overall lower scores that the older group (21+) except for Vignette 4. With higher scores meaning more difficulties to talk with someone as depicted in the vignettes, younger participants (i.e., between 18 and 21) seemed to perceive less struggle to engage in a conversation ("difficulty to talk with") with people as presented in vignettes 1–3 (e.g., normal ups and downs to clinical depression). However, compared to their older counterparts (Mean = 1.40), younger participants found it much *more* difficult to interact with more severe forms of depression (Mean = 2.22).

Similarly, participants' recommendation for professional help significantly increased with the perceived level of severity of symptoms (see Table 4). However, considering the severity of the symptom of depression depicted in each vignette, it was particularly interesting to notice the low percentages of health professionals selected in vignette 4 (i.e., severe symptoms of depression with suicidal thoughts) even though 97% of the respondents would advise that person to seek some help. Indeed, less than 50% of those respondents selected a psychiatrist, only 57% chose a GP and only 53% picked a clinical psychologist as the source of help they would recommend. An explanation for those surprisingly low percentages may come from participants' lack of awareness regarding the differences between a psychiatrist, a GP and a (clinical) psychologist or perhaps even their general roles and training. This is an important finding considering the current climate of increased concern and publicity about mental health.

Examining participants' personal attitudes towards symptoms of depression

Only 138 participants out of the original 197 completed the personal subscale of the Depression Stigma Scale. As shown by the mean scores and standard deviations illustrated in Table 5, some variability highlighting different patterns of thoughts across

Table 3. Mean (SD) of participants' difficulty to talk depending on the perceived severity for each vignette by age.

Variable	Levels of severity of symptoms of depression			
Difficulty to talk	Vignette 1 No symptom of depression	Vignette 2 Mild symptoms of depression	Vignette 3 Moderate symptoms of depression	Vignette 4 Severe symptoms of depression
Participants over 21 years old *M* (SD)	.48 (.11)	1.24 (.13)	1.49 (.15)	1.40 (.17)
Participants 21 years old and under *M* (SD)	.36[a] (.24)	.80[a] (.29)	1.16[a] (.32)	2.22[a] (.36)

[a]Based on modified population marginal mean.

Table 4. Mean in percentage (SD) of the options selected by the participants from a help-seeking list.

	Level of severity of symptoms of depression			
Help-seeking options	Vignette 1 No symptom of depression % (SD) ($n = 145$)	Vignette 2 Mild symptoms of depression % (SD) ($n = 162$)	Vignette 3 Moderate symptoms of depression % (SD) ($n = 139$)	Vignette 4 Severe symptoms of depression % (SD) ($n = 151$)
1. A typical GP or family doctor	24% (.43)	50% (.50)	58% (.50)	57% (.50)
2. A chemist or pharmacist	3% (.16)	1% (.08)	2% (.15)	4% (.20)
3. A counsellor	17% (.37)	35% (.48)	47% (.50)	59% (.49)
4. A social worker	4% (.20)	6% (.23)	16% (.37)	17% (.38)
5. Telephone counselling service	3% (.18)	10% (.30)	23% (.42)	42% (.50)
6. A psychiatrist	3% (.18)	14% (.34)	32% (.47)	48% (.50)
7. A clinical psychologist	6% (.23)	21% (.41)	36% (48)	53% (.50)
8. Help from his close family	29% (.46)	41% (.49)	47% (50)	56% (.50)
9. Help from some close friends	30% (.46)	38% (.49)	50% (.50)	55% (.50)
10. A naturopath or an herbalist	0% (.00)	2% (.14)	3% (.17)	3% (.18)
11. The clergy, a minister or a priest	1% (.12)	2% (.16)	6% (.23)	10% (.30)
12. Other	1% (.08)	2% (.16)	0% (.00)	3% (.16)

elements was apparent, with higher scores marking lesser personal stigma towards depression. Personal attitudes were checked by a 2×4 (age $\times$ group) MANOVA to examine differences between participants' attitudes towards depression. The MANOVA showed an overall significant effect of the variable "groups" ($\lambda_{Wilks} = 2.16$; $p < 0.01$) but no significant age effect. Differences in personal attitudes depending on participants' group were also evidenced by a medium effect size (partial $\eta^2 = .14$).

With the risk of type I error controlled by the initial overall MANOVA, follow-up tests (e.g., item-based analyses) were conducted to examine groups-related differences in participants' personal attitudes using one-way ANOVA and Tukey tests. Those follow-up tests highlighted significant differences across items between the participant groups (see Table 5). More specifically, three items showed significant difference between groups – namely "People with depression could snap out of it if they wanted" ($F_{(3,137)} = 2.81$; $p < .05$), "Depression is a sign of personal weakness" ($F_{(3,137)} = 4.47$; $p < .01$), and "I would not employ someone if I knew they had been depressed" ($F_{(3,137)} = 6.99$; $p < .01$). Reflecting our comment at the start of the results section, there were notable differences in the standard deviations within groups but also across the same item between groups. In this particular instance, participants' personal beliefs were significantly different between athletes and combat-experienced military forces ($p < .05$), as well as between athletes and the general population ($p < .05$), regarding the item stating that "Depression is a sign of personal weakness". Thereby, with a lower score on that statement, athletes seem more susceptible to believe that depression is a sign of personal weakness compared to combat-experienced military forces and people from the general population (Castaldelli-Maia et al., 2019). In contrast, the item "I would not employ someone if I knew they had been depressed" showed significant differences between combat-experienced military forces and the three other groups, namely: athletes ($p < .01$), performing artists ($p < .01$) and the general population ($p < .01$). Accordingly, compared to the

Table 5. Means (SD) by items and by groups for the personal components of the Depression Stigma Scale.

		Depression Stigma Scale			
Statement about Personal Beliefs about Depression	Overall (n = 138) *M* (SD)	Athletes (n = 69) *M* (SD)	Performing artists (n = 10) *M* (SD)	Military (n = 22) *M* (SD)	General population (n = 37) *M* (SD)
1. People with depression could snap out of it if they wanted *	4.25 (.79)	4.07 (.85)	4.50 (.53)	4.55 (.51)	4.35 (.82)
2. Depression is a sign of personal weakness **	4.35 (.88)	4.09 (1.01)	4.60 (.70)	4.68 (.48)	4.57 (.69)
3. Depression is not a real medical illness	4.46 (.85)	4.36 (.86)	4.80 (.42)	4.64 (.90)	4.46 (.87)
4. People with depression are dangerous	3.53 (1.01)	3.42 (.96)	3.70 (.95)	3.50 (1.10)	3.70 (1.08)
5. It is best to avoid people with depression, so you don't become depressed yourself	4.30 (.73)	4.19 (.60)	4.20 (1.03)	4.59 (.73)	4.38 (.83)
6. People with depression are unpredictable	2.72 (.93)	2.64 (.86)	3.40 (.52)	3.00 (.98)	2.78 (1.08)
7. If I had depression, I would not tell anyone	3.34 (.93)	3.35 (.87)	4.00 (.94)	3.14 (1.13)	3.27 (.87)
8. I would not employ someone if I knew they had been depressed***	3.86 (.82)	3.93 (.67)	4.40 (.70)	3.23 (.81)	3.97 (.93)
9. I would not vote for a politician if I knew they had been depressed	3.87 (.88)	3.83 (.84)	4.40 (.70)	3.82 (.73)	3.84 (1.04)
Total	34.69 (4.31)	33.87 (4.34)	37.00 (2.87)	35.14 (4.29)	35.32 (4.37)

*p-value < .05.
**p-value < .01.
***p-value < .001.

three other groups, combat-experienced military forces would seem more inclined to agree with the statement "I would not employ someone if I knew they had been depressed". Although a risk of type I error might exist, item-based differences across groups are, particularly, interesting as they may further inform the design of mental health interventions targeting a change in attitudes towards sub-clinical and clinical symptoms of a mental health disorder such as depression.

Discussion

The present study sought to examine the representations of symptoms of depression held by individuals selected from different settings (e.g., sport, military, performing arts, and the general population). Specifically, we compared participants' knowledge (e.g., ability to correctly respond to the vignette task), together with their reactions and attitudes towards people experiencing symptoms of a common mental health disorder, namely depression. Findings revealed significant increases evidenced by medium to large effect sizes in participants' recognition and reactions as a function of the severity of the symptoms of depression. A small age effect was also found on participants' perceived difficulty to talk with characters as depicted in the vignettes. Furthermore, despite participants' tendency to advise someone to seek help depending on the perceived severity of the symptomatology depicted, participants did not always seem to recommend the most appropriate source of support (e.g., professional help). This was especially evident in the

Table 6. Summary of key findings.

Variables	Key Findings
Recognition abilities	Effect of the perceived level of severity (large effect size) No group effect No age effect
Level of concern	Effect of the perceived level of severity (large effect size) No group effect No age effect
Difficulty to talk with	Effect of the perceived level of severity (medium effect size) No group effect Age-related effect (small effect size)
Recommendation for help	Effect of the perceived level of severity No group effect No age effect
Personal beliefs towards depression	Group-related effect (medium effect size) No age effect

vignette depicting the most severe form of depression. Finally, an overall group effect was identified regarding participants' personal attitudes and beliefs towards depression. A summary of these key findings is presented in Table 6.

Recognition abilities

In line with previous research (Reavley & Jorm, 2011), participants were able to better discriminate between the vignettes describing clinical thresholds and severe forms of depression compared to those depicting sub-clinical symptoms of depression as well as normal ups and downs. Those findings were, however, somewhat contradictory compared to Lauber et al. (2003) who found that only 39.8% of their participants correctly identified the depression vignette whilst the majority categorised that vignette as a life-crisis experience. Indeed, in the present sample, participants tended to perceive the symptoms of depression as more severe than the ones actually depicted in the vignette presented to them. Such findings may partly be explained by the increased number of public statements about mental health (Walton et al., 2019), increased attention of the media on common mental health disorders such as depression (Reavley & Jorm, 2011) as well as by the booming diffusion of mental health awareness campaigns (e.g., Mental Health Awareness week, Blue Light programme, Time to Change). While there is no reason to assume that people share a common understanding of the term "depression" (Burns & Rapee, 2006), potential explanations for those discrepancies may come either from the different study methods used (Lauber et al., 2003) or from an overgeneralisation about the term "depression" and its common symptoms (Reavley & Jorm, 2011).

Reactions towards symptoms of depression

Even though participants showed a better recognition rate and increased levels of concern for symptoms of clinical depression (namely, moderate and severe symptoms of depression) compared to normal ups and downs and sub-clinical symptoms of depression, they also acknowledged perceiving more difficulties in talking to individuals as their symptomatology became more severe. Although not significant, some

group differences are worth mentioning. Athletes, for example, rated their difficulties to talk to a person experiencing symptoms of depression in each vignette slightly higher than the other groups except for vignette 2 (mild or sub-clinical symptoms of depression). Appearing weak to others and its perceived consequences (e.g., losing playing time, being excluded from the team or from a game, losing a contract; Bauman, 2016; Castaldelli-Maia et al., 2019; Gorczynski et al., 2017; Hill et al., 2016; Uphill et al., 2016) may partially explain athletes' perceived difficulty or awkwardness felt in broaching such topic.

Compared to participants aged 21+, participants between 18 and 21 found it more difficult to talk with someone experiencing severe forms of depression. These results are in line with those reported by Langston et al. (2010) who found that US junior Navy personnel were more likely to feel uncomfortable discussing emotional issues with their peers than senior staff. This is important as age and perceived severity of ones' own psychological distress are likely to influence help-seeking intentions (Wadman et al., 2019). Furthermore, when approaching the notion of support, the present findings are consistent with previous research highlighting a preference to seek help and support from GPs (Reavley & Jorm, 2011), family and friends rather than from a mental health professional (Rickwood et al., 2005). Whilst seeking help from and talking to their friends and family may already be an important first step, the kind of help these sources can provide may not be suitable in terms of moderate and severe symptoms of depression. Indeed, when it comes to assist those with sub-clinical and clinical symptoms of a mental health disorder, friends and family might be poorly equipped to manage such problems (Rickwood et al., 2005). Barriers for seeking professional help may also arise from a general lack of awareness regarding "from whom" to seek help, the different roles each health professional play in regard to mental health, or how to access professional help (Gulliver et al., 2012; Reavley & Jorm, 2011). Nevertheless, in regards to looking for professional help, the present findings are in line with Reavley and Jorm (2011) and Burns and Rapee (2006) highlighting participants' tendency to turn to GPs or counsellors instead of psychiatrists and/or psychologists. This is despite the fact that the latter are the registered specialists in mental health (Reavley & Jorm, 2011) and are more likely to offer evidence-based treatments (Burns & Rapee, 2006). On the other hand, such results might also reflect participants' desire or beliefs that such situations should be handled by oneself (Andrade et al., 2014). Either way, a lack of knowledge and understanding about mental health services (e.g., providers and the services provided), their availability and, more importantly, how and when to access them (Gulliver et al., 2012; Rickwood et al., 2005) are obstacles to help-seeking that need to be addressed by preventive initiatives. Attention should, therefore, be paid to individuals' education and genuine understanding regarding the professional help available and, more specifically, on the differences between the roles and services provided for instance by counsellors, (clinical) psychologists, and psychiatrists (Reavley & Jorm, 2011). Educating high-level performers is especially important as it has been suggested that young performers have less positive attitudes than the general population towards seeking help, which may partly explain their reluctance to seek help (Gulliver et al., 2012). Such action may not only foster help-seeking behaviours but also allow them to better identify and reach out to suitable or better sources of support within their environments (Vogel et al., 2007).

Personal attitudes towards depression

Participants' scores on the personal components of Griffiths et al.'s (2006) Depression Stigma Scale reflected their tendency to either report no opinion or disagree with the statements presented. Importantly, these scores may be due to the impact of previous contact and familiarity with mental health symptoms and/or disorder(s) on personal stigma (Griffiths et al., 2008), a reflection of societal changes over the years (Langston et al., 2010), or the results of current awareness and anti-stigma campaigns. Familiarity with mental health symptoms and disorders can have a positive impact on one's personal attitudes towards depression as it is reported by the present and previous studies (Duffy et al., 2019; Griffiths et al., 2008; Jorm & Wright, 2008). Nevertheless, to properly reduce the stigma surrounding mental health in high-performing environments, a first step may be to target and identify the cause of that stigma (e.g., attitudes and beliefs). If stigma is not addressed it will likely negatively impact anti-stigma interventions (Castaldelli-Maia et al., 2019).

Individuals in high-performance sport environments appeared less tolerant than the other groups (e.g., military, performing arts, and the general population). Although the spread of opinion within that group indicates that many disagreed or at least struggled with this position, athletes appeared more inclined to perceive depression as a sign of personal weakness. Those findings are in line with Castaldelli-Maia et al. (2019) who suggested that athletes still experience difficulties when it comes to disclosing any perceived signs of weakness. In contrast, combat-experienced military forces showed significantly more stigmatising attitudes towards the employment of individuals having experienced depression. Furthermore, even though they are supportive and positive towards dealing with others (e.g., colleagues and/or subordinates; Langston et al., 2010), participants from the military setting seemed to prefer to hide experiencing mental health symptoms and/or disorder(s) from their environment (e.g., "If I had depression I would not tell anyone"). Despite the efforts made to increase awareness about mental health symptoms and disorders and their subsequent treatments (Bauman, 2016), those results are consistent with previous research highlighting the persistence of stigma associated with mental health symptoms and/or disorder(s) in sport (e.g., Armstrong et al., 2015; Castaldelli-Maia et al., 2019; Delenardo & Terrion, 2014; Griffiths et al., 2004; Gulliver et al., 2012) and in the military forces (Crone et al., 2020; Langston et al., 2010).

Personal stigma influence help-seeking behaviours and intentions (Wadman et al., 2019), so the present findings are of particular interest from an applied perspective. Indeed, differences in personal beliefs about depression across environments may be relevant to consider when developing prevention programmes adapted to their targets. Supporting Castaldelli-Maia et al. (2019) and Wadman et al. (2019), those findings suggest that personalised, context-specific approaches may be more suitable. Identifying and targeting groups' specific stigmatising beliefs about depression and/or sub-clinical and clinical symptoms of a mental health disorder, in general, may be of particular value given that their impact may not only vary from one group to another but also have an influence on people's future actions (e.g., help-seeking behaviours, intentions, and recommendations).

Implications for practice

Acknowledging that oneself or someone else is experiencing mental health symptoms or disorders is an important first step as early identification is likely to be followed by early interventions (Lauber et al., 2003; Reavley & Jorm, 2011). Notably, early interventions

could not only prevent the development of threshold disorders and/or the onset of comorbidities (Kessler et al., 2005), but have also been shown to lead to a better chance of long-term recovery (Kamm, 2008; Kelly et al., 2007). Therefore, with high-level performers being at-risk to experience mental health symptoms and/or disorder(s) (Gross & Musgrave, 2016; Reardon et al., 2019; Sundin et al., 2011), it may be particularly relevant for people involved in such environments to increase their knowledge and understanding about mental health as it might not only have an impact on their attitudes but also enable them to recognise early signs of psychological distress and act accordingly (Armstrong et al., 2015). Of course, whilst people involved in such environments need to be adequately educated about the mental health continuum, they do not need to become experts. The issue here is not so much that those people are able to recognise differences in degrees of severity but whether they have enough knowledge and understanding about mental health, mental health symptoms and disorders, *in general,* to notice when it might be more serious than "normal ups and downs". This is, especially, valuable in sport as the symptoms (Doherty et al., 2016; Lebrun et al., 2018) and prevalence of certain type of mental health symptoms and/or disorder(s) can differ from one sport to another (Rice et al., 2016; Schaal et al., 2011). Importantly, it would also contribute to disseminating a more accurate perception regarding the need for professional help as it is thought to greatly influence one's help-seeking attitudes and behaviours (Burns & Rapee, 2006; Gulliver et al., 2012). As stigma and lack of knowledge act as barriers to mental health care, with people choosing not to access mental health services despite their benefits (Corrigan, 2004), the present observations support the need to normalise seeking professional help and educate people on the different roles and training of health professionals (Reavley & Jorm, 2011). This is especially important since one's decision to seek professional help might be influenced by friends' and family's attitudes towards those professionals (Vogel et al., 2007).

Moreover, increased mental health literacy is believed to be linked to lower personal stigma, increased coping skills, and confidence in individuals' capacity to help others experiencing mental health symptoms and/or disorder(s) (Anderson & Pierce, 2012; Hadlaczky et al., 2014). Reflecting these elements, differences in personal beliefs about depression, and other mental health disorders, across environments may be relevant when developing prevention programmes tailored for their targets. Athletes, for example, have been shown to better adhere to programmes adapted and sensitive to the environments they are embedded in (Gavrilova & Donohue, 2018; Shannon et al., 2019). Catching the full picture by highlighting the nuances between high-performing groups is, therefore, an important and crucial step that should precede the development of any context-specific mental health preventive initiative. As aforementioned, targeting sub-cultures beliefs about mental health, mental health symptoms and disorders, in general, would be of particular value as they seem to vary from one group to another and influence people's responses. Consequently, more research is warranted to identify groups' specific stigmatising beliefs about depression and mental health symptoms and disorders in general.

Limitations

The present study was not without limitations, and these need to be critically considered. Whereas some might argue that the vignettes were too brief to adequately represent the

reality of the elements studied, O'Dell et al. (2012) suggested that a lack of details gives participants the opportunity to "project their feelings, views and social norms onto the character in the vignette" (p. 704). Although this approach does not perfectly replicate what participants would do or say if they were really experiencing those situations (Burns & Rapee, 2006; O'Dell et al., 2012), it gives an indication on how they think they would respond and has the advantage of presenting a more elaborate stimulus than simply asking questions about mental health symptoms and depression (Link et al., 2004). Future studies using this design may want to adopt a randomised or Latin square design in order to reduce or evaluate the bias potentially attributable to order effects (e.g., fatigue, boredom).

Efforts undertaken by the media (e.g., media recent coverage of PTSD in veterans, recipients of mental health treatments, etc.; Reavley & Jorm, 2011) to increase people's awareness and current mental health campaigns (e.g., Mental Health Awareness week, Blue Light programme, Time to Change) may partly explain the high recognition rate of moderate and severe forms of depression. It is indeed possible that participants would be more familiar with depression than with any other disorder due to its high worldwide incidence (Lauber et al., 2005; Sai & Furnham, 2013; WHO, 2018) and hence, more disposed to show any concerns in regard to that mental health disorder in particular. In addition to the demystifying impact of media coverage and awareness campaigns (Lauber et al., 2003; Lauber et al., 2005), the current self-reported responses may be tarnished by some social desirability (Brenner & DeLamater, 2014). Participants having rated their own knowledge, attitudes and reactions, their responses are susceptible to respondent bias. Furthermore, while participants were asked about previous contact or experience with mental health symptoms and/or disorder(s), they were not asked about any training (e.g., mental health first aid) they may have undertaken at some point on that topic. Future studies investigating ones' representations of mental health symptoms and disorders may want to examine the impact of extraneous variables such as previous training, gender and having suffered from mental health symptoms and/or disorder(s) themselves. As an additional concern, given the focus on symptoms of depression, the present findings might not be generalisable to other mental health disorders as they may not be representative of participants' perceptions and attitudes towards other existing mental health symptoms and disorders, especially as the stigma might be different from one category of disorder to another (e.g., Jorm & Wright, 2008; Lauber et al., 2003).

From a statistical perspective, even though the Central Limit Theorem stipulates that the means of sample sizes greater than 5 or 10 per group are approximately normally distributed and are, therefore, big enough to be used with ANOVAs (Norman, 2010), caution is also needed when generalising the present findings due to differences in group size. Opinion is divided across statisticians as to the acceptability of different groups sizes in applying parametric tests; this most especially when some group sizes are much smaller than others.

The main limitation relates to statistical power associated with the smallest sample sizes, thus having an impact in some groups more than others. Reductions in power are associated with an increase in Type II errors, so making it less likely that genuine effects may be found (Button et al., 2013). Somewhat counterintuitively, this may also call into question the veracity of statistically significant findings (Button et al., 2013);

that is the identification of effects as significant, a problem but one related to the more usually addressed Type 1 error. Moreover, effects around performing artists and military personnel (the smaller groups) may have been susceptible to artefactual effects. As such, some caution should be taken with results where the levels of statistical significance are marginal.

The present study did not look at important features of stigma such as perceived or experienced stigma, for instance. Further studies should not only consider those constructs but also investigate how previous personal experience of mental health symptoms and/or disorder(s) may influence perceived stigma or experienced stigma as well as participants' role perception and engagement in helping behaviours. Finally, given the focus of this paper, it is important to clarify that, although people might unintentionally perceive some stigma attached to some of terms used throughout this paper, this was not our intention. Finding the right terminology can be challenging. Therefore, care was taken throughout the manuscript to avoid stigmatising vocabulary and suggestions made by the reviewers and the editor were taking into consideration to ensure that stigmatising language was avoided.

Conclusion

In conclusion, the present study sought to compare different groups' knowledge, reactions, and attitudes towards sub-clinical and clinical symptoms of a common mental health disorder, namely depression. Differences in recognition abilities, reactions, and significantly different attitudes towards symptoms of depression – depending on the environment in which participants were embedded (e.g., sport, art, military, general population) – were identified. Findings also highlighted participants' apparent lack of information regarding service providers and treatments (e.g., from who, where, when) which may, in turn, prevent them to seek appropriate help and support. Overall, the present findings support the need to pursue current efforts aiming to increase people's mental health literacy and showed the importance of tailored mental health interventions taking each high-performance group's specific needs into account as well as targeting their attitudes towards seeking professional help. Context-specific mental health training (e.g., sport-, art-, military-, and age-related) may, therefore, be more appropriate and efficient than broad and general information. Future research on mental health literacy and attitudes towards mental health is warranted in each of those high-performance environments. In particular, future research is needed to better understand and address the influence of the context and, as a result, to design mental health interventions specifically adapted to those environments.

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Data availability statement

The datasets generated during and/or analysed during the current study are available on request from the authors. The data are not publicly available due to ethical restrictions.

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