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Mental health literacy of negative body image: symptom recognition and beliefs about body image in a British community sample

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The present study examined mental health literacy of negative body image in a sample of 485 British adults. Participants were presented with vignettes of a fictional woman ('Kate') and man ('Jack') suffering from negative body image and were asked questions addressing symptom recognition, distress, sympathy and sources of help-seeking. Participants also completed measures of body appreciation and psychiatric skepticism. Results showed that less than a fifth of participants correctly identified the vignettes as depicting cases of negative body image. The vignette describing Kate was rated as significantly more distressing, deserving of sympathy and requiring help than that of Jack. Women rated the conditions described by both vignettes as significantly more distressing and requiring help than did men. Psychiatric skepticism and body appreciation were significantly associated with beliefs about the vignettes. Implications of the results for the promotion of mental health literacy in relation to body image are discussed.

Keywords: mental health literacy; body image; symptom recognition; psychiatric skepticism; body appreciation

Introduction

Body image refers to a multifaceted construct consisting of an individual's perceptions of, and attitudes toward, her or his body and physical appearance (Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002). Negative body image in particular is now widely recognised as an important public health concern because its high prevalence worldwide (Cash, 2004; Smolak, 2006; Swami et al., 2010). For example, Garner (1997) reported that 56% of women and about 40% of men were dissatisfied with their overall appearance, and there appear to be few differences in negative body image across countries (Swami et al., 2010). This has led to the suggestion that negative body image is now a 'normative' experience for many women and men (Cash, 2004; Rodin, Silberstein, & Striegel-Moore, 1984; Smolak, 2006).

The high prevalence rate of negative body image is of concern for several reasons. First, negative body image is recognised as a reliable predictor of a range of disordered eating and weight-related outcomes, such as frequent dieting (Ackard, Croll, & Kearney-Cooke, 2002; Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006), bulimic symptoms and dietary restraint (Neumark-Sztainer, Wall et al.,

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2006) and weight gain (van den Berg & Neumark-Sztainer, 2007). Second, negative body image is associated with poorer psychological wellbeing more generally (Keery, van den Berg, & Thompson, 2004), including symptoms of depression (Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006) and depressive mood (Mond, van den Berg, Boutelle, Hannan, & Neumark-Sztainer, 2011). Finally, negative body image has been found to be a mediator of the relationship between body mass index (BMI) and lowered self-esteem (Wertheim, Koerner, & Paxton, 2001).

It is clear, then, that negative body image brings considerable emotional, physical and economic consequences for individuals and their families. Conversely, early help-seeking for symptoms of negative body image may promote opportunities for early intervention and may also result in improved long-term outcomes (Levine & Smolak, 2001; Stice, Shaw, Becker, & Rohde, 2008). Although a number of different factors may shape help-seeking for symptoms of negative body image, including structural barriers (e.g., actual or perceived availability of services [Banasiak, Paxton, & Hay, 1998]) and illness-related factors (e.g., shame [Vitousek, Daly, & Heiser, 1991]), a growing focus of scholarly research has been on the explanatory models that the general public rely on to explain health maintenance and reasons for ill-health (e.g., Swami et al., 2009). Specifically, Jorm et al. (1997) coined the term 'mental health literacy' to refer to 'knowledge and beliefs about mental disorders which aid their recognition, management, or prevention' (p. 182). In this view, it is proposed that the conceptual models that lay individuals use to understand and explain mental disorders help shape their help-seeking behaviours for psychiatric symptoms, as well as treatment choice and compliance (e.g., Angermeyer & Dietrich, 2006; Angermeyer, Matschinger, & Riedel-Heller, 1999; Jorm, 2012; Rüsck, Evans-Lacko, Henderson, Flach, & Thornicroft, 2011).

In terms of the literature on mental disorders in general, scholars frequently cite poor mental health literacy among the general public as an impediment to optimal help-seeking (Jorm, 2000; Jorm et al., 1997). A primary concern is the poor ability among members of the general public to recognise symptoms of mental disorders: although there is evidence that the general public recognise labels of mental disorders (Swami, Papanicolaou, & Furnham, 2011; Swami, Persaud, & Furnham, 2011), they show difficulty in identifying cases of mental disorders presented in the absence of labels (e.g., Furnham, Daoud, & Swami, 2009; Jorm, 2000; Jorm, Nakane et al., 2005; Swami, Loo, & Furnham, 2010; Wetherell et al., 2009). Conversely, the ability to recognise symptoms of mental ill-health, such as when presented in the form of case vignettes, may be associated not only with improved help-seeking but also with better communication with health practitioners (Jorm, Christensen, & Griffiths, 2005; Wright, Jorm, Harris, & McGorry, 2007).

In addition, the available evidence also suggests that the general public do not share health practitioners' opinions about the efficacy of psychiatric and psychological treatments (e.g., Jorm et al., 1997). For example, when asked about treatment choices for hypothetical cases, the general public typically show a preference for self-help treatments and alternative therapies over conventional medicine (Jorm, 2000; Nieuwsma & Pepper, 2010). Furthermore, the general public tend to hold negative attitudes toward psychotropic medication for mental disorders, primarily because of concerns about side-effects and their efficacy in dealing with causes of symptoms (e.g., Croghan et al., 2003). This is compounded by the common perception that

mental disorders are embarrassing and that their symptoms should be dealt with privately (e.g., Chew-Graham, Rogers, & Yassin, 2003).

In the past decade, a systematic body of work on mental health literacy has focused on disordered eating (Mond & Hay, 2008; Mond et al., 2010; Mond, Hay, Rodgers, & Owen, 2006, 2008; Mond, Hay, Rodgers, Owen, & Beaumont, 2004a, 2004b, 2004c). This body of research has shown that, although women generally believe that disordered eating is extremely distressing, they also believe that symptoms are 'primarily problems of low self-esteem, rather than eating or mental health problems per se' (Mond et al., 2010, p. 280). This in turn may lead to perceptions that patients only have themselves to blame (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000). Moreover, women who are at high-risk and symptomatic for disordered eating appear to view bulimic behaviours as normative or even desirable (Mond et al., 2010).

In terms of the treatment of disordered eating, women in the general population appear to be sceptical about the role of mental health practitioners, while being more positive about primary care practitioners (including nutritionists, general practitioners [GPs], counsellors and psychologists [Mond et al., 2004a, 2004b, 2004c]). In addition, the use of self-help treatments, such as talking about the problem and the use of vitamins and minerals, was viewed positively. Conversely, respondents hold more negative views about the use of psychotropic medication for the treatment of disordered eating (Mond et al., 2004a, 2004b, 2004c). Taken together, the available evidence suggests that poor mental health literacy of disordered eating may be a barrier to effective help-seeking, particularly among individuals who are symptomatic or at high-risk (Mond et al., 2010).

Although mental health literacy of disordered eating has been examined in some detail, the same is not true of negative body image. That is, to our knowledge no previous study has examined the general public's beliefs about the aetiology, severity and treatment options for negative body image. This is an important oversight, given that negative body image is now thought to affect a majority of adults in socioeconomically-developed settings (Swami et al., 2010) and given the predictive role of negative body image in relation to disordered eating (Neumark-Sztainer, Paxton et al., 2006; Stice, 2002). Thus, to the extent that negative body image is perceived as a 'normative' experience in appearance-focused societies, this may hamper appropriate help-seeking from healthcare practitioners. Conversely, improved mental health literacy should be viewed as an important step in attempts to improve optimal help-seeking not only for symptoms of negative body image, but possibly also for disordered eating.

The primary aim of the present study, therefore, was to examine mental health literacy of the general public concerning negative body image. On the basis of previous work on disordered eating (Mond & Hay, 2008; Mond et al., 2004a, 2004b, 2004c, 2006, 2008, 2010), we expected that respondents would view negative body image as a result of low self-esteem and that self-help treatments would be viewed more positively than professional sources of help. In an aspect of our study that was more exploratory, we also examined associations between attitudes toward negative body image (distress caused by negative body image, sympathy towards individuals suffering from negative body image and appropriateness of help-seeking) and respondents' own body image (operationalised as body appreciation, a measure of positive body image), their attitudes toward psychiatry in general and their demographics.

Methods

Participants

Participants of the study were 485 volunteers (240 women, 245 men) from among the general public in London, UK. Participants ranged in age from 18 to 74 years old ($M = 35.73$, $SD = 14.19$) and in self-reported BMI from 14.47 to 42.38 kg/m² ($M = 24.86$, $SD = 4.80$). The majority of the sample self-reported as being of British White ancestry (82.1%), while 13.0% were of Asian descent and 4.9% were of African Caribbean descent. In terms of educational qualifications, a total of 16.3% of the sample had completed minimum schooling only, 9.1% were still in full-time education, 33.0% had an undergraduate degree, 27.8% had a postgraduate degree and 13.8% had some other higher qualification. The majority of the sample (51.5%) was single, 28.9% were married, 10.3% were cohabiting, 7.2% were divorced or separated and 2.0% had some other marital status.

Materials

Mental health literacy

This aspect of the design was modelled on Mond and colleague's (Mond & Hay, 2008; Mond et al., 2004a, 2004b, 2004c, 2006, 2008, 2010) work on the mental health literacy of disordered eating, which in turn was based on protocols established by Jorm et al. (1997). The first author, a body image scholar, initially designed case vignettes of a 19-year-old female ('Kate') and a 20-year-old male ('Jack') suffering from negative body image. These vignettes were based on reviews of scholarly papers dealing with key symptoms of negative body image, as well as cases described in Mond et al. (2004a, 2004b, 2004c, 2010). The cases were carefully designed to highlight core features of negative body image (e.g., dissatisfaction with appearance, obsessive self-scrutiny, frequent comparison to others and fear of evaluation), while avoiding the use of medical terminology and labels. The vignettes were then presented to three international experts on body image, who were asked to assess the cases for accuracy in terms of describing individuals with negative body image. Based on their collective comments, minor revisions were made to the final case vignettes, which are presented in Appendix 1.

In accordance with Mond et al. (2010), participants were presented with the vignettes and were initially asked, 'What, if anything, would you say is Kate/Jack's main problem?' Although Mond et al. (2010) presented participants with a list of pre-determined options to choose from, we felt an open-ended format would be more appropriate for the present purposes. Participants' qualitative responses were then coded by three judges (the first author plus two independent judges knowledgeable in the broad area of body image) for maximal-response identification (see Swami, Loo, et al., 2010). Specifically, the judges coded participants' responses into the minimum number of distinct categories that was possible. Inter-judge reliability on this task was .93 for the female vignette and .95 for the male vignette.

For each vignette, participants were also asked to rate, on 7-point Likert-type scales, how distressing they thought the described condition was (1 = Not at all, 7 = Extremely), how sympathetic they would be towards someone with the described condition (1 = Not at all, 7 = Extremely) and, if they were friends with the described individuals, how likely it is that they would suggest that they seek help for the condition (1 = Not at all, 7 = Definitely). Participants were also asked, if they were

friends with the described individuals, how likely they would be to suggest a number of options as suitable places to get help. The list included 10 pre-determined options (None – s/he should cope alone, Her/his personal tutor, Her/his friends, Her/his parents, Other family members, University counsellor, Her/his GP, A psychologist/psychiatrist, Books, the Internet), each of which was rated on a 7-point Likert-type scale (1 = Not very likely, 7 = Very likely). Finally, participants were asked, using an open-ended question, what proportion of the British population they believed had the same problem as the case vignettes at any given point in time.

Body appreciation

Participants completed the 13-item Body Appreciation Scale (BAS: Avalos, Tylka, & Wood-Barcalow, 2005), which measures four aspects of positive body image, namely favourable opinions of one's body, acceptance of the body despite its imperfections, respect for the body and protection of the body. The BAS was selected for inclusion because it provides a brief measure of an attitudinal dimension of body image that can be completed by both women and men. Items on the BAS are rated on a 5-point Likert-type scale (1 = Never, 5 = Always). Among Western samples, the BAS has been shown to reduce to a single dimension (Avalos et al., 2005; Swami, Stieger, Haubner, & Voracek, 2008) and has been shown to have good discriminant, construct and incremental validities (Avalos et al., 2005; Swami, Hadji-Michael, & Furnham, 2008). An overall score of body appreciation was computed as the mean of all items, with higher scores indicating more positive body appreciation. In the present study, Cronbach's alpha for this scale was .86.

Psychiatric scepticism

We used the Psychiatric Scepticism Scale (PSS: Swami, Persaud et al., 2011) to measure an individual's degree of scepticism towards psychiatry as a legitimate science. The PSS consists of 16-items that are rated on a 7-point Likert-type scale (1 = Strongly disagree, 7 = Strongly agree). The scale has been reported to consist of a one-dimensional structure and has been shown to have adequate convergent and good construct validity (Swami & Furnham, 2011; Swami, Persaud, et al., 2011). In addition, the scores on the PSS have been found to be associated with mental health literacy in previous work (Swami, Persaud et al., 2011). Following reverse coding of three items, an overall score was computed as the mean of all items. Higher scores on this scale reflect greater psychiatric scepticism. Cronbach's alpha for the PSS in the present study was .89.

Demographics

Participants were asked to provide their demographic details, consisting of gender, age, ethnicity, marital status, highest educational qualification, height and weight. Participants' self-reported height and weight were used to calculate their BMI as kg/m². Finally, participants also completed the McArthur Ladder of Subjective Social Status (MLSSS: Adler, Epel, Castellazzo, & Ickovics, 2000), a measure of subjective social status that is presented as a 'social ladder'. Participants were asked to select which rung of the ladder best described their social status. Responses on this scale range from 1 to 10, with lower values indicating lower subjective ratings.

Ratings on the MLSSS have been shown to correlate with measures of objective social status (Adler et al., 2000).

Procedure

Ethical approval for this study was obtained from the relevant university ethics committee. Two versions of the survey were prepared, where the order of presentation of the vignette of Kate and Jack were counterbalanced (order of presentation of these vignettes did not affect the results – details are available from the first author). Participants were recruited opportunistically using a snowball sampling method. A number of data collectors initially recruited participants for a study ostensibly on health and wellbeing from their pool of personal contacts. Participants who agreed to take part in the study completed a paper-and-pencil version of the survey and were also asked to invite further participants from their own pool of contacts. All participants provided informed consent and took part on a voluntary basis with no remuneration. Once the survey was completed, participants were provided with a debrief sheet.

Results

Beliefs about problems

Table 1 shows participants' coded responses concerning the 'main problem' of Kate and Jack. A total of 18.1% of participants correctly indicated that Kate suffered negative body image, whereas the corresponding figure for Jack was 12.4%. Considering the vignette of Kate alone, the most common responses were that Kate's problem concerned her low self-esteem (mentioned by 23.9% of all participants) and lack of confidence (16.9%). Two categories were unique to the vignette of Kate, namely that she was depressed (< 1.0%) and that she was unattractive (16 men, but no women, or 3.3% of total responses). On the other hand, the most common responses for the vignette of Jack were that he lacked self-confidence (mentioned by 30.3% of all participants) or had low self-esteem (22.5%). Two categorical responses were unique to the vignette of Jack, namely that he was immature (3.9%) and that he needed a girlfriend (2.1%).

To examine whether there were gender differences in responses, we computed multi-dimensional chi-square tests for Kate and Jack separately. For the vignette of Kate, the results showed that there was a significant gender difference, $\chi^2(10) = 46.42$, $p < .001$, $\phi = .31$. Of note, more women than men indicated that Kate suffered from negative body image (55.5% versus 45.5%), that she had an eating disorder (64.3 versus 34.7%) or that there was nothing wrong with her behaviour (65.2 versus 34.8%). On the other hand, men were more likely than women to suggest that Kate had low self-esteem (65.5 versus 34.5%), that she was influenced by societal or media pressure (56.3 versus 43.7%), that she was unattractive (100% men) or that she was obsessed with her appearance (63.3 versus 36.7%).

The same analysis for the vignette of Jack showed that there was a significant gender difference, although the effect size was slightly smaller, $\chi^2(11) = 34.80$, $p < .001$, $\phi = .26$. Notably, more women than men indicated that Jack had low self-confidence (56.5 versus 43.5%), had negative body image (58.3 versus 41.7%), was influenced by societal or media pressure (55.7 versus 44.3%) or had an eating

Table 1. Participants' coded responses (frequencies) concerning the 'main problem' of Kate and Jack, respectively.

Category mentioned	Participant gender	Kate	Jack
Lack of confidence	Women	43	83
	Men	39	64
Low self-esteem	Women	40	40
	Men	76	69
Negative body image	Women	48	35
	Men	40	25
Influenced by society/media pressure	Women	35	44
	Men	45	35
Unattractive	Women	0	0
	Men	16	4
Depressed	Women	4	0
	Men	0	0
Nothing wrong/normal behaviour	Women	15	0
	Men	8	5
Obsessed with appearance	Women	11	15
	Men	19	28
Eating disorder	Women	18	4
	Men	10	0
Delusional/paranoid	Women	10	0
	Men	4	4
Immaturity	Women	0	9
	Men	0	10
Needs a girlfriend/boyfriend	Women	0	5
	Men	0	5
Not sure	Women	0	1
	Men	4	0

disorder (100% women). Conversely, more men than women believed that Jack had low self-esteem (63.3 versus 37.7%), that there was nothing wrong with his behaviour (100% men) or that he was obsessed with his appearance (65.1 versus 34.9%). Overall, the results provide some evidence that women are more likely to accurately recognise symptoms of negative body image than men.

Perceptions of severity, sympathy and help advice

Descriptive statistics for responses to the questions about the distress caused by the condition, participants' sympathy toward the cases and likelihood of suggesting help are reported in Table 2. To examine whether there were gender differences in these responses as a function of the gender of the individuals described in the vignettes, we computed a series of 2 x 2 mixed analyses of variance (ANOVAs). Participant gender was entered as a between-subjects variable, whereas the gender of the individuals in the vignettes was entered as within-subjects variable. Analyses were conducted separately for each of the response items and, below, all interactions are reported prior to main effects.

For the distress item, the results of the ANOVA showed no significant interaction between participant and vignette gender, $F(1, 483) = 1.70, p = .193, \eta_p^2 < .01$. There was, however, a significant main effect of vignette gender, $F(1, 483) = 58.74, p < .001, \eta_p^2 = .11$, with Kate's condition being rated as more distressing than Jack's. There was

Table 2. Descriptive statistics for responses to questions about the distress caused by the condition, participants' sympathy toward the cases, likelihood of suggesting help and sources of help.

Item	Kate		Jack	
	Women <i>M (SD)</i>	Men <i>M (SD)</i>	Women <i>M (SD)</i>	Men <i>M (SD)</i>
Distress	5.31 (1.46)	4.99 (1.37)	4.75 (1.52)	4.59 (1.45)
Sympathy	5.36 (1.41)	5.37 (1.41)	4.96 (1.81)	4.60 (1.66)
Likelihood of suggesting help	5.94 (1.38)	5.58 (1.37)	5.32 (1.79)	5.17 (1.63)
Sources of help				
None (s/he should cope alone)	1.63 (1.24)	2.40 (1.90)	1.96 (1.58)	2.71 (1.87)
Her/his personal tutor	2.84 (1.89)	3.21 (1.80)	3.01 (1.86)	3.31 (1.74)
Her/his friends	4.67 (1.82)	5.31 (1.54)	4.04 (1.87)	5.33 (1.56)
Her/his parents	4.58 (1.72)	4.94 (4.58)	4.31 (1.87)	4.67 (1.73)
Other family members	4.04 (1.88)	4.42 (1.85)	3.57 (2.08)	4.21 (1.76)
University counsellor	4.40 (2.10)	4.79 (1.93)	4.76 (2.02)	4.16 (1.98)
Her/his general practitioner	5.61 (1.41)	4.96 (1.84)	5.52 (1.68)	4.54 (2.07)
A psychologist/psychiatrist	5.87 (1.27)	4.75 (2.10)	5.60 (1.40)	4.61 (2.07)
Books	4.14 (2.02)	4.05 (1.89)	3.82 (1.94)	3.86 (1.84)
The Internet	3.09 (1.85)	3.18 (2.14)	3.38 (2.11)	3.15 (2.00)

also a significant main effect of participant gender, $F(1, 483) = 4.27, p = .039, \eta_p^2 = .01$, with women reporting that the conditions described in both vignettes were more distressing than men.

For the item on sympathy towards the described condition, there was a significant participant gender by vignette gender interaction, $F(1, 483) = 7.59, p = .006, \eta_p^2 = .01$. Tests of simple effects showed that women were more sympathetic toward Jack's condition than men, $t(483) = 2.28, p = .023, d = 0.21$, whereas there was no gender difference in sympathy towards Kate's condition, $t(483) = 0.07, p = .945, d < .01$. The results also revealed a significant main effect of vignette gender, $F(1, 483) = 76.63, p < .001, \eta_p^2 = .14$, with Kate's condition deriving more sympathy than Jack's. Finally, there was no main effect of participant gender on ratings of sympathy, $F(1, 483) = 1.89, p = .170, \eta_p^2 < .01$.

For the item concerning the likelihood of advising Kate and Jack, respectively, to seek help, the results of the ANOVA showed no significant interaction, $F(1, 483) = 1.63, p = .202, \eta_p^2 < .01$. There was, on the other hand, a significant main effect of vignette gender, $F(1, 483) = 38.14, p < .001, \eta_p^2 = .07$, with Kate being more likely to be advised to seek help than Jack. There was also a significant main effect of participant gender, $F(1, 483) = 4.93, p = .027, \eta_p^2 = .01$, with women being more likely to recommend help than men.

Sources of help

Descriptive statistics for ratings of sources of help are reported in Table 2. Overall, sources of help were rated more positively than the suggestion that Kate cope on her own, with her GP and a psychologist or psychiatrist being rated most positively by women and her friends being rated the most positively by men. A similar pattern of results was obtained for the vignette of Jack, with his GP and a psychologist or psychiatrist being rated most positively by women and his friends being rated most

positively by men. In general, books, the Internet and personal tutors were not rated as positively as other sources of help for either Kate or Jack.

To examine the impact of participant gender on decisions about sources of help, we computed multivariate analyses of variance (MANOVAs) separately for Kate and Jack, with participant gender entered as a between-subjects variable. The results for Kate showed that there was an omnibus effect of participant gender, $F(10, 474) = 8.96, p < .001, \eta_p^2 = .16$. Looking at specific sources of help, women were more likely than men to recommend that Kate seek help from her GP, $F(1, 485) = 19.10, p < .001, \eta_p^2 = .04$, and from a psychologist or psychiatrist, $F(1, 485) = 51.30, p < .001, \eta_p^2 = .10$. On the other hand, men were more likely than women to suggest that Kate seek help from her personal tutor, her parents, other members of her family, a counsellor and, especially, her friends ($F_s = 4.67-17.96, p_s = .001-.010-.031, \eta_p^2 = .01-.04$).

The same analysis for sources of help for Jack also revealed an omnibus effect of participant gender, $F(10, 474) = 14.99, p < .001, \eta_p^2 = .24$. Looking at individual sources of help, it was noticeable that men were more likely than women to suggest that Jack cope on his own, $F(1, 485) = 23.09, p < .001, \eta_p^2 = .05$. Men were also more likely than women to suggest that Jack seek help from his friends, $F(1, 485) = 68.45, p < .001, \eta_p^2 = .12$, his parents, $F(1, 485) = 4.59, p = .033, \eta_p^2 = .01$, and other members of his family, $F(1, 485) = 13.07, p < .001, \eta_p^2 = .13$. On the other hand, women were more likely than men to suggest that Jack seek help from a counsellor, $F(1, 485) = 10.68, p = .001, \eta_p^2 = .02$, his GP, $F(1, 485) = 32.39, p < .001, \eta_p^2 = .06$, and a psychologist or psychiatrist, $F(1, 485) = 37.51, p < .001, \eta_p^2 = .07$.

Prevalence estimates

When asked what percentage of the British population they believed had the same problem as Kate, women (percentage $M = 64.84, SD = 17.34$) suggested a significantly higher prevalence rate than men (percentage $M = 49.70, SD = 21.57$), $t(483) = 8.51, p < .001, d = 0.77$. Women (percentage $M = 52.91, SD = 18.89$) were also more likely to suggest a higher prevalence rate than men (percentage $M = 39.31, SD = 17.42$) for problems similar to that of Jack affecting the British population, $t(483) = 8.25, p < .001, d = 0.75$. In general, participants indicated that there was a significantly higher prevalence rate of negative body image among women than men (57.19% versus 46.04%), $t(483) = 19.12, p < .001, d = 1.74$.

Correlations

Finally, we conducted a preliminary analysis of associations between beliefs about the conditions described in the vignettes (distress, sympathy, likelihood of suggesting help) and participants' body appreciation, psychiatric scepticism, BMI, age and subjective social status. To do so, we computed bivariate correlations between these variables for Kate and Jack separately and results are reported in Table 3. As can be seen, stronger perceptions of the severity of Kate's condition was associated with greater feelings of sympathy and greater likelihood of suggestion she seek help. In addition, greater feelings of sympathy for Kate were associated with higher likelihood of suggesting she seek help, lower psychiatric scepticism, older age and higher subjective social status. Greater likelihood of suggesting Kate seek help was associated with lower body appreciation.

Table 3. Bivariate correlations between beliefs about the conditions described in the vignettes.

	1	2	3	4	5	6	7	8
(1) Distress		.49**	.58**	-.05	-.02	.04	.07	.01
(2) Sympathy	.58**		.37**	-.04	-.30**	.07	.15**	.12**
(3) Suggesting help	.46**	.41**		-.11*	-.01	.05	.06	-.03
(4) Body appreciation	-.05	-.12**	.07		-.15**	-.28**	-.03	.20**
(5) Psychiatric scepticism	-.05	-.15**	-.11*	-.15**		.01	.10*	-.31**
(6) Body-mass index	.07	-.07	-.02	-.28**	.01		.29**	.12**
(7) Age	.14**	.04	-.07	-.03	.10*	.29**		.06
(8) Subjective social status	.06	.08	.02	.20**	-.30**	.12*	.12**	

Note: Upper off-diagonal entries are for Kate and lower off-diagonal entries are for Jack; $n = 485$; * $p < .05$, ** $p < .001$.

For the vignette of Jack, greater perceptions of distress were associated with greater feelings of sympathy, greater likelihood of suggesting he seek help and older age. Greater sympathy was associated with greater likelihood of suggesting he seek help, lower body appreciation and lower psychiatric scepticism. In addition, likelihood of suggesting that Jack seek help was negatively associated with psychiatric scepticism. Overall, the strength of correlations was stronger among ratings of distress, sympathy and suggesting help ($r_s = .46$ to $.58$) than they were with the other variables ($r_s = -.12$ to $-.30$). Other notable associations include the correlation between body appreciation and BMI ($r = -.28$), which provides evidence of the validity of the former, and the association between psychiatric scepticism and subjective social status ($r = -.31$), which has not previously been reported.

Discussion

In the present study, we examined mental health literacy of negative body image among a British general population sample. When presented with case vignettes, we found that less than a fifth of our sample were able correctly identify the cases as depicting negative body image. This is lower than the correct identification of cases of disordered eating in previous studies (about 20% [Mond et al., 2004a, 2004b, 2004c, 2010]) and much lower than the identification of cases of other mental disorders, such as depression (between 40 and 70% [Jorm et al., 1997, 2005; Swami, Loo, et al., 2010]). In very broad terms, our results suggest that, when it comes to cases of negative body image, there is a very low level of mental health literacy among the British public.

Our participants were much more likely to suggest that the vignettes were examples of individuals lacking self-confidence or with low self-esteem. In general, this is consistent with the work of Mond and colleagues (Mond & Hay, 2008; Mond et al., 2010; Mond, Hay, Rodgers, & Owen, 2006, 2008; Mond et al., 2004a, 2004b, 2004c) on disordered eating, where it is typically found that participants consider low self-esteem to be the most important aetiological factor. Of course, negative body image may be correlated with lack of self-confidence and low self-esteem, but our

results suggest that participants do not view negative body image as a problem of mental health specifically. Rather, there appears to be a tendency to perceive cases of negative body image as reflecting poor well-being more generally, which may in turn lead to blame for the condition being placed on the individual as opposed to broader factors (Crisp et al., 2000).

It was also noteworthy that a significant minority of participants incorrectly identified our case vignettes as reflecting other mental disorders, such as paranoia, delusional ideation and depression. Of course, we cannot rule out the possibility that participants were not able to articulate their beliefs about the causes of the problems presented in the vignette in a way that would match our expectations or that of healthcare professionals, but we nevertheless posit that our results indicate some cause for concern insofar as they reflect relatively poor mental health literacy.

Our results also showed some evidence of gender differences in symptom recognition, with women being more likely to correctly identify the cases as depicting negative body image. Women were also more likely than men to incorrectly suggest that the vignettes were examples of individuals suffering from disordered eating. Just as importantly, women were more likely than men to suggest that the vignette of Kate depicted normal behaviour and that the vignette of Jack depicted an individual who was influenced by social or media pressure. On the other hand, men were more likely than women to indicate that both vignettes were examples of individuals who suffered from low self-esteem or were obsessed with their appearance. Of particular concern was our finding that a small proportion of men believed that Kate was simply unattractive and that this, in itself, was an explanation for her condition.

The pattern of gender differences was also found in relation to the items on distress, sympathy and likelihood of advising Kate and Jack to seek help. Specifically, women rated the conditions described by vignettes as significantly more distressing than men and were also more likely to suggest that Kate and Jack seek help for their conditions. Although there was no significant main effect of participant gender on sympathy towards the described individuals, women were significantly more sympathetic toward Jack's condition than men. In addition to these differences in terms of participant gender, the gender of the individual described in the vignettes was pertinent. Specifically, compared to the vignette of Jack, Kate's condition was rated as significantly more distressing, deserving of sympathy and needing help.

Broadly speaking, this set of results suggests the lens of gender is important when considering mental health literacy of negative body image (cf. Swami, 2012). This is consistent with previous work suggesting that women rate cases of disordered eating as more severe than men (Mond & Arrighi, 2011) and, more generally, that women have better mental health literacy than men (Cotton, Wright, Harris, Jorm, & McGorry, 2006; Gaebel, Baumann, Witte, & Zaeske, 2002; Lauber, Nordt, Falcato, & Rössler, 2003; Wang et al., 2007). In terms of the present work specifically, it is arguable that, despite growing empirical evidence to the contrary (e.g., Striegel-Moore et al., 2009), negative body image is perceived by the general public as a 'female problem'. For example, it is possible that the societal emphasis on appearance, which historically has centred on women, has meant that negative body image continues to be viewed as a problem primarily affecting women. This is also reflected in our finding that women were more likely to suggest higher prevalence rates of negative body image than men among the wider British population.

The lens of gender is also important when considering sources of help for negative body image. In the present study, we found that women rated primary care practitioners (GPs and psychologists or psychiatrists) more positively than men, whereas men were more likely to suggest that individuals seek help for symptoms of negative body image from their friends. This is consistent with previous studies showing that women are more open to psychological interventions for mental health issues, whereas men are much more likely to rely on self-help (Gaebel et al., 2002; Wang et al., 2007). In the first instance, the regard given to GPs, in particular by women, may necessitate better evaluations and improvements in knowledge of body image among GPs, such that they are able to identify and deal with presenting cases (Hay, Darby, & Mond, 2007). On the other hand, the preference for friends as a source of help may be associated with inappropriate help-seeking among men, which may require targeted interventions that promote better mental health literacy of body image and treatment options.

Finally, our preliminary analyses suggested that perceptions of the severity of the conditions presented in the vignettes were positively associated with feelings of sympathy and likelihood of suggesting help. Other variables included in our correlational analyses are also noteworthy, particularly associations between body appreciation and the likelihood of suggesting Kate seek help and sympathy for Jack, respectively. We also found associations between psychiatric scepticism and sympathy for both Kate and Jack, and the likelihood of suggesting that Jack seek help. Although the strength of these associations were weak to moderate, they may prove useful when designing interventions. For example, promoting more positive attitudes toward psychiatry and the psychiatric services may help induce feelings of sympathy for affected individuals, which in turn may influence the likelihood of suggesting help for the condition.

Of course, a number of limitations need to be considered when interpreting the present set of results. First, we relied on case vignettes and, although such vignettes are widely used in the literature, their ecological validity may be questioned. Specifically, case vignettes may not accurately reflect the nature of symptom recognition in real-life situations, particularly in terms of the wealth of exchanged information and the ability to monitor wellbeing or changes in symptomatology over time. In a similar vein, given that negative body image is not recognised as a mental disorder in its own right, the face validity of our vignettes will need to be assessed in more detail. This could be achieved, for example, by presenting our vignettes to mental health professionals and determining what proportion indicate that the individuals described experience the problem the vignettes were designed to evoke. Moreover, although some items in our measure of mental health literacy asked participants to take the perspective of being a friend, it is likely that the use of vignettes increases depersonalisation and distance from the affected individual. Alternative methods of presenting cases, such as the use of clips in which actors discuss symptoms, may help to alleviate some of these limitations.

Related to this is a concern about how best to conceptualise lay responses to vignettes (Jorm, 2000). For example, implicit in our treatment of the data is an assumption that lay interpretations of the vignette, at least in the majority of cases, are less valid or 'correct' than those of professionals. However, this in itself may limit our understanding of the community's understanding of body image and, as such, it is possible that there remain large gaps in the way we have treated lay knowledge. One way in which this aspect of our design could be improved upon would be

through the use of qualitative research that seeks to place the conceptual models used by individuals to explain wellbeing within discursive contexts and the broader social environment (Hughner & Kleine, 2004). For example, ethnographic research that focuses on the lived experiences of individuals suffering from negative body image may offer more in-depth views of their attitudes toward symptoms and treatments (e.g., see Carpenter-Song, 2009).

Another limitation of the present work was the reliance on a snowball-sampling method of recruiting participants. Although this method allowed us to recruit a relatively large sample from the community, it also introduces sampling biases such that our sample cannot be considered representative of the wider British population (Heckathorn, 1997). In addition, although we measured a number of variables that were expected to be associated with attitudes toward individuals with negative body image, future work could extend this aspect of our study by including a wider range of variables. In a similar vein, while we included a measure of participants' body image in the present work, it should be noted that this measure was focused on positive body image whereas our vignettes described cases of negative body image. Given that body appreciation and negative body image do not necessarily fall on opposite ends of the same continuum (Swami, Hadji-Michael, et al., 2008; Wood-Barcalow, Tylka, & Augustus-Horvath, 2010), the inclusion of a measure of negative body image may be useful direction for future research.

Acknowledging the above limitations, our results may nevertheless have important implications for healthcare practitioners and policy-makers. Taken at face value, our results suggest that a the majority of members of the community have difficulty in identifying cases of negative body image and that there may be gendered biases in attitudes toward body image. Community-based interventions, which have shown some success in relation to mental disorders such as depression (e.g., Jorm, 2012; Jorm et al., 2005), may be required to promote better mental health literacy of body image and knowledge of optimal treatment options. An important first step may be to incorporate components that seek to improve knowledge of the symptoms of negative body image within interventions aimed at promoting positive body image. In addition, given that women in particular appear to regard GPs as an important source of help, the need to evaluate mental health literacy of body image among this group remains an urgent need. More broadly, there remains much scholarly work to be done in the area of mental health literacy of body image and we hope that the present findings will encourage other researchers to explore this neglected area of knowledge.

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Appendix 1. Case vignettes used in the present study describing a fictional woman (‘Kate’) and a man (‘Jack’) suffering from negative body image.

Kate is a 19-year-old student in her second year of university. Although she is not overweight, Kate is dissatisfied with her body and thinks that she is unattractive. When Kate looks in the mirror, she thinks that parts of her body are too large, and she often wishes that she could be thinner. She frequently compares her body to those of others, particularly celebrities she sees on TV and in magazines, and wishes she could have a body like theirs. She is terrified of becoming fat and, at university, Kate joined a fitness programme and started running and weighing herself daily. At the same time, she started to diet, avoiding fatty foods, not eating between meals and trying to eat set portions of ‘healthy food’. Although she is an outgoing person, she tries to avoid social situations where she knows she will be ‘checked out’ or where there may be other women who are thinner than her. When she does go out with her friends, she often feels nervous that other people are evaluating her appearance. Kate doesn’t like talking about her weight, but her grades have remained steady during her time at university.

Jack is a 20-year-old student in his third year of university. Although his weight is within the normal range for his age and height, Jack feels dissatisfied with the appearance of his body and would like to be more muscular. When Jack looks in the mirror, he thinks that parts of his body are too small and lack toning or definition. He frequently compares his body to those of others, particularly athletes he sees on TV and in magazines, and wishes he could have a body like theirs. While at university, Jack joined a gym and started working out regularly, often for an hour or two daily. At the same time, he began to control what he ate, avoiding fatty foods and taking muscle-building supplements. Although his friends think he is an extravert, Jack in fact avoids social situations where he knows others will be looking at him or where there may be other men who are more muscular than him. When he does go out, he often feels nervous that other people are evaluating his appearance. Despite all this, Jack has been able to maintain his grades at university at consistent level and his lecturers think he is a good student.