Examining mental health literacy, help seeking behaviours, and mental health outcomes in UK university students

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Abstract

Purpose

Many university students in the UK experience mental health problems and little is known about their overall mental health literacy and help seeking behaviours. This study aimed to ascertain levels of mental health literacy in UK university students and examine whether mental health literacy is associated with better mental health outcomes and intentions to seek professional care.

Design/methodology/approach

A total of 380 university students at a university in the south of England completed online surveys measuring multiple dimensions of mental health literacy, help seeking behaviour, distress, and well-being.

Findings (mandatory)

Mental health literacy in the students sampled was lower than seen in previous research. Women exhibited higher levels of mental health literacy than men and postgraduate students scored higher than undergraduate students. Participants with previous mental health problems had higher levels of mental health literacy than those with no history of mental health problems. Individuals were most likely to want to seek support from a partner or family member and most participants indicated they would be able to access mental health information online. Mental health literacy was significantly positively correlated with help seeking behaviour, but not significantly correlated with distress or well-being.

Practical implications

Strategies, such as anonymous online resources, should be designed to help UK university students become more knowledgeable about mental health and comfortable with seeking appropriate support.

Originality/value

This study is the first to examine multiple dimensions of mental health literacy in UK university students and compare it to help seeking behaviour, distress, and well-being.

Keywords

Mental health literacy, attitudes, help seeking behaviours, university students

Article Classification

Research paper

Introduction

Research shows that university students exhibit a great deal of vulnerability with respect to experiencing mental health difficulties (Royal College of Psychiatrists, 2011; Storrie *et al.*, 2010; Universities UK, 2015). According to the National Student Survey (NSS), which was conducted for the All Party Parliamentary Group on Students (All Party Parliamentary Group on Students, 2015), 78% of university students in the United Kingdom (UK) indicated they have experienced some form of mental health difficulty in the previous academic year. Mental health problems impair functions of daily living and can range from minor everyday occurrences, such as feelings of worry or stress, to serious long-term conditions, including anxiety or depressive disorders (Mind, 2014). Evidence has shown that stress, a lack of energy and motivation, and feelings of unhappiness or being 'down', as the commonly cited mental health problems reported by UK university students (NUS, 2013). Most troubling are the findings that 33% of students have contemplated suicide at least once in the previous academic year (All Party Parliamentary Group on Students, 2015). Findings from a large-scale web-based US study found prevalence rates of 17.3% for depression, 7% for generalized anxiety, and 6.3% for suicide ideation among university students (Eisenberg *et al.*,, 2013). Mental health problems, such as depressive and anxiety disorders, experienced by university students present serious threats to the long-term mental, social, and physical health of students as well as their ability to achieve academic success (Eisenberg *et al.*, 2009; Eisenberg *et al.*,, 2013; Hysenbegasi *et al.*, 2005).

Researchers have indicated that university students lack sufficient mental health literacy skills to be able to recognize mental health problems and seek professional help when necessary (Furnham *et al.*, 2011; Hunt and Eisenberg, 2010; Merritt *et al.*, 2007; National Student Survey,

2013; Reavley *et al.*, 2012; Wei *et al.*, 2013). In particular, this is evident in the latest findings from the NSS where 33% of students did not know where to access support (All Party Parliamentary Group on Students, 2015). Mental health literacy skills consist of three main areas: 1) knowledge of mental health problems; 2) promotion of positive mental health; and 3) knowledge of help-seeking behaviours (Wei *et al.*, 2013). They can be divided further into six main attributes, including the ability to: 1) recognize symptoms of different disorders; 2) identify risk factors and causes of different disorders; 3) promote positive attitudes toward mental health problems and help seeking behaviour; 4) administer self-treatment; 5) locate mental health information; and 6) seek professional help (Jorm *et al.*, 2005). Research indicates that mental health literacy is positively correlated with help seeking behaviour in university students (Smith and Sochet, 2011), while research findings from Australian adolescents and young adults reveals that levels of mental health literacy are positively correlated with mental wellbeing (Lam, 2014). Currently, little information is known about the overall mental health literacy skills of UK university students, as defined by Jorm *et al.* (2005). Furthermore, to the best of our knowledge, no research has examined whether mental health literacy is associated with better mental health, overall well-being, and, most importantly, help seeking behaviour in UK university students.

Purpose

The purpose of this study was to ascertain levels of mental health literacy in UK university students and examine whether mental health literacy is associated with better mental health outcomes and intentions to seek professional care.

Methodology

Setting and sample

This study took place between December 2015 and February 2016. The study participants involved registered students at a university in the south of England, UK, who were over the age of 16 years. After ethical approval was obtained, participants were recruited to the study through the research team contacting different academic departments, and disseminating a web link to each student which provided details of the study. If consent was indicated, the participants completed four questionnaires online, which were administered by the online survey company Qualtrics (Qualtrics, 2016).

Materials

Demographic Data. Demographic information was collected, which included age, gender, sexuality, previous diagnosis of mental health problems, and current education year.

Mental Health Literacy Scale (MHLS). The MHLS is a 35-item measure of mental health literacy (O'Connor and Casey, 2015). The measure assesses disorder recognition, knowledge of help seeking information, knowledge of risk factors and causes, knowledge of self-treatment, knowledge of professional treatments available, and attitudes toward promoting positive mental health or help seeking behaviour. The MHLS has a minimum score of 35 and a maximum score of 160, where higher scores indicate greater mental health literacy. The MHLS has been shown to have good internal consistency with a Cronbach's alpha of .873 and test-retest reliability ($r = .797$, $p < 0.001$) (O'Connor and Casey, 2015). Questions nine and ten in the MHLS were modified to be specific to the UK context, where "Australia" was switched with "UK." In the current study the MHLS had a Cronbach's alpha of .839, indicating good internal consistency.

The General Help-Seeking Questionnaire (GHSQ). For the purpose of the current study, one question from the GHSQ was used to assess intentions to seek help for mental health problems (Wilson *et al.*, 2007). The question used was: "If you were having a personal or emotional problem, how likely is it that you would seek help from the following people?" Participants indicated their level of intention to seek help from a number of individuals (e.g., intimate partner, friend, mental health care professional, religious leaders) on a scale of 1 (extremely unlikely) to 7 (extremely likely). A higher score indicated a higher intention to seek help for mental health problems. The GHSQ has been shown to be significantly correlated to seeking access to counselling (r_s=.17, $p<0.05$) (Wilson *et al.*, 2007). Additionally, the GHSQ has been shown to have good test-retest reliability (r=.92) (Wilson *et al.*, 2007).

Kessler Psychological Distress Scale 10 (K10). The K10 instrument is a 10-item measure of psychological distress (Kessler *et al.*, 2002). Participants indicated their level of agreement on a scale of 1 (none of the time) to 5 (all of the time), where higher scores indicated higher levels of distress. Total K10 scores range from 10 to 50, with scores under 20 indicating an individual is likely to be well. The K10 has been shown to have good discriminant validity (Australian Bureau of Statistics, 2007) and good internal consistency (Kessler *et al.*, 2002). In the current study, the K10 had a Cronbach's alpha of .916, indicating excellent internal consistency.

The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS). The WEMWBS is a 14-item measure of mental well-being (Tennant et al., 2007). Participants indicated how often they feel aspects of positive mental health on a scale of 1 (none of the time) to 5 (all of the time), where higher scores indicated higher levels of mental well-being. Scores for the WEMWBS

range from 14 to 70. The WEMWBS has been shown to have good internal consistency (Cronbach's alpha of .89 to .91 in student and general population samples, respectively) and good test-retest reliability (r=.83) (Tennant *et al.*, 2007). In the current study, the WEMWBS had a Cronbach's alpha of .920, indicating excellent internal consistency.

Data Analysis

Differences in mental health measures were explored using analyses of variance for gender, sexuality, previous diagnosis of mental health problems, and current education year. To examine relationships between measures, Pearson correlations were used. An alpha level of 0.05 was used for all analyses.

Results

Demographic Data

A total of 146 women and 233 men participated in the study. One participant did not identify a gender. The mean age of the participants was 20.94 years (SD=5.29 years; Range=18-64 years). The majority of students self-identified as heterosexual (93.9%) and most were in their first year of undergraduate study (54.4%). A total of 11.6% of respondents indicated a diagnosis of a previous mental health problem by a medical professional. Complete demographic information is presented below in Table 1.

<insert table 1 here>

Mental Health Literacy (MHLS): Overall

The mean score for mental health literacy was 122.88 (*SD*=12.06, Range=87.00-160.00, 95% CI=121.63-124.06). Skewness (0.25, SE=.125) Kurtosis (-.163, SE=.250), and the Shapiro-

Wilk Test (S-W=.998, df=380, p=.862) indicated the results of the scale were normally distributed.

Women had significantly higher ratings of mental health literacy (M=128.23, SD=10.99) than men (M=119.48, SD=11.51) (F(1, 377) = 53.67, p=0.00). No Significant differences in mental health literacy were seen between heterosexual (M=122.67, SD=12.09), bisexual (M=125.22, SD=9.38), gay (M=133.83, SD=15.21), lesbian (M=121.00, SD=4.58), and other participants (114.67, SD=8.62) (F(4, 373) = 1.72, p = .145). Mental health literacy scores increased with education year from the first year undergraduate (M=120.94 (SD=10.78)), and second year undergraduate students (M=120.58 (SD=11.37)), to the third year undergraduate (M=129.38 (SD=13.65)), postgraduate masters (M=127.47 (SD=13.41)), and postgraduate PhD students (M=132.00 (SD=2.83)). Those participants who indicated a previous diagnosis of a mental health problem scored significantly higher for mental health literacy (M=135.14, SD=13.47) than those who had no previous mental health problems (M=121.24, SD=10.89) (F(1,378) =59.72, p=0.00). Results pertaining to knowledge of mental illness, information resources, and treatment can be seen in Table 2.

<insert table 2 here>

The General Help-Seeking Questionnaire (GHSQ)

The mean score for general help-seeking behaviour was 33.55 (SD=7.89, Range=11.00-63.00, 95% CI=32.76-34.35). Participants indicated they would be most likely to seek help for mental health problems from an intimate partner (e.g., girlfriend, boyfriend, wife, husband) (M=5.37, SD=1.71) or parent (M=4.72, SD=2.09), and least likely to seek help from a doctor or GP (M=2.74, SD=1.66). Overall, there were no significant differences in help-seeking behaviour

between women and men (F(1, 377) = .193, p=.661). Bisexuals were least likely to seek help for mental health problems (M=25.56, SD=5.17) which significantly differed from heterosexuals (M=33.80, SD=7.87) (mean difference = 8.25, 95% CI=.79-15.70), p=.019). No other significant differences were seen between students of other sexualities (p>.05). No differences were noted between education years (F(4,374)= .412, p=.800). Individuals with no previous mental health problems (M=33.96, SD=7.79) were significantly more likely to indicate they would seek-help compared to those with previous mental health problems (M=30.45, SD=8.01) (F(1,378) =7.815, p=.005).

Kessler Psychological Distress Scale 10 (K10)

The mean score for distress was 21.14 (SD=7.81, Range=10.00-47.00, 95% CI= 20.35-21.93). In total, 184 (48.4%) individuals indicated a score of a mild (N=76, 20%), moderate (N=46, 12.1%), or severe (N=62, 16.3%) mental disorder. Women indicated significantly greater levels of distress (M=23.13, SD=8.54) than men (M=19.93, SD=7.06) (F(1,377)=15.64, p=.000). Bisexuals indicated the highest levels of distress (M=29.67, SD=6.26) and differed significantly from heterosexuals (M=20.99, SD=7.74) (mean difference = 8.68, 95% CI=1.34-16.01), p=.009). No other significant differences were seen between students of other sexualities (p>.05). No differences were seen between education years (F(4,374)=1.239, p=.294). Individuals with a previous mental health problem (M=29.00, SD=9.66) were significantly more likely to experience distress than those with no previous mental health problems (M=20.11,SD=6.92) (F(1,378)=57.91, p=.000).

The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

The mean score for well-being was 47.57 (SD=9.13, Range=20.00-70.00, 95% CI=46.56-48.50). Women indicated significantly lower levels of well-being (M=45.39, SD=10.27) than men (M=48.96, SD=8.07). Bisexuals indicated the lowest levels of well-being (M=33.78, SD=8.42) and differed significantly from heterosexuals (M=47.92, SD=8.99) (mean difference = -14.15, 95% CI=-22.65- -5.64), p=.000). No significant differences were seen between students of other sexualities (p>.05). No differences were identified between education years (F(4,372)=.600, p=.663). Individuals with a previous mental health problem (M=39.79, SD=10.48) experienced significantly lower levels of well-being than those with no previous mental health problems (M=48.57,SD=8.45) (F(1,376)=38.84, p=.000).

Comparing mental health literacy with help seeking behaviours and mental health

MHLS was significantly positively correlated with GHSQ total score r(380)=.123 p=.017, indicating that individuals with higher MHLS scores were more likely to seek help overall for their mental health problems. GHSQ total score was significantly negatively correlated with K10 r(380)=-.274 p=.000, and significantly positively correlated with WEMWBS r(378)=.383 p=.000, indicating that individuals who were more likely to seek help had lower levels of distress and higher levels of well-being, respectively. No significant relationships were found between MHLS and K10 r(380)=.08 p=.118, and MHLS and WEMWBS r(378)=.012 p=.812, indicating that levels mental health literacy was not associated with levels of distress or well-being.

Discussion

The purpose of this study was to ascertain levels of mental health literacy in UK university students and examine whether mental health literacy was associated with better mental

health and intentions to seek professional care. Overall, mental health literacy in the UK university students sampled was below that of previous findings that have used the MHLS with Australian university students (O'Connor and Casey, 2015). In their study of 372 first year undergraduate students, O'Connor and Casey (2015) found that their participants had a mean mental health literacy score of 127.38, compared to a mean score of 122.88 found in the current study. Moreover, in the current study, women and those who indicated a previous mental health problem exhibited significantly higher levels of mental health literacy. No other factors were associated with any significant differences in mental health literacy. Individuals were most likely to want to seek support from an intimate partner or family member than a healthcare professional. Overall, 48.4% of participants indicated they had a mild, moderate, or severe mental disorder and many students scored a low rating of well-being. Women, bisexuals, and individuals who had indicated a previous mental health problem were perceived to be most vulnerable as they exhibited significantly greater distress and lower well-being. No other factors were associated with any significant differences in distress or well-being. Although mental health literacy was significantly positively correlated with help seeking behaviour, mental health literacy was not significantly correlated with distress or well-being.

Mental health literacy and help seeking behaviour

Researchers who have examined mental health literacy have shown that university students have difficulties recognizing and understanding symptoms of mental illnesses (Furnham *et al.*, 2011; Furnham *et al.*, 2013; Youssef *et al.*, 2014), limited knowledge of help services and where to turn to for support (Chew-Graham *et al.*, 2003; Eisenberg *et al.*, 2007), a reluctance to

disclose mental health problems due to stigma (Soorkia *et al.*, 2011; Quinn et al., 2009), and negative attitudes toward seeking help for mental health problems (Chew-Graham *et al.*, 2003; Curtis, 2010; Downs and Eisenbert, 20102; Soorkia *et al.*, 2011; Stanley *et al.*, 2010). Findings from this study show that those with greater overall mental health literacy are more likely to seek help for mental health problems, either in person or through other means. The current study found that many students struggle with identifying symptoms of mental health problems and that 42.3% of students do not know where to find available resources. Of those indicating an intention to seek help for mental health problems, most preferred online resources, as well as family and friends rather than medical professionals such as GPs. This is a similar finding to previous studies (Chew-Graham *et al.*, 2003; Curtis, 2010; Czyz, Horwitz *et al.*, 2013; Leach, Christensen, *et al.*, 2007).

Given that 51.8% of participants in the current study indicated an intention to attend face-to-face meetings with a mental healthcare professional and 61.3% of participants understood when healthcare professionals have to break confidentiality, researchers may wish to further examine educational strategies to help students better understand and build trust in mental health services. Previous research has suggested that in order to improve help seeking behaviour in young people, mental health services must help young people improve their mental health literacy by helping them recognize different mental health symptoms, reduce mental health stigma by improving attitudes toward mental health and treatment, and incorporate self-help techniques (Gulliver *et al.*, 2010). Research by Soorkia *et al.* (2010) also recommends that universities should do a better job of understanding their students' mental health needs based on their cultural values and ethnic identities. As the findings from the current study suggest, and as

indicated through previous research (Farrer *et al.*, 2015), mental health services on university campuses may wish to explore online platforms that incorporate family and friends into treatment. Additionally, these services should provide tailored information and treatment specifically to individuals who are considered to be most vulnerable for distress and low well-being, including women, bisexuals, and those with a history of mental health problems. Although mental health literacy is significantly positively correlated with help-seeking behaviour, and despite no significant differences in help-seeking behaviour being found between genders and years of education, further research may be needed to ascertain whether additional provisions are necessary to specifically help men and undergraduates, two groups of individuals who scored lower for mental health literacy

Mental health literacy and distress and well-being

The finding of a lack of relationship between mental health literacy and distress and well-being warrants further review. Overall, nearly half of the students in the current study indicated they have a mental disorder, which is twice as high as the national average in the UK (McManus *et al.*, 2013), and a lower rating of well-being than the English general population (National Statistics, 2012). Previous research has found that mental health literacy is associated with overall lower symptoms of depression in adolescents and young adults (Lam, 2014). Although findings from the current study indicate that mental health literacy is significantly positively correlated with help-seeking behaviour, a finding also seen in previous similar research (Reavley *et al*., 2014), other aspects of the university environment need to be examined with respect to improving overall mental health. Findings from the 2013 NUS study indicated that course loads, exams, balancing study and other commitments, and grades represented the top four mental

distress triggers for students. Researchers should further evaluate environmental aspects of the university when aiming to improve the overall mental well-being of students. In addition to mental health literacy, environmental determinants such as class structures, workloads, timetables, and policies need to be examined for their contribution to mental health difficulties. Research by Macaskill (2013) has also pointed to changes in the manner the British government has provided financial support to universities and how this increased financial cost has been passed onto students. Accordingly, stress experienced by students that stems from the financial costs of university education should also be examined. Additionally, the availability and accessibility of mental health services for students, both at the university and externally, should be examined further, as has been recommended by several organisations and researchers (Royal College of Psychiatrists, 2011; Storrie *et al.*, 2010; Universities UK, 2015).

Strengths and limitations

A number of strengths and limitations should be mentioned about this study. First, to the best of our knowledge, this is the first study to examine multiple attributes of mental health literacy in UK university students. Previous studies in the UK (Chew-Graham *et al.*, 2003; Furnham *et al.*, 2008; Furnham *et al.*, 2011; Furnham *et al.*, 2013; Furnham and Wong, 2007; Stanley *et al.*, 2010) have not addressed all major aspects of mental health literacy and therefore failed to provide a holistic investigation of what university students understand, feel about, and ultimately act on, with respect to mental health problems. Second, the MHLS, K10, and WEMWBS indicated good or excellent internal consistency, illustrating that they reliably measured all intended constructs of mental health literacy, distress, and well-being. The GHSQ has previously been shown to have good test-retest reliability. Third, a large sample of students

from various departments across one university was recruited for this study, providing a diverse analysis of mental health literacy, help seeking behaviour, and mental health in this population. Fourth, data on sexuality was collected and provided input on variances in mental health literacy, help seeking behaviour, and mental health between sexual minorities and heterosexuals. Such information based on sexuality has been advocated by the Institute of Medicine (2011) because it can help researchers better understand health conditions and identify health deficits that need to be addressed through specific interventions. In the current study, results showed that the mental health needs of individuals who identify as bisexual will require further attention.

With respect to limitations, three must be mentioned. First, the majority of participants were undergraduate students with only a limited number of those in postgraduate education. Given that mental health literacy increases with education years, this large sample of undergraduates may have lowered the overall mean average score of mental health literacy for the entire sample. Second, all participants were recruited from one university in the south of England, thus limiting the generalisability of these findings. Further holistic mental health literacy research is needed across universities in the UK. Third, as this was a cross-sectional study, relationships between variables can only be identified, rather than explained.

Conclusion

The current study illustrated that improved mental health literacy is associated with improved help-seeking behaviours, but unfortunately those who need help most (i.e., those with high levels or distress, low levels of well-being) are the least likely to seek it out. Strategies need to be devised and investigated that reach these students and offer mental health support in ways that will be accessed and used. Furthermore, the results of the current study indicate that there

are at-risk populations within university settings, including women, bisexuals, and those with previous mental health problems, who may require different approaches to mental health care than has previously been provided. Although no differences were seen in mental health literacy between women and men or any sexual minorities and heterosexuals, women and bisexuals did indicate significantly higher levels of distress and lower levels of well-being. Further investigations of mental health literacy in conjunction with environmental determinants of mental health are needed.

References

All Party Parliamentary Group on Students. (2015), "Lost in transition? – provision of mental health support for 16-21 year olds moving to further and higher education", available at: http://appg-students.org.uk/resources/briefings/ (accessed May 12, 2016).

Australian Bureau of Statistics. (2007), "National survey of mental health and wellbeing: summary of results (cat. 4326.0)" available at: http://www.abs.gov.au (accessed May 12, 2016).

Blanco, C., Okuda, M., Wright, C., Hasin, D.S., Grant, B.F., Liu, S.M., and Olfson, M. (2008), "Mental health of college students and their non-college-attending peers: Results from the National Epidemiologic Study on Alcohol and Related Conditions", *Archives of General Psychiatry*, Vol. 65 No. 12, pp. 1429-1437.

Chew-Graham, C.A., Rogers, A., and Yassin, N. (2003), "'I wouldn't want it on my CV or their records': Medical students' experiences of help-seeking for mental health problems", *Medical Education*, Vol. 37 No. 10, pp. 873-880.

Curtis, C. (2010), "Youth perceptions of suicide and help-seeking: 'They'd think I was weak or "mental"'", *Journal of Youth Studies* Vol. 13 No. 6, pp. 699-715.

Czyz, E.K., Horwitz, A.G., Eisenberg, D., Kramer, A., and King, C.A. (2013), "Self-reported barriers to professional help seeking among college students at elevated risk for suicide", *Journal of American College Health*, Vol. 61 No. 7, pp. 398-406.

Downs, M.F., and Eisenberg, D. (2012), "Help seeking and treatment use among suicidal college students." *Journal of American College Health*, Vol. 60 No. 2, pp. 104-114.

Drum, D.J., Brownson, C., Burton Denmark, A., and Smith, S.E. (2009), "New data on the nature of suicidal crises in college students: Shifting the paradigm", *Professional Psychology: Research and Practice*, Vol. 40 No. 3, pp. 213-222.

Eisenberg, D., Golberstein, E., and Gollust, S.E. (2007), "Help-seeking and access to mental health care in a university student population", *Medical Care*, Vol. 45 No. 7, pp. 594-601.

Eisenberg, D., Golberstein, E., and Hunt, J.B. (2009), "Mental health and academic success in college", *The B.E. Journal of Economic Analysis & Policy*, Vol. 9 No. 1.

Eisenberg, D., Hunt, J.B., and Speer, N. (2013), "Mental health in American colleges and universities: Variation across student subgroups and across campuses", *Journal of Nervous & Mental Disease*, Vol. 201 No. 1, pp. 60-67.

Farrer, L., Gulliver, A., Bennett, K., and Griffiths, K.M. (2015), "A virtual mental health clinic for university students: A qualitative study of end-user service needs and priorities", *JMIR Mental Health*, Vol. 2 No. 1., e2.

Furnham, A., Annis, J., and Cleridou, K. (2014), "Gender differences in the mental health literacy of young people", *International Journal of Adolescent Medicine and Health*, Vol. 26 No. 2, pp. 283-292.

Furnham, A., Cook, R., Martin, N., and Batey, M. (2011), "Mental health literacy among university students", *Journal of Public Mental Health*, Vol. 10 No. 4, pp. 198-210.

Furnham, A., Raja, N., and Khan, U.A. (2008), "A cross-cultural comparison of British and Pakistani medical students' understanding of schizophrenia", *Psychiatry Research*, Vol. 159 No. 3, pp. 308-319.

Furnham, A., and Wong, L. (2007), "A cross-cultural comparison of British and Chinese beliefs about the causes, behaviour manifestations and treatment of schizophrenia", *Psychiatry Research*, Vol. 151 No. 1–2, pp. 123-138.

Gulliver, A., Griffiths, K. M., and Christensen, H. (2010), "Perceived barriers and facilitators to mental health help-seeking in young people: A systematic review", *BMC Psychiatry*, Vol. 10 No. 113.

Hunt, J., and Eisenberg, D. (2010), "Mental health problems and help-seeking behavior among college students", *Journal of Adolescent Health*, Vol. 46 No 1, pp. 3-10.

Hysenbegasi, A., Hass, S.L., and Rowland, C.R. (2005), "The impact of depression on the academic productivity of university students", *Journal of Mental Health Policy and Economics*, Vol. 8 No. 3, pp. 145-151.

The Institute of Medicine. (2011), *The health of lesbian, gay, bisexual, and transgender people: Building a foundation for better understanding*, The National Academies Press, Washington, DC.

Jorm, A.F., Christensen, H., and Griffiths, K.M (2005), "The public's ability to recognize mental disorders and their beliefs about treatment: changes in Australia over 8 years", *Australia and New Zealand Journal of Psychiatry*, Vol. 40 No. 1, pp. 36-41.

Kessler, R.C., Andrews, G., Colpe, L.J., Hiripi, E., Mroczek, D.K., Normand, S.L.T., Walters, E.E., and Zaslavsky, A.M. (2002), "Short screening scales to monitor population prevalence's and trends in non-specific psychological distress", *Psychological Medicine*, Vol. 32 No. 6, pp. 959-976.

Lam, L.T. (2014), "Mental health literacy and mental health status in adolescents: a population-based survey", *Child and Adolescent Psychiatry and Mental Health,* Vol. 8 No. 26.

Leach, L.S., Christensen, H., Griffiths, K.M., Jorm, A.F., & Mackinnon, A.J. (2007), "Websites as a mode of delivering mental health information: Perceptions from the Australian public", *Social Psychiatry and Psychiatric Epidemiology,* Vol. 42 No. 2, pp. 167-172.

Macaskill, A. (2013), "The mental health of university students in the United Kingdom", *British Journal of Guidance & Counselling,* Vol. 41 No. 4, pp. 426-441.

McManus, S., Meltzer, H., Brugha, T., Bebbington, P., and Jenkins R. (2009), "Adult psychiatric morbidity in England 2007: Results of a household survey", available at: http://www.hscic.gov.uk/pubs/psychiatricmorbidity07 (accessed May 12, 2016).

Merritt, R.K., Price, J.R., Mollison, J., and Geddes, J.R. (2007), "A cluster randomized controlled trial to assess the effectiveness of an intervention to educate students about depression", *Psychological Medicine,* Vol. 37 No. 3, pp. 363-372.

Mind. (2014), "Understanding mental health problems", available at: http://www.mind.org.uk/media/619080/understanding-mental-health-problems-2014.pdf (accessed May 12, 2016).

National Statistics. (2012), "Health Survey for England 2011", available at: http://www.hscic.gov.uk/catalogue/PUB09300/HSE2011-Sum-bklet.pdf (accessed May 12, 2016).

National Student Survey. (2013), "Mental distress survey overview", available at: http://www.nus.org.uk/Global/Campaigns/20130517%20Mental%20Distress%20Survey%20%20Overview.pdf (accessed May 12, 2016).

O'Connor, M., and Casey, L. (2015), "The Mental Health Literacy Scale (MHLS): A new scale-based measure of mental health literacy", *Psychiatry Research*, Vol. 229 No. 1-2, pp. 511-516.

Qualtrics (2016), "Qualtrics", available at: qualtrics.com (accessed May 12, 2016).

Quinn, N., Wilson, A., MacIntyre, G. and Tinklin, T. (2009), "'People look at you differently': Students' experience of mental health support within higher education", *British Journal of Guidance & Counselling*, Vol. 37 No. 4, pp. 405-418.

Reavley, N.J., McCann, T.V., and Jorm, A.F. (2012), "Mental health literacy in higher education students", *Early Intervention in Psychiatry,* Vol. 6 No. 1, pp. 45-52.

Reavley, N.J., McCann, T.V., Cvetkovski, S., and Jorm, A.F. (2014), "A multifaceted intervention to improve mental health literacy in students of a multicampus university: a cluster randomised trial." Social Psychiatry & Psychiatric Epidemiology, Vol. 49 No. 10, 1655-1666.

Royal College of Psychiatrists. (2011), "Mental health of students in higher education", available at: http://www.rcpsych.ac.uk/files/pdfversion/cr166.pdf (accessed September 12, 2016).

Smith, C., and Shochet, I.M. (2011), "The impact of mental health literacy on help-seeking intentions: Results of a pilot study with first year psychology students", *International Journal of Health Promotion,* Vol. 13 No. 2, pp. 14-20.

Soorkia, R., Snelgar, R. and Swami, V. (2011), "Factors influencing attitudes towards seeking professional psychological help among South Asian students in Britain", *Mental Health, Religion & Culture,* Vol. 14 No. 6, pp. 613-623.

Stanley, N., Mallon, S., Bell, J., and Manthorpe, J. (2010), "Suicidal students' use of and attitudes to primary care prevention services", *Primary Health Care Research and Development,* Vol. 11 No. 4, pp. 315-325.

Storrie, K., Ahern, K. and Tuckett, A. (2010), "A systematic review: students with mental health problems—a growing problem", *International journal of nursing practice,* Vol. 16 No. 1, pp. 1-6.

Tennant, R., Hiller, L., Fishwick, R., Platt, P., Joseph, S., Weich, S., Parkinson, J., Secker, J., and Stewart-Brown, S. (2007), "The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): Development and UK validation", *Health and Quality of Life Outcome,* Vol. 5 No. 63.

Universities UK. (2015), "Student mental wellbeing in higher education: Good practice guide", available at: http://www.mwbhe.com/inc/files/documents/publications/studentmentalwellbeinginhe.pdf (accessed September 12, 2016).

Wei, Y., Hayden, J., Kutcher, S., Zygmunt, A., and McGrath, P. (2013), "The effectiveness of school mental health literacy programs to address knowledge, attitudes, and help-seeking among youth", *Early Intervention in Psychiatry,* Vol. 7 No. 2, pp. 109-121.

Wilson, C.J., Deane, F.P., Ciarrochi, J., and Rickwood, D. (2007), "Measuring help-seeking intentions: Properties of the general help seeking questionnaire", *Canadian Journal of Counseling,* Vol. 39 No. 1, pp. 15–28.

Youssef, F.F., Bachew, R., Bodie, D., Leach, R., Morris, K., and Sherma, G. (2014), "Knowledge and attitudes towards mental illness among college students: Insights into the

wider English-speaking Caribbean population", *International Journal of Social Psychiatry*, Vol. 60 No. 1, pp. 47-54.