Running head: MENTAL HEALTH LITERACY

**Mental health literacy: A review of what it is and why it matters.**

**Abstract**

An increasing amount of scholarly work has attempted to understand the reasons for poor rates of help-seeking for symptoms of mental health disorders all around the world. One particular body of work has focused on ‘mental health literacy’ (MHL) defined as knowledge about mental health disorders that are associated with their recognition, management, and prevention. In this paper we report a non-systematic review of studies on MHL, to give non-expert academics, policy makers and practitioners an understanding of the field. We find that studies consistently show that the general public have relatively poor recognition of the symptoms of mental health disorders and appear to emphasise self-help over traditional medical treatments. In addition, we find that there are age, gender, educational, urban-rural and cross-cultural differences in MHL, which may differentially affect rates of help-seeking in different contexts. Implications and future directions for research are considered in conclusion.

**Keywords**: Mental health literacy; Lay beliefs; Mental illness; Explanatory models; Cross-cultural.

**Simple English Summary**. Whilst the importance of individual and society health literacy has long been recognised there has been less work on *mental* health literacy (MHL) which is the ability to recognise, manage and prevent mental illness. In this paper we look at what the research says on this topic particularly individual differences (e.g. age, gender, education) in MHL. We also examine the research on cultural and national differences and conclude with what implications this work has for application and future research.

**Mental health literacy: A review of what it is and why it matters**

Two of the United Nations (UN) Sustainability Development Goals are Good Health and Well-Being (SDG-3) and Quality Education (SDG-4). Like others, these goals are related and of considerable importance to advance the welfare and people world-wide. Everybody wants and need access to health facilities and education in how to recognise health and illness in oneself and others.

For many years there has been an active research interest in health literacy (HL) because it has been demonstrated to be closely related to significant health outcomes (Kutcher, Wei & Conoglio, 2016). Definitions of health literacy vary but essentially involve the access, communication, comprehension and evaluation of information about (personal) health which leads to the improvement, maintenance and promotion of health. The World Health Organisation has stressed the role of health literacy as being a stronger predictor of health than education, employment status, income as well as ethnic/racial group. Hence, multinational agencies and governments have realised that at both the individual and population level better HL is associated with decreasing health inequalities, enhancing health systems and developing better health policies.

Whilst the concept of HL is well known and researched it has not been the same story for Mental Health Literacy (MHL). This paper looks at the literature on MHL: what it means, what we know and do not know, and why it may be as important as HL. Indeed a few recent studies which have compared MHL and HL have shown, rather unexpectedly, that people are more knowledgable about physical than mental health (Wickstead & Furnham, 2017) though it does depend on the particular illness (Vimalanathan. & Furnham, 2018).

In the past several decades, the prevalence of mental health disorders has been studied in a number of different countries, providing estimates on how common these disorders are. Although different criteria or thresholds of severity have been used, the results of most community epidemiological surveys suggest that mental health disorders are relatively common, cross-culturally among the general public. For example, the World Health Organization (WHO) reported that over a third of people worldwide meet sufficient criteria to be diagnosed with a mental health disorder at some point in their lives(WHOCPE, 2000). Similarly, reviews of cross-European studies have reported that up to one-in-three people meet criteria for mental health disorders at some stage in their lives (Alonso et al., 2004).

These rates differ by gender (with women generally having higher prevalence rates than men (Somers, Goldner, Waraich & Hsu, 2006) and by specific disorders. In terms of the latter, for example, preliminary results from a survey of 26 countries by the WHO indicates that anxiety and mood disorders are the most common globally, whereas substance and impulse-control disorders are consistently less prevalent (WHOCPE, n.d.). In addition, there appear to be cultural, national and regional differences, with prevalence rates generally highest in Western countries and lowest in Asian countries though that may be a function of MHL. Importantly, however, reported prevalence rates are believed to be underestimates, due to poor diagnosis (particularly in countries with lower access to mental health services) and low self-reporting rates(WHOCPE, n.d.). In the United States, for example, surveys of the general population have reported lifetime mental health disorder prevalence rates of almost 50%(Kessler, Berglund, Demler, Jin, Meikangas & Walters, 2005).

The high prevalence rates of mental health disorders is an important concern for public health professionals because of the many consequences for individuals and their families, as well as the socioeconomic burden on national economies(Sobocki et al., 2007; White & Casey. 2017). Yet many people with mental health disorders do not receive any sort of professional assistance or help(Alonso et al., 2007). For instance, one report suggested that about half of serious mental illness cases in developed countries, and about four-fifths of cases in less developed countries, received no treatment in the year prior to the survey(Demyttenaere et al., 2004). This is of particular concern because early help-seeking for mental ill-health issues has been shown to promote early intervention and results in improved long-term outcomes(Clarke et al., 2006).

It is not surprising, then, to learn that a good deal of scholarly activity has sought to understand the reasons for poor help-seeking rates in relation to mental health symptoms. Thus, some work has focused on systemic barriers that impede help-seeking, such as economic hardship, limited access to psychiatric services, or lack of awareness of services(Sue & Sue, 2003, Kutcher et al., 2016). Other related work has examined psychological factors that are associated with poorer utilisation of psychiatric services, including attitudes toward professional help(Smith, Peck & McGovern, 2004), cultural mistrust particularly among ethnic minority groups(Gilbert, Gilbert & Sanghera, 2004; Soorkia, Snelgar & Swami, 2011) and scepticism of psychiatry as a science(Swami & Furnham, 2012).

In addition, a growing body of work has focused specifically on the explanatory models that the general public rely on to explain health maintenance and reasons for ill-health(Helman, 1989). Such explanatory models are typically viewed as the lay beliefs and conceptions that non-professionals hold about health and illness(Hughner & Kleine,2004). This body of work can be traced back at least until the mid-1950s(Nunnally, 1961). There appears to be a divergence between lay perceptions of health and illness, on the one hand, and established scholarly knowledge on the other, which may influence when and how the general public seek help for their health concerns.

**Mental health literacy**

This literature has been greatly rejuvenated by the expanding literature on what is called MHL introduced by Jorm and colleagues (Jorm, Korten, Jacomb, Christensen, Rodgers, et al., 1997; Jorm, 2000, 2012, 2015) to refer to public knowledge and recognition of mental disorders, as well as knowing how and where to seek help. There are probably now well over five hundred papers that fall into this field. The idea has been so popular that there are now papers titled by very specific “literacies” like dementia literacy (Low & Anstey, 2009) and schizophrenia literacy (Furnham & Blythe, 2012) meaning knowledge of a specific disease.

Jorm (2015) has argued that the introduction of the concept has led to policy impact and led to the development of may interventions. Indeed, there have been so many interventions that a recent systematic review has appeared (Lo et al, 2018).

In a seminal article, Jorm and colleagues (1997) defined MHL as “knowledge and beliefs about mental disorders which aid their recognition, management, or prevention” (p. 182). The two mental disorders most investigated have definitely been depression and schizophrenia (Koutoufa & Furnham, 2014; Park et al., 2018; Thornsteinsson et al., 2014; Wong et al., 2010).

Viewed from this perspective, it is argued that the conceptual models that lay individuals use to understand and explain mental health illnesses help shape their help-seeking behaviours for psychiatric symptoms. In addition, such conceptual mental models are also believed to influence related aspects of help-seeking, such as choice of treatment, compliance with treatment, and the stigmatising of individuals suffering from mental health disorders(Angermeyer & Dietrich, 2006; Rusch, Evans-Lacko, Henderson, Flach & Thornicroft. 2011; Ten Have et al., 2010).

When scholars have examined MHL, they have typically found the general public to have a poor understanding of mental health which has impeded them seeking and getting treatment (Goldney et al., 2001). Renewed attention to these issues began in the late 1990s, when scholars determined that the general public in a number of countries did not share the same opinions as mental health professionals about various aspects of mental health(Angermeyer & Matschinger, 2005; Dietrich et al., 2004; Furnham & Igboaka, 2007; Furnham, Raja & Khan, 2008). This included conceptual explanations of the aetiology of mental health disorders, with the general public typically favouring psychosocial explanations over biological explanations in relation to the onset of a range of mental health disorders (Angermeye & Dietrich, 2006; Furnham & Igboaka, 2007; Furnham, Raja & Khan, 2008; Hugo et al., 2003; Swami, Furnham, Kannan & Sinniah, 2008). For example, one large survey of the Finnish general public reported a common belief to be that depression is a matter of personal will(Aromaa, Tolvanen, Tuulari & Wahlbeck, 2010). Other studies have reported that the public in European countries tend to emphasise stressful circumstances in a person’s life as the most likely cause of a range of mental health disorders (Hannson, Chotai & Bodlund, 2010).

In terms of the aetiology and risk factors for schizophrenia specifically, for instance, the available evidence suggests that participants believe schizophrenia is caused by the social environment, particularly by recent stressors. By contrast, factors such as chemical imbalances in the brain and genetic inheritance appear to be much less emphasised when explaining the aetiology of schizophrenia(Link et al., 1999; Furnham et al., 2016). Related studies have similarly shown that the social environment and life events are more strongly emphasised than biological factors when explaining the causation of different mental health disorders, including depression.Nevertheless, there is some evidence of a recent shift among the general public toward biological explanatory models for mental health disorders, although this shift appears to be piecemeal and stronger for certain disorders(Read, Mosher & Bentall, 2004).

One of the great problems for the researcher in this area is to find salient papers as they are found across many disciplines including anthropology, education, psychology, social work and

sociology.

The explosion of papers in the MHL area has also lead to a number of reviews (O’Connor Casey & Clough, 2014). For instance, Kutcher, Wei and Congiglio (2016) reviewed over 400 papers and were critical of a number of issues: the limited number of interventions reported in the studies; consistent problems with the measurement of MHL by vignettes; and samples often being restricted to students. Many have been critical of vignette techniques (Sai & Furnham, 2013; Furnham et al, 2016). Others have been much more critical of the vagueness of the construct and poor theory development (Spiker & Hammer, 2018). Similarly, there has been such a proliferation of ways of measuring MHL that a recent review located and evaluated knowledge, stigma and seeking help measures (Wei et al., 2015). Indeed, there have been so many studies that some reviews have restricted themselves to papers emanating from a particular country or region (Tonsing, 2018).

**Cross-Cultural Research**

Certainly, one of the most interesting aspects of this research concerns cross-cultural comparisons. Most studies compare two or three countries (Altweck et al., 2015; Liu et al., 2014) and there have been also been reviews. Furnham and Hamid (2014) reviewed over 30 studies with a particular focus on east-west comparisons. Some studies focus on within country cultural differences and others cross-cultural differences. There were many correlates of MHL including age, gender and socioeconomic status. Urban populations tend to show greater recognition of both depression and schizophrenia than rural populations, as well as being more likely to recommend a mental health professional for either disorder. The more developed the country the greater the MHL of its citizens. Cross-country comparisons were interesting but difficult because of the way mental illnesses are defined, understood and treated. Many studies have emerged from Australia led by Jorm and his very active group, as well as from America, China, India, Pakistan, and Nigeria using similar methodology show surprisingly different results. One important finding is that MHL is closely related to religious and supernatural causes, which has important implications for how to target groups with low MHL.

**Symptom recognition**

In addition to their preference for psychosocial explanations of mental health disorders, lay individuals also have difficulty recognising mental health disorders and labels. This is important because failure to identify symptoms and use correct psychiatric labels is known to negatively impact upon help-seeking behaviour for psychiatric symptoms (Jorm, Christensen & Griffiths, 2005; Wright, Jorm, Harris & McGorry, 2007). Moreover, such issues may also negatively affect communication with health practitioners, who are known to be more likely to detect and treat mental health symptoms if patients communicate those symptoms in psychological rather than somatic terms (Herran, Vasquez-Barquerro & Dunn, 1999). Importantly, the ability to recognise symptoms of mental health disorders may not be closely related to stigmatising attitudes (Crisp, Gelder, Rix, Meltzer & Rowlands, 2000), although it does appear to be associated with a reduction in negative emotional responses to mental illness (Rose, Thornicroft, Pinfold & Kassam, 2007).

The main way in which studies have examined the general public’s ability to recognise mental health disorders has been through the use of case vignettes (Lauber et al., 2003; Jorm, Angermeyer & Katschnig, 2000; Jorm, Nakane, Christensen, Yoshioka, Griffiths & Wata, 2005). An example of these is shown in Table 1 and derived from Furnham, Ritchie and Lay (2016).

Insert Table 1 here

When participants are asked to describe the problem identified in the case vignette, they typically fail do identify it as an instance of depression (Jorm, Nakane, Christensen et al., 2005). Certainly, early work indicated that only about 40% of participants correctly identify the vignette as being a case of depression(Jorm, Korten, Jacomb et al., 1997). More recent studies using the same or similar vignettes of depression have suggested that there have been some improvement in the general public’s recognition abilities, with up to 70% of participants providing a correct label (Jorm, Christensen & Griffiths, 2006; Swami, Loo & Furnham, 2010;). Similarly improved rates of recognition have also been reported for vignettes of schizophrenia (Klimidis, Hsiao & Minas, 2007), although many participants still confuse the disorder with ‘split personalities’ (Furnham & Rees, 1988; Furnham & Chan, 2004; Jorm, 2000; Brandli, 1999; Hillert, Sandman & Ehmig, 1999). Other studies have similarly reported that participants have difficulty identifying cases of anxiety disorders (Coles & Coleman, 2010; Olsson & Kennedy, 2010), psychosis (Leighton, 2010; Chung, Chen, Lam & Chan, 1997), eating disorders (Mond & Arrighi, 2011), psychopathy (Furnham, Daoud & Swami, 2009), autism spectrum disorders (Korama et al., 2009)], and personality disorders (Furnham, Abajian & McClelland, 2015; Furnham, Kirkby & McClelland, 2011; Winceslaus & Furnham, 2011).

Three other methods have been used to study lay individual’s understanding of mental health disorders. The first asks respondents to rate scholar-generated statements about particular disorders (Furnham & Igboaka, 2007; Swami, Furnham, Kannan & Sinniah, 2008), although this technique may have low validity. That is, asking respondents to rate a series of statements about a given disorder assumes that respondents have at best a coherent understanding the disorder and at worst minimal information about the disorder, when it is quite possible that neither of these assumptions is true. Such a concern is especially important when scholar-generated statements have been designed to reflect professional opinions about a disorder or when there are competing explanatory models in lay conceptual models. An example of questionnaires about the cause and consequence of depression can be seen in Tables 2 and 3 (Furnham, Ritchie & Lay, 2016)

Insert Table 2 and 3 here

A second method presents participants with a minimal description of a disorder followed by an extended list of possible causes of the disorder (Swami, Loo & Furnham, 2010). Participants are asked to rate how likely they think each item in the list is a cause of the disorder and ratings are then factor-analysed to examine whether there is an underlying structure to their beliefs. Thus, one recent study using this technique with Malaysian participants reported that their beliefs about the causes of depression could be reduced to five coherent factors relating to environmental causes, destiny and God as causes, stress and pressure as causes, biological causes, and supernatural causes. The strengths of this technique include its simplicity and its wide applicability (for example, the same scale could be used to examine beliefs about the causes of different disorders), although it too relies on scholar-generated items and could potentially omit alternative explanatory factors.

A third method that has been recently introduced to examine MHL and the ability of the public to recognise mental health disorders specifically, is the over claiming technique (Swami, Persaud & Furnham, 2011; Swami, Papanicoloau & Furnham, 2011). Originally introduced as a self-report measure intelligence, the over claiming technique presents participants with a large set of items, which they are asked to rate for familiarity (Pauhlus & Bruce, 1990). To the extent that participants rate foils (not existent illnesses) as familiar, this constitutes over claiming. Using this technique, two recent studies have reported that the general public are generally able to distinguish real mental health disorders from foils (Swami, Persaud & Furnham, 2011; Swami, Papnicoloau & Furnham, 2011).

**Treatment choices**

In addition to the above, the available evidence also suggests that the general public do not share health practitioners’ opinions about the efficacy of psychiatric and psychological treatments (Jorm, Korten, Jacomb et al., 1997; Angermeyer & Matschinger, 2005; Jorm, Christensen & Griffiths, 2005; Angermeyer, Brier, Deitrich, Kenzine & Matschinger, 2005). For example, studies of actual help-seeking suggest that most people do not seek help for symptoms of mental health disorders (Angermeyer, Brier, Deitrich, Kenzine & Matschinger, 2005; Sawter et al., 2001; Zachrisson, Rodhe & Mykletun, 2006; Weiss, 1994) and those who are more likely to self-help or turn to friends and family for help than to health professionals (Jorm, Angermeyer & Katschnig, 2000; Evans, Hawton & Rodham, 2005; Holzinger, Mastchinger & Angermeyer, 2015). Moreover, when asked about treatment choices for hypothetical cases, the general public again appear to prefer self-help treatments over conventional medicine (Swami, Loo & Furnham, 2010; Jorm, 2000; Brandli, 1999; Nieuwsma & Pepper, 2010). Such findings are more worrying among children and adolescents, who frequently report not knowing what to recommend to a friend with mental health difficulties; where help is recommended, it is more likely to be with peer groups rather than professional help (Scottish Executive, 2004; Kelly, Jorm & Rodgers, 2006).

**Variations in mental health literacy**

**Culture**

Although the evidence suggests that the general public have poor MHL some recent evidence indicates that, in developed countries, there have been improvements in the ability of lay individuals to recognise symptoms of mental health disorders (Wright, Jorm, Harris & McGorry, 2007; Angermeyer, Holzinger & Matschinger, 2009; Eckert, kutek, Dunn, Air & Goldney, 2010). Moreover, there also appears to have been a shift in opinions about the aetiology and best treatments for mental health disorders in developed nations, with these opinions having become more similar to those of practitioners over the past decade (Angermeyer, Holzinger & Matschinger, 2009; Eckert, Kutek, Dunn, Air & Goldney, 2010; Goldney, Fisher, Dal Grande & Taylor, 2005). By contrast, the extant literature suggests that MHL remains at a relatively low level in most developing nations (Lauber & Rossler, 2007), including those in West Africa (Furnham & Igboaka, 2007), East Africa (Furnham & Baguma, 1999), Southern Africa (Sorsdahl & Stein, 2010), South Asia (Furnham, Raja & Khan, 2008; Suhail, 2005; Raguram, Raghu, Vounatsou & Weiss, 2004; Fernando, Deane & McLeod, 2009), Southeast Asia (Swami, Furnham, Kannan & Sinniah, 2008; Swami, Loo & Furnham, 2010; Edman & Kameoka, 1997; Parker, Lee, Chen, Kua, Loh & Jorm, 2001; Chen, Parker, Kua, Jorm & Loh, 2000), East Asia (Furnham & Wong, 2007; Furnham & Chan, 2004), the Middle East (Al-Krenawi, Graham, Al-Bedah, Kadri & Sehwali, 2009; Ozmen, Ogel, Aker et al., 2005; Bener & Ghuloum, 2011; Sadik, Bradley, Al-Hasoon & Jenkins, 2010; Ghuloum, Bener, Tuna Burgut, 2010), central Asia (Dietrich, Beck, Bujantugs et al., 2004), and South America (Leiderman, Vazquez, Berizzo, Bonifacio et al., 2010; De Toledo Piza Peluso, De Araujo Peres & Luis Blay, 2008). Indeed, poor MHL remains an important concern in the developing world (Mubbashar & Farooq, 2001; Peterson, Lund & Stein, 2011), particularly because of more negative attitudes toward mental illness, lower rates of help-seeking for mental health disorders in this context(WHOCPE, n.d.), and perceived structural barriers to help-seeking (Lee, Guo, Tsang et al., 2010).

Thus, the available evidence suggests that individuals in the developing world are more reluctant than their counterparts in developed nations to use psychiatric labels (Furnham & Igboaka, 2007; Swami, Furnham, Kannan & Sinniah, 2008; Swami, Loo & Furnham, 2010; Furnham & Baguma, 1999; Furnham & Wong, 2007; Furnham & Chan, 2004). This is particularly true in relation to depressive cases (Hugo, Boshoff, Traut et al., 2003), where they are much more likely to highlight general stress and low self-esteem as explanations for depressive symptoms (Jorm, Nakane, Christensen et al., 2005). Moreover, there is some evidence that individuals from developing countries are more likely to somatise symptoms of mental health disorders or associate it with physical illness (Patel, Abas, Broadhead, Todd & Reeler, 2001). Thus, for example, several studies have suggested that the Chinese tend to present symptoms of depression somatically, while suppressing emotional aspects of the disorder (Lin & Cheung, 1999; Ng, 1997; Yeung, Chang, Gresham, Nieranberg & Fava, 2004; Parker, Gladstone & Chee, 2001).

More generally, respondents from developing countries are less likely to seek explanations for mental illnesses (Herzlich, 1973) and, when they do, they are more likely to cite religious and supernatural factors, rather than psychosocial or biological factors, as causes of mental health disorders (Furnham &Igboaka, 2007; Swami, Furnham, Kannan & Sinniah, 2008; Swami, Loo & Furnham, 2010; Furnham & Baguma, 1999; Edman & Kameoka, 1997; Sadik, Bradley, Al-Hasoon & Jenkins, 2010; Ghuloum, Bener & Tuna Burgut, 2010). In particular, many communities in developing nations continue to locate the origin of mental health disorders in the social (primarily failure to observe religious or social norms, or to perform essential rituals) and supernatural worlds (such as possession by spirits or ghosts) (Bener & Ghuloum, 2011; Sadik, Bradley, Al-Hasoon & Jenkins, 2010; Ghuloum, Bener & Tuna Burgut, 2010; Hillier & Jewell, 1983). Not surprisingly, then, individuals from developing nations are also more likely to use non-traditional forms of treatment, such as visiting witch-doctors and indigenous healers (Swami, Loo & Furnham. 2010; Banerjee & Roy, 1998).

Understanding the way in which lay conceptions of mental health disorders are formed and influenced in different cultural contexts remains an important task for scholars. In particular, where cultural groups differ or disagree about a pattern of symptoms of illness, it may lead to different conceptual models about health and the origin of illness. These, in turn, may influence attitudes toward mental illness, as well as rates of help-seeking, preferred treatment options, and the stigmatisation of patients (Kurihara, Kato, Sakamoto, Reverger & Kitamura, 2000; Kermode, Bowen, Arole, Pathare & Jorm, 2009). Folk understandings of mental health disorders provide a useful example of the influence of cultural factors: the available sociological literature includes examples of folk understandings of mental illness among communities in developing countries, such as *susto* (or ‘fright sickness’) in South America (Castor & Eroza, 1998) and *amok* (uncontrollable rage) in Southeast Asia (Kon, 1994).

Perhaps more than any other area of MHL, cross cultural studies are growing fastest. Some compare people from more than one culture (Altweck et al., 2015; Park et al. 2018; Wong et al., 2017) while other concentrate on just one country (Al-Yateem, et al, 2018, Lui, Wong & Furnham 2016). Some have reviewed all the MHL data arising from one country (Tonsing, 2018).

There have also been reviews over specific time periods concentrating on cross-cultural studies. Furnham and Hamid (2014) reviewed many and scattered papers published between 2000 and 2014 on MHL, with particular focus on recognition and attitude towards treatment within non-Western countries. They found the more developed the country the greater the MHL of its citizens. They also noted that there were greater similarities between the international studies than there are differences. All studies showed people show a greater recognition of depression than of schizophrenia. Females compared to makes, higher rather than lower socioeconomic status and urban rather than rural populations had higher MHL

**Demographics**

Even within particular cultures, there appears to be some variation in MHL. For example, in studies that have specifically examined the influence of socio-demographic factors, older age, lower educational qualifications, religiosity, and less vicarious experience of mental illness have all been associated with poorer MHL (Angermeyer & Dietrich, 2006; Riedel-Heller, Matschinger & Angermeyer, 2005; Shulman & Adams, 2002; Fischer & Goldney, 2003; Furnham & Buck, 2003). Other work has highlighted important gender differences, with women generally having better MHL than men (Lauber, Nordt, Falcato & Rossler, 2003; Jorm, Nakane, Christensen et al., 2005; Wang, Adair, Fick, Lai et al., 2007; Gaebel, Baumann, Witte & Zaeske, 2002; Cotton, Wright, Harris, Jorm & McGorry, 2006; Barry & Grilo, 2002). Thus, for example, studies have variously suggested that men are more likely to suggest self-help treatments for mental illness (Jorm, Nakane, Christensen et al., 2005; Wang, Adair, Fick, Lai et al., 2007; Gaebel, Baumann, Witte & Zaeske, 2002), are less likely to be informed about the causes of mental illness (Wang, Adair, Fick, Lai et al., 2007), and are less able to correctly identify symptoms of mental illness in case vignettes (Wong, Lam, Poon & Chow, 2017). Women, on the other hand, appear more likely to endorse psychological explanations for the causes of mental illness and are more open to psychological interventions (Swami, Loo & Furnham, 2010; Wang, Adair, Fick, Lai et al., 2007; Gaebel, Baumann, Witte & Zaeske, 2002; Cotton, Wright, Harris et al., 2006; Barry 7 Grilo, 2002). The type of disorder under consideration may also be important, with women holding more positive attitudes toward cases of disordered eating (Mond & Arrighi, 2011) and post-natal depression (Highet, Gemmill & Milgrom, 2011).

Other work has suggested that ethnic minority and migrant groups may have poorer MHL than majority groups (Furnham & Malik, 1994; Mori, Panova & Keo, 2007; Sheikh & Furnham, 2000). In the United States, for example, one study has reported that undergraduates of Asian descent were more likely to report misconceptions of mental illness and also showed lower confidence in psychotherapy than White undergraduates (Mori, Panova & Keo, 2007). However, the gender-ethnicity interaction may be particularly important. Thus, one study reported that Chinese men in Hong Kong were more likely to endorse psychological explanations of mental illness (Furnham & Chan, 2004). Other work has similarly suggested that Chinese men were more willing to use psychiatric services than Chinese women (Boey, 1999). Chinese women, on the other hand, appear to have a greater tendency to seek help from non-psychiatric sources, including traditional medicine, folk healing, and religious treatments (Boey, 1999). Other work has reported that women in an Arab country were more likely to believe in supernatural and religious causes of mental illness and hold more negative attitudes toward patients in general (Bener & Ghuloum, 2011). However, it has also been reported that adherence to traditional values and acculturation may attenuate these effects, particularly among migrant groups (Wong, Lam, Poon & Chow, 2017).

Finally, a small body of work has examined MHL from an individual differences perspective. For example, recent work has suggested that greater ability to recognise real mental health disorders from foils is positively associated with self-rated intelligence and knowledge of psychiatry, and negatively associated with psychiatric scepticism (Swami, Papanicoloau & Furnham, 2011; Pauhlus & Bruce, 1990). Mental health literacy also appears to be associated with the Big Five personality factor of Openness to Experience, although studies have reported both negative (Swami, Pa[anicoloau & Furnham, 2011) and positive associations (Pauhlus & Bruce, 1990). In general, however, the work on MHL from an individual differences perspective remains very much in its infancy.

**Conclusion**

In the past decade, work on MHL has gathered pace at an astounding rate. Indeed Jorm’s (2012) paper has received over 1300 quotations. One group of studies has simply concentrated on MHL with respect to very specific disorders like the anxiety disorders (Hadjimina & Furnham, 2017) or the conduct disorders (Furnham & Cater-Leno,V. 2012). Others have looked at very specific disorders which have been neglected like Borderline Personality Disorder (Furnham, Lee & Kotzeev, 2016).

For the first time there are experimental studies in the area where vignettes are manipulated to see how small changes have a big impact on labelling (Lee, Furnham & Merritt, 2017) as well as studies which compared physical and MHL with the surprising finding that the latter is better than the former (Wickstead & Furnham, 2017). The focus of the work remains applied and the questions the same.

The evidence that we have reviewed above suggests that, while there may have been some limited improvements in some developed countries, MHL in general remains at a relatively low level. Poor MHL therefore, remains an urgent public health concern because it is known to influence the public’s decision-making in relation to their mental health, particularly their low rates of help-seeking for psychiatric symptoms. In addition, MHL may also influence other aspects of the help-seeking process, such as attitudes toward mental health practitioners, stigma and bias toward patients, treatment choice, and compliance with treatment (Angermeyer & Dietrich, 2006; Angermeyer, Matschinger & Riedel-Heller, 1999; Lauber, Nordt, Falcato & Rossler, 2003; Rusch, Evans-Lacko, Henderson, Flach & Thornicroft, 2011; Ten Have, de Graaf, Vilagut et al., 2010). To the extent that such beliefs are monological in nature, it is also possible that mental health literacy will shape and be shaped by attitudes toward science more broadly (Swami, Stieger, Pietschnig, Nader & Voracek, 2012).

Although much is now known about MHL and its implications, a number of important limitations of this literature are worth highlighting. *First,* scholars studying MHL have typically set off with the assumption that the public’s interpretation of symptoms or a condition are less valid than those of trained mental health professionals. This is important because it could limit our understanding of lay beliefs about mental health and illness. One question is where and when MHL coincides and differs within and between professionals and lay people. Another is the best type of education to increase MHL.

*Second,* as we have noted above, studies on mental health literacy have typically relied on vignettes that are presented in written form and where participants are asked to identify a cluster of symptoms. It is surprising to us that this method of escaped the level of scrutiny that it almost certainly deserves. In particular, the vignette methodology likely lacks ecological validity, in that it may not translate very well to real-life situations. In real life, individuals likely get a good deal more information about symptoms in others and, particularly in close relationships, are able to monitor changes in symptomatology over time. There has been a call for short “talking head” videos where actors from various backgrounds portray symptoms while speaking about them. The question is whether “upgrading” the richness of the “case” will yield different results: is that people have higher MHL than previously thought. When those symptoms affect one’s self, it seems likely that introspection, temporal changes, and knowledge about past behaviour will all affect beliefs about those symptoms, their causes, and the most appropriate treatments.

*Third,* as scholars begin to identify a wider range of factors that shape MHL, the need for sophisticated predictive models of attitudes and behaviours will become increasingly important. As we have noted above, a number of different factors that influence or are related to MHL have been identified, including gender, culture, age, educational qualifications, and personality. The question is which are the more powerful predictors and how are they related. Thus, studies above have indicated that urban-rural differences are important indicators of MHL, but that these differences are confounded by social class and education which may also be related to religion. The answer to this question not helps understand the process of the development of MHL but also where best to introduce educational interventions.

These limitations notwithstanding, it remains clear that there is a need for scholars and practitioners to design and evaluate the efficacy of interventions aimed to promoting better MHL among the general public. Importantly, several studies have reported that interventions based on narrative advertising and printed mental health information has been successful at improving MHL. Such work has provided the basis for successful interventions aimed at improving MHL and reducing the stigma of mental illness among the general public. In the longer-term, improved MHL may be expected to result in improved rates of help-seeking for mental health disorders .

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**Table 1: Examples of Depression Vignettes**

Below are brief descriptions of two cases of people who have a mental health problem. Please read through each description carefully and answer the following questions on what you think might be wrong and how the person may be helped.

Case 1: Kate is 30 years old. She has been feeling really down for the last few weeks. She doesn't enjoy things the way she normally would. In fact, nothing gives her pleasure. Even when good things happen, they don't seem to make Kate happy. She has to force herself to get through the day, and even the smallest things seem hard to do. She finds it hard to concentrate on anything and has no energy at all. Even though Kate feels tired at night, she still can't sleep, and wakes up too early in the morning. Kate feels worthless and feels like giving up. Her family has noticed that she hasn't been herself for about the last month. She doesn't feel like talking and isn’t taking part in things like she used to.

In your opinion, what is wrong, if anything, with Kate?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How do you think Kate could best be helped?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Case 2: John is 45 years old. In the recent month, John has been feeling unusually sad and miserable. He does not enjoy being with his friends and family as before. Even though he feels tired every day, he found it difficult to sleep at night and struggles to get out of bed in the mornings. He does not feel like eating and has lost a lot of weight. John cannot concentrate in his daily tasks, and finds it very difficult to function in the home and at work. John cannot keep his mind on his work and puts off making important decisions. This is causing problems in his job and his boss is concerned about his lowered productivity. John thinks he is a burden to his family and believes that they would be better off without him. John feels so strongly that he is unable to cope with life and unable to be happy anymore, he has been thinking of ways to end his life.

In your opinion, what is wrong, if anything, with John?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How do you think John could best be helped?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Table 2: Example of the rating of causes of depression**

*Depression* is a mental disorder characterised by a pervasive low mood, loss of interest in usual activities and diminished ability to experience pleasure. Below you will find a list of potential causes of depression. For each item, we would like you to rate how strongly you believe it is a *cause of depression*. If you think an item is a cause of depression, you should give it a high response (e.g., 7, 6), but if you think it is not a cause of depression, you should give it a low response (e.g., 1, 2).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Depression is caused by…** | **Strongly Strongly**  **disagree agree** | | | | | | |
| Genetic factors. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being controlled by Satan. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Complications before or during birth. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A chemical imbalance in the brain. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Stress at work. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Academic pressure or failure. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Evil done in a previous life. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being raised by parents or guardians who have depression. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A stressful family environment. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Thinking about things too much. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Not following religious commandments. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Day-dreaming too much. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Enlargement of certain areas of the brain. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A brain neurotransmitter dysfunction. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Destiny. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Cold and uncaring parents. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Possession by ghosts, genies, or evil spirits. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Having blood relatives who have depression. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Taking illegal drugs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Searching too much for inner peace. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A lack of sleep. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| The pressures of modern society. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Punishment from God. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Having an overprotective mother. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Immoral behaviour. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Not drinking enough water. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Germs or a virus that affects the brain. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Loneliness or a lack of friends. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being controlled by a witch-doctor. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Life trauma (e.g., separation, or loss of a relative/close friend) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Childhood trauma (e.g., physical or sexual abuse). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A monotonous and mundane life. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Old age. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being the victim of black magic. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| An unhealthy diet. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A lack of exercise. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Smoking too much. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A lack of freedom in society. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Individuals wanting to be different. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Repressed feelings and emotions in the subconscious. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Wind. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Body temperature. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A test from God. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Financial problems. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Lack of will power. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A side-effect of some other illness. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Unknown causes | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

**Table 3: Example of the rating of cures for depression**

Below you will find a list of potential *treatments for depression*. For each item, we would like you to rate how strongly you believe it is a good treatment for depression. If you think an item is a good treatment for depression, you should give it a high response (e.g., 7, 6), but if you think it is not a good treatment for depression, you should give it a low response (e.g., 1, 2).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Depression is best treated by…** | **Strongly Strongly**  **disagree agree** | | | | | | |
| Taking prescribed medication or drugs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Acupuncture. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Family counseling. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being more religious. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Eating well. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Seeing a psychiatrist | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Becoming more physically active. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Finding new friends. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Cognitive-behavioral therapy (CBT). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Stress management. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Quitting illegal drugs. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Seeing a faith healer. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being kind to others. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Changing one’s diet. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being admitted to a mental hospital. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Buying books on depression. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Drinking coconut water. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Thinking positively. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Seeing a counsellor. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Dealing with symptoms on one’s own. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Going for a physical check-up. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Getting help from close friends. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Talk-therapy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Resting more. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Seeing a social worker. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Taking herbal medicine. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Being strong emotionally. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Quitting smoking. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Meditation or yoga. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Seeing a GP or doctor. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Prayer. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Rigorous exercise. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Hypnosis. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Seeing a psychologist. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Taking up a hobby. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Drinking more water. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Electroconvulsive therapy (ECT). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Exorcism. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Going on holiday. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Following religious commandants. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Homeopathy. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Seeing a psychoanalyst. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Using telephone counselling service (e.g. Befrienders). | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Socialising more. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Getting help from one’s close family. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Seeing a priest or religious teacher. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Taking some time off work. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Not doing anything. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |