Article

Mental health literacy towards depression among non-medical students at a Malaysian university

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ABSTRACT

Background The aim of the present study was to evaluate the knowledge and perception of depression among students of University Sains Malaysia (USM), in Penang, Peninsular Malaysia.
Method Face-to-face interviews were conducted using a pre-validated 21-item questionnaire among students at USM.
Results A total of 500 respondents participated in the survey comprising 24.6% (n=123) males and 75.4% (n=377) females. Half (50.0%, n=250) were Malays, followed by Chinese (44.0%, n=220) and Indians (6.0%, n=30). Whilst exploring the respondents' knowledge of the symptoms of depression, it was found that Chinese females had a comparatively better knowledge (P=0.058) of the symptoms of depression in comparison with Malays and Indians. Overall, social issues were attributed as the possible cause of depression. A cursory knowledge level was observed regarding

medication for depression. Female students were more inclined towards the use of alternative and traditional medicines. However, with regard to seeking professional help, consultation with a psychiatrist was preferred by the majority.
Conclusion Overall, a moderate level of knowledge about the symptoms of depression and a cursory knowledge of its therapy were observed. Those with personal experience of depression had better knowledge of the symptoms and therapy. Alternative treatments and traditional medicines were also favoured. There is a risk that this may affect the ability of Malaysian youths to seek evidence-based mental health care.

Keywords: alternative medicine, depression, knowledge, perception, personal experience, students

Introduction

Depression is the most prevalent mental disorder: it is characterised by symptoms of sadness, lack of interest in routine activities and fatigue.[1] The World Health Organization (WHO) has declared depression to be the leading cause of disability because of its physical, psychological and social impacts.[2]

The WHO has provided evidence of a high rate of depression with a lifetime risk of 7–12% for males and 20–25% for females in the South East Asian Region (SEAR).[3] In the Malaysian context, epidemiological surveys in rural areas have provided evidence that 10% of the population suffers from either

minor or major depressive disorders.[4] Among the elderly, depression has a prevalence rate of 13%. It is particularly prevalent among patients with medical complications, such as diabetes and low haemoglobin levels.[5] In addition, hypertension and low socioeconomic status account for depression among 7.6% of the elderly population.[6,7]

Students have been found to be more prone to depression, probably caused by stress during and over examinations and relationship problems with partners, parents, siblings, lecturers, course mates and loved ones.[8,9] However, international studies associate the prevalence of depressive disorders among students mainly with a stressful educational environment.[10]

The lack of knowledge of and negative attitudes towards depression are other vital issues that can be addressed by evaluating students' level of mental health literacy.[11,12] Mental health literacy is defined as the knowledge and beliefs of the public about mental disorders which aid their recognition, help-seeking behaviours and prevention.[13]

In spite of significant developments in Malaysia's healthcare systems, studies have rarely focused on beliefs about mental illness in the Malaysian milieu.[14] Early studies have provided evidence that many Malaysians believe in supernatural causes of psychiatric illness, particularly spirits and black magic.[15–18] Other causal beliefs regarding poor mental health include excessive mental exertion, punishment from God and sorcery.[19] Moreover, Malaysians who believe in supernatural causes of ill health are also more likely to visit *bomohs* (faith healers) for treatment.[17,20]

The prevalence rate may be higher among adolescents in Malaysia,[21] especially since screening and diagnosis rates remain low.[22] Moreover, traditional practices, such as the use of herbs and roots, are common among Malaysians in dealing with the symptoms of depression.[23] Available information suggests that no concerted efforts have been directed in Malaysia towards addressing issues such as the level of knowledge about symptoms and perceptions about the causes of depression among students. Students may vary from the general public in that they may be more at risk of depression due to stressful academic events and financial constraints faced while pursuing their professional education.[8–10] The present study was therefore undertaken to determine the level of knowledge of depression among students at a Malaysian university.

Methodology

This study was a questionnaire-based survey undertaken in June 2007 at a public university in Penang, Malaysia. Penang is a multicultural state in Malaysia comprising Malays (42.5%), Chinese (46.5%), Indians (10.6%) and other minorities (0.4%).[24] A face-to-face interview was conducted among the students at USM.

Study tool

A preliminary version of the questionnaire was designed which included 30 items, covering questions on socio-demographics, the causes, symptoms, treatment and help-seeking for depression, that were deemed important based on a review of the literature.

In order to assess content validity, the preliminary version of the questionnaire was sent to professionals at the School of Pharmacy and health professionals at the Psychiatric Outpatient Department of the Penang General Hospital. These professionals were asked to assess the questionnaire by providing their overall opinion and by listing the questions in the order of relevance and importance. The questions of greater relevance and importance were highlighted by them and were retained in view of their comments. A 21-item questionnaire was then finalised.

A pilot test was conducted to test the reliability and validity of the questionnaire; two groups consisting of 30 respondents (one group of ten university students and another group of 20 respondents from the general public) were recruited. These respondents were asked for their views on the significance, worth and simplicity of each question and to identify which questions they would suggest be removed so as to make the questionnaire brief. In addition to this, the respondents were also welcome to suggest further comments on the questions as whether they were understandable or not. Most of them suggested simplifying the questions relating to the symptoms. A few also recommended putting the names of some of the medicines (e.g. diazepam and fluoxetine) that are used for the treatment of depression. Responses obtained from the pilot test were entered in the Statistical Package for Social Sciences (SPSS) and the reliability scale was applied in order to estimate the internal consistency of the knowledge domain. All the variables, i.e. knowledge about symptoms, diagnosis and therapy and awareness of causes/prevention were part of the knowledge domain. The internal consistency of the tool was estimated on the basis of Cronbach's alpha

(α=0.76). Furthermore, to assure the validity of the contents, factor analysis was carried out. The content validity was estimated by using Bartlett's test of sphericity and the Kaiser–Mayer–Olkin measure of sampling adequacy. The results show that Bartlett's test of sphericity was significant at <0.0001 and the Kaiser–Mayer–Olkin measure of sampling adequacy was 0.790. According to Scheridan and Lyndall, a measure of more than 0.6 reflects the adequacy of the contents of the questionnaire.[25] Thus, these results showed considerable evidence of the reliability and validity of the sampling tool. The reliability scale was applied to all the variables comprising the knowledge domain, i.e. knowledge about symptoms, diagnosis and therapy and awareness of causes/prevention and, while the internal consistency of the tool was estimated on the basis of Cronbach's alpha (α=0.76). Keeping in mind the language constraints of Penang's multiracial society, all the interviews were conducted by researchers with excellent proficiency in the Malay, Indian and Chinese languages. The same questionnaire had been used in previous studies[26,27] to evaluate public attitudes to and knowledge and perception of depression.

Contents of the questionnaire

The questionnaire comprised two parts: a demographic information section and a section evaluating the students' knowledge and perceptions of depression. The demographic variables considered in the study tool were race, age, religion and gender (questions number 1 to 4). The second section was further subdivided into four: 1) general knowledge about depression; 2) recognition of symptoms of depression; 3) perceptions about the causes of depression; and 4) knowledge regarding the medicines used to treat depression and about seeking professional help.

Section one (question numbers 5 to 8)

General knowledge about depression was evaluated using four questions:

5 Have you ever heard of a disease depression? (Yes/No)
6 What type of depression you have heard about? (open ended)
7 Where did you hear about depression for the very first time? (open ended)
8 Have you ever suffered from depression? (Yes/No/Don't want to disclose).

Section two (question numbers 9 to 17)

Knowledge about depression was assessed using the symptoms of depression identified in the Diagnostic Statistical Manual (DSM IV, 1994).[28] Nine symptoms (nine items) of depression adapted from DSM IV were presented in the questionnaire (Table 1). To estimate the respondents' knowledge, options of yes or no were provided for every symptom. The students' responses were then scored and classified into their respective levels. This classification provides information about the level of recognition of the symptoms of depression. Every right answer (yes) added one point to the respondent's knowledge level. The knowledge levels were rated as follows; zero (very poor), one to two (poor), three to four (moderate), five to six (good) and seven and over (very good).

Section three (question number 18)

This section evaluated students' perceptions of the causes of depression. They were provided with eight possible causes of depression and a ninth statement referring to the prevalence of depression without any reason (i.e. occurring automatically). No rating scale, i.e. yes/no or agree/disagree, was used to measure the response for this particular question. It was a type of multiple option question and respondents could choose more than one option. Details about the contents of this section are presented in Table 2.

Section four (question numbers 19 to 21)

This section comprised of three questions; question number 19 evaluated the students' recognition of depression therapy (multiple options were provided to choose from). Question number 20 explored students' beliefs in traditional therapies to cure depression. An open option was provided and respondents could share their beliefs about types of traditional therapies (see Table 3). Question number 21 was the last question of the study tool and evaluated respondents' willingness to seek professional help from either a general practitioner or psychiatrist.

Data collection

The potential respondents came from ten main disciplines at the university, i.e. pharmacy, chemistry, physics, biology, dentistry, social sciences, computer sciences, Islamic studies, linguistics and communication. On average 50 students from each discipline were approached. The first 50 students having the Electronic Matrix Identity Card of that particular

Table 1 Recognition among students of symptoms of depression

Symptoms	Malay 50.0 % (n=250) n (%)	Chinese 44.0% (n=220) n (%)	Indian 6.0% (n=30) n (%)	χ^2	P value
Sadness or bad moods	208 (49.8)	182 (43.5)	28 (6.7)	2.224	0.365*
Loss of appetite or overeating	151 (49.8)	137 (45.1)	16 (5.3)	0.919	0.632†
Lack of interest in routine activities	154 (47.2)	154 (47.2)	18 (5.5)	4.019	0.134†
Suicidal or self-harming thoughts	127 (40.8)	167 (53.7)	17 (5.5)	31.795	<0.001†**
Fatigue and body aches, feelings of tiredness and exhaustion	114 (51.6)	98 (44.3)	9 (4.1)	2.662	0.264†
Sleep disorders	146 (49.6)	132 (44.9)	16 (5.4)	0.517	0.772†
Lack of energy	124 (50.6)	108 (44.1)	13 (5.3)	0.422	0.810†
Sexual dysfunction or loss of sexual desire	66 (44.6)	75 (50.7)	7 (4.7)	3.923	0.141†
Change in behaviour	90 (43.5)	100 (48.3)	17 (8.2)	7.378	0.025†**

* Fischer exact, † Chi square,** Significant

Table 2 Student's beliefs about causes of depression

Causes of depression	Malay (n=250; 50.0%) n (%)	Chinese (n=220; 44.0%) n (%)	Indian (n=30; 6.0%) n (%)	Total (n=500)	χ^2	P value
Failure in achievements	192 (47.6)	186 (46.2)	25 (6.2)	403 (80.6)	4.642	0.098†
Interpersonal/sad or guilt feelings	200 (48.5)	187 (45.4)	25 (6.1)	412 (82.4)	2.204	0.361†
Examinations	158 (49.4)	144 (45.0)	18 (5.6)	320 (64.0)	0.480	0.787†
Projects	96 (46.6)	99 (48.1)	11 (5.3)	206 (41.2)	2.375	0.305†
Chemical imbalance in brain	88 (54.0)	69 (42.3)	6 (3.6)	163 (32.6)	3.093	0.213†
Death of loved ones	140 (45.3)	154 (49.8)	15 (4.9)	309 (61.8)	11.598	0.003†*
Home/family disharmony	131 (48.5)	127 (47.0)	12 (4.4)	270 (54.0)	3.858	0.145†
Relationship breakup	156 (49.7)	137 (43.6)	21 (6.7)	314 (62.8)	0.709	0.702†
Occurring automatically	30 (41.1)	35 (47.9)	8 (10.0)	73 (14.6)	5.161	0.076†

†Chi square, *Significant

Table 3 Association of gender with attitudes towards alternative medicine

Alternative medicine	Male (n=123; 24.6%)	Female (n=377; 75.4%	χ^2	P value
Spa treatment/massage	3	7		
Religious/spiritual therapy	18	11		
Aromatherapy	2	13		
Person affected can solve it better	2	5	27.391	0.005*
Love is the best solution	3	7		
Meditation/yoga/exercise	2	10		
Traditional medicine	3	16		
Total	33 (32.4%)	69 (67.6%)		

*Significant

school were accepted for interview. There were no specific inclusion and exclusion criteria for the selection of respondents. However, in the case of a respondent refusing to participate in the study, the next respondent from the same school was welcomed.

Keeping in mind ethical requirements verbal consent was taken from the respondents for their participation in the study. Furthermore, ethical approval from the Clinical Research Committee, Ministry of Health Malaysia was sought and granted for this study.

Data analysis

The Statistical Package for Social Sciences (SPSS 15.0®) was used in the data analysis. The χ^2 test was used to examine the difference between proportions. As a rule of thumb, if 25% or more of the cells have an expected cell count that is less than five, then Fisher's exact test is preferred over the chi square test. For comparison of knowledge level differences between the two groups on the basis of gender and personal experience of depression, t-tests were applied. However, for comparison of knowledge levels of more than three, analysis with ANOVA was carried out. A P value of less than 0.05 was considered significant.

Results

The total number of student respondents in this study was n=500, of whom 24.6% (n=123) were

males and 75.4% (n=377) were females. Half of the respondents were Malay (50.0%, n=250), followed by Chinese (44.0%, n=220) and Indians (6.0%, n=30). Their mean age was 22 years (SD: ± 3.70). About 13.0% (n=65) of the respondents had never heard of the disease depression, while 11.4% (n=57) reported having had personal experience of depression; of these 59.6% (34) were female (χ^2=8.605, P=0.003). In response to the multiple option question about the type of depression, the majority (77.2%, n=386) ranked tension as the main type of depression, followed by sadness (49.8%, n=249), change in behaviour (29.0%, n=145) and madness (20.8%, n=104).

Knowledge about symptoms of depression

The respondents' knowledge about the symptoms of depression was assessed using a nine-item symptom scale. The details of the responses are provided in Table 1. Each correct answer was awarded one point and the total was taken to reflect the respondents' knowledge about the symptoms of depression. The minimum score on the scale was zero and the maximum was nine. Findings demonstrate that the Chinese have a significantly (P=0.058) better knowledge of the symptoms in comparison to Malays and Indians (Table 4). Multiple comparisons using post hoc analysis revealed significant (P=0.003) knowledge differences between Chinese and Malays. However, the knowledge difference between Indians and Malays (P=0.995), and Indians and Chinese (P=0.450) was not significant.

Table 4 Comparison of knowledge among ethnic groups

Knowledge level	Very poor	Poor	Moderate	Good	Very good	Excellent		
Score	0	1–2	3–4	5–6	7–8	9	F	*P* value
Malay	7 (2.8%)	54 (21.6%)	72 (28.8%)	35 (14.0%)	44 (17.6%)	38 (15.2%)		
Chinese	7 (3.2%)	30 (13.6%)	55 (25.0%)	41 (18.6%)	50 (22.7%)	37 (16.8%)	2.870	0.048*,**
Indian	1 (3.3%)	5 (16.7%)	10 (33.3%)	4 (13.3%)	6 (20.0%)	4 (13.3%)		

* One-way ANOVA, ** Significant

Furthermore, to clarify the knowledge difference between gender and personal experience of depression, further analysis was carried out using *t*-tests. Those with personal experience of depression were found to have significantly better knowledge (*t*=2.803, *P*=0.005). However, in terms of gender, the findings were not significant (*t*= –0.295, *P*=0.761).

Perception about the causes of depression

In relation to the causes of depression, most of the respondents cited familial and educational issues as the key possible causes of depression. Table 2 illustrates the responses in this regard. The findings revealed some gender-based differences: female respondents were more inclined to link depression to family-related problems. Slightly over half, or 51.6% (*n*=258) ranked death of a loved one as a cause of depression, followed by relationship problems (47.6%, *n*=238) and home and family disharmony (42.0%, *n*=210). With regard to student perceptions of the biological causes of depression, 32.6% (*n*=163) cited chemical imbalance in the brain as a cause of depression. However, further analysis revealed that 74.8% (*n*=122) of these respondents were female.

Knowledge of medication and professional help

In a response to the question evaluating their knowledge of medications for treating depression, slightly less than one-third, or 31.4% (*n*=157), mentioned the use of antidepressants as the first drug of choice, followed by herbs (27.2%, *n*=136), vitamins (12.4%, *n*=62), diazepam (9.8%, *n*=49), nerve tonic (9.4%, *n*=47) and Fluoxetine (6.6%, *n*=33). In addition, about 20.4% (*n*=102) recommended the use of alternative medicines. Further analysis was carried out to determine gender and race differentials in respondents' attitudes towards alternative medicine. Details are shown in Table 3 and Table 5.

In terms of help-seeking behaviour, the majority revealed a willingness to consult both psychiatrists and general practitioners (GPs). However, a breakdown of the responses showed that about 65.6% (*n*=328) were willing to seek help from psychiatrists, while about 49.6% (*n*=248) preferred to consult GPs. Professional help-seeking responses were found to be associated with gender, and a majority (65.6%, *n*=328) would prefer to consult a psychiatrist.

Discussion

Overall, the findings demonstrate a moderate level of knowledge among students. Of the different cultural groups, findings revealed that Chinese students have the best knowledge of the symptoms of depression, followed by Malays and Indians. However, a small number of respondents (3.2%, *n*=16) failed to recognise any symptoms of depression. The knowledge difference was noticeable in terms of gender, as female respondents demonstrated a better knowledge of depression.[27,29] Approximately 11.4% (*n*=57) of the respondents revealed having had personal experience of depression. Not surprisingly, this group, of whom 59.6% (*n*=34) were females, demonstrated statistically significantly better knowledge. In a study by the American College of Obstetricians and Gynaecologists' Committee on Gynaecologic Practice it was also found that females have better knowledge than males of the symptoms of depression.[30] Yonkers and White have associated better knowledge of depression among females with personal experience,[28,31] especially at the time of secondary sexual characteristic development.[32–34]

Table 5 Attitudes toward alternative medicine

Alternative medicine	Malay (*n*=250; 50.0%)	Chinese (*n*=220; 44%)	Indian (*n*=30; 6.0%)	χ^2	*P* value
Spa/massage	8	2	0		
Religious/spiritual therapy	17	11	1		
Aromatherapy	11	3	0	44.445	0.020*
Person can solve it better	2	3	2		
Love is the best solution	3	5	2		
Meditation/yoga/exercise	3	5	4		
Traditional medicine	7	10	2		
Total	51(50.0%)	39(38.2%)	11(11.8%)		

*Significant

Regarding beliefs about the causes of depression, the majority identified educational issues such as failure in achievement and education related problems (such as examinations and projects) as the major cause of depression. However, the death of a loved one, relationship problems and home/family disharmony were found to be perceived as significant causes of depression. Further analysis revealed that these issues were prioritised by female respondents.[26,27,29,35] However, about 32.6% (*n*=163) identified a chemical imbalance in the brain as a possible cause of depression, with the majority (74.9%, *n*=122) surprisingly being female.

The findings revealed only a cursory knowledge of the medications used in the treatment of depression among respondents. The majority recommended alternative treatments, such as yoga, massage and traditional medicines. Ethnic background and religion have been observed as underpinning the belief in traditional ways of curing depression, such as yoga and meditation. Previous studies have documented that these practices are more prevalent among the Chinese (Buddhists) and Indians (Hindus).[36,37] However, the findings of the current study contradict the findings from other studies.[36,37] Among the Malays (Muslims), the majority claimed benefits from religious/spiritual therapies and psychotherapy. Further, a subgroup gender analysis revealed that females were significantly more inclined towards the use of alternative medicines. This finding is consistent with other studies which provide evidence of a strong belief among females in traditional medicines for the treatment of depression.[27,38,39] The most preferred alternative and traditional treatments

were massage, aromatherapy and meditation. Previous studies have identified other issues associated with the use of traditional and herbal medicines, such as culture and the availability of traditional and alternative treatments. While this study did not evaluate the influence of culture on the preferred form of treatment, other studies have indicated that belief in and use of herbal and traditional medicine is culturally more prevalent among the Chinese.[27,36]

Various studies, e.g. Tahir *et al* (2009) and Anthony *et al* (2005), have provided evidence that correlate personal experience of depression with a better recognition of the symptoms of depression and a better knowledge about therapy.[27,40] When exploring respondents' attitudes to seeking professional help, psychiatrists were preferred over GPs.[27,41,42] However, there is a significant gender differential in that females are more willing to seek help from psychiatrists rather than GPs.

Conclusion

Overall, a moderate knowledge level about the symptoms of depression and a cursory knowledge of therapy was found. Those with personal experience of depression had better knowledge of the symptoms and therapy. In relation to treatment, the majority were inclined towards the use of alternative medicines or treatments. There is an inherent risk in the preference for alternative and traditional medicines in that this may affect the

respondent's ability to seek evidence-based mental health care. Further research should be undertaken to prove or disprove this contention.

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CONFLICTS OF INTEREST

None.

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