

ORIGINAL ARTICLE

THE INTERPRETATION OF DEPRESSIVE SYMPTOMS IN URBAN AND RURAL AREAS IN SABAH, MALAYSIA

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Abstract

Objective: The treatment gap for mental health disorders in Sabah, Malaysia is estimated to be over 90%. Probable reasons include how the depressive symptoms are interpreted. The aim of this study was to explore the interpretation of depressive symptoms in Sabah in rural and urban areas in order to find ways of reducing the treatment gap. **Methods:** Subjects were given an instrument which consisted of a vignette identification exercise and a set of statements about causes and treatment of depression, which the subjects were asked to rate. **Results:** One hundred and ninety eight subjects from an urban area and 180 subjects from a rural area were sampled. The most common cause given for the vignette identification was “Stress”, with “Counseling” the preferred treatment option. Principal component analysis (PCA) of the causes of depression revealed five factors: “Lifestyle” (11 items), “Stress and Pressure” (10 items), “Supernatural” (9 items), “Environmental” (6 items) and “Biological” (5 items), with the “Environmental” and “Stress and Pressure” items the most heavily endorsed. PCA of the treatment options showed seven factors, of which five were retained for further analysis: “Psychological treatment and lifestyle,” “Traditional” and “Lifestyle”, “Religion”, “Psychology” with “Religion” and “Psychological treatment and lifestyle” the most heavily endorsed and “Supernatural” the least heavily endorsed. **Conclusion:** Improving the treatment gap in mental health in Sabah will require educating people on the differences between stress and depression, making services more acceptable by increasing the provision for psychological therapies and working with religious leaders. *ASEAN Journal of Psychiatry, Vol. 17 (1): January – June 2016: XX XX.*

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Introduction

Depression is now the leading cause of years lost to disability in the World [1]. It is extremely disabling, with consequences for the individual, the family and society in general. Cost effective treatments are available [2]. Most depression, particularly in developing countries, is neither detected nor treated [3]. The treatment gap is the difference between

the number of people that get managed for a disorder, in comparison to the number of people that have the disorder [3]. The treatment gap for serious mental disorders in lower and middle-income countries is more than 70% [4]. There are a number of explanations why depression is not treated in lower and middle-income countries. These include: lack of mental health literacy, stigma, primary care physicians having inadequate

time to detect and treat depression, poor training in mental health of primary care staff and lack of access to high quality, non stigmatising mental health services [3].

A significant component of what causes the treatment gap is that there is also a knowledge gap about mental disorders [5]. Jorm defined the concept of “mental health literacy” as: “knowledge and beliefs about mental disorders which aid their recognition, management or prevention” [5]. There is relatively little research into mental health literacy and effective strategies to improve this in lower and middle-income countries, and in non-Western societies [6]. This translates into a lack of coordinated action to improve mental health literacy in most lowly and middle-income countries. There are multiple strategies for improving mental health literacy, which include televised campaigns, general distribution of educational brochures, small group discussion, school-level interventions and education of specific groups, such as primary health-care workers and teachers [7]. In lower and middle-income countries, one useful strategy has been the education of traditional healers, with better integration into the formal healthcare system [6].

Malaysia is a middle-income country with a mainly Muslim population and strong spiritual and religious beliefs. The two East Malaysian States of Sabah and Sarawak are situated on the island of Borneo, and are culturally distinct from West Malaysia. Sabah has more than sixty different ethnic groups, large Christian populations and is socio economically disadvantaged compared to West Malaysia [8]. Belief in spiritual causes of psychological symptoms is strong. Before seeking help from psychiatric services, many people visit traditional healers (known as *Bomoh*) to rule out spiritual causes such as possession or a curse. There have been several studies from West Malaysia, showing that over 50% of patients refer to traditional healers, prior to consulting medical services [9–11].

One recent study showed that the treatment gap for common mental disorders in primary care centers in Kota Kinabalu, the state capital of Sabah is over 90% [12]. In order to design a relevant strategy to improve mental health literacy, we need a baseline understanding of

the perception of mental illness and its treatment in the local setting. Mental health literacy has been investigated in West Malaysian Malay populations [13], where it was found that urban populations are more prone to use psychiatric labels, whereas rural populations are more likely to use general terms, such as “stress” to describe a vignette. There has been relatively little research on mental health literacy in Sabah. Research prior to carrying out any public education campaign is one of the things that improved the chances of success of the campaign [14]. This study aims to determine how depressive symptoms are interpreted, since this is likely to be one of the biggest modifiable factors that contribute to the treatment gap in depression. A secondary aim is to understand the demographic determinants of mental health literacy, in order to better target public education.

Methods

The main aim of this study was to determine and improve the treatment gap in Sabah, where the research was used as part of a cycle of action [15]. We used a pragmatist, exploratory paradigm [16], where our objective was to understand the worldview of the people studied, rather than to prove a hypothesis. A modified version of the technique used by Swami et al [13] was used. This uses vignette identification and a questionnaire to understand how people viewed the symptoms of depression. The vignette used featured a person with typical symptoms of depression, including low mood, social withdrawal, loss of energy, poor sleep, worthlessness, occupational dysfunction and suicidal ideation.

Instruments

A modified version of the questionnaire developed by Swami et al was used [13]. Following field testing, one of the vignettes was removed, since some of the subjects were frustrated by the length of the questionnaire. Some of the items were also removed, in order to reduce the length of the questionnaire and because some of the subjects found these items confusing. An item about alcohol was added, since alcohol use disorders are common in

Sabah [17]. This resulted in 47 causal items and 46 treatment items for analysis.

Sampling

A mixture of systematic and convenience samplings were used. The area chosen for the rural study was the Kudat district, which is a socio economically disadvantaged rural region in the North of Sabah. Healthcare in this area is basic, with the nearest mental health professional 174km away in Kota Kinabalu. The district hospital in Kudat provides medication management of mental disorders such as schizophrenia, but depression is rarely treated there. The rural subjects were sampled from six villages in the Kudat area, which were chosen at random from a list of all the accessible villages in the area, using random numbers generated by Excel. Data was collected by approaching 10-20 consecutive houses (depending on the size of the village) and asking all adult members of the household to fill in the questionnaire. One village was a long house, and all adult members of the long house were invited to fill in the questionnaire. In one village, the head of the village had already asked the villagers to come together in the village hall, so the data was collected from them there. The urban subjects were sampled from three areas of Kota Kinabalu, the main city in Sabah. Initially, two areas were chosen at random, using a map of the city and data was collected by approaching consecutive houses in those areas. Since the response rate from this method was very low in the urban area and some groups had not been adequately sampled, a third area was purposively chosen. In the third area, subjects were sampled from public areas, such as coffee shops, and a shopping center. In most cases, the subjects filled in the questionnaire on their own. In some cases, where the subject had poor literacy or eyesight, the researcher assistants helped the subjects with the questionnaire, by reading out the questions and recording the answers for them.

Data analysis

The data from the vignette identification was categorised by both researchers independently. The categories generated were then compared between the researchers, and a set of final categories were agreed on and the data

recategorised. The Chi-squared test was used to assess the effect on the data of gender, ethnicity, religion, education, and whether the respondent was urban or rural. A Bonferroni correction was used to determine the correction for multiple hypothesis testing and only differences, which are significant at a $p < 0.01$ level are reported.

The proportion endorsing each item on the questionnaire was calculated. In order to reduce the 47 causal items and 46 treatment items on the questionnaire down to a smaller number of underlying components, principal component analysis was used. The number of factors to retain was determined by examination of the scree plot and parallel analysis of several solutions to find the greatest clarity of fit. Factors were retained if the factor loading was above 0.4 and there was no cross loading. The effects of urban or rural, gender, ethnicity, religion, educations on the factors were assessed using Analysis of Variance (ANOVA).

Ethical considerations

The project was approved by the ethics committee of the University Malaysia Sabah (UMS) Medical School, and the village heads or district officers in each of the areas involved. All subjects provided written, informed consent prior to filling in the questionnaire.

Results

A total of 180 subjects were sampled from rural areas, with 198 subjects sampled from urban areas. The descriptive statistics, according to religion, ethnic group, education level and gender are shown in Table 1. The rural participants were significantly different in their ethnic group (χ^2 [8, N=377]= 242.0, $p < 0.001$), education level (χ^2 [3, N=371] =70.3, $p < 0.001$) and gender (χ^2 [1, N=375] =8.8, $p = 0.003$), with the rural participants more likely to be Rungus, female and have a lower education level, compared to the urban participants who were more likely to be Kadazan or Dusun, male and have a higher-education level. There was no difference in religion or age between urban and rural areas.

Table 1. Demographics data

		Rural or Urban		Total
		Rural	Urban	
Gender	Male	59	96	155
	Female	118	102	220
Ethnicity	Malay	19	33	52
	Chinese	1	3	4
	Kadazan	3	85	88
	Dusun	6	45	51
	Rungus	131	1	132
	Bajau	9	13	22
	Java	2	1	3
	Sungai	1	3	4
	Other	8	13	21
Religion	Islam	46	67	113
	Buddhist	0	3	3
	Christian	132	127	259
	None/not sure	1	1	2
Education level	None	14	0	14
	Primary	26	7	33
	Secondary	126	120	246
	University	9	69	78

Causes of depression

Vignette identification

The most common answer was “Stress”, with 25% of respondents mentioning this as a cause. 17% of respondents mention “Depression” as a cause. Women were significantly more likely to answer

“Depression” as a cause ($\chi^2 [1, N=375] = 16.01, p < 0.001$). Less-educated people were more likely to answer “Don’t know” ($\chi^2 [3, N=371] = 30.45, p < 0.001$). There were no other significant differences, between urban or rural participants, gender, ethnicity, religion or education (Table 2).

Table 2. Percentage of respondents that mention each cause in the vignette

	Total	Rural (n=180)	Urban (n=198)
Stress	27%	29%	25%
Emotional disturbance	25%	28%	23%
Depression	13%	10%	17%
Don't understand	6%	9%	3%
Too much or inappropriate thinking	4%	2%	7%
Lost confidence	3%	2%	5%
Non-specific health problem	3%	3%	3%
Mental illness (unspecified)	3%	3%	3%
Family problem	2%	2%	3%
Work problems	2%	1%	4%
Sleeping problem/Not enough rest	2%	1%	2%
Physical problem	2%	1%	2%
Other inappropriate coping mechanism	1%	2%	1%
Feels alone/separate/ not socialising	1%	1%	2%
Romance problem	1%		3%
Age related	1%		2%
External cause of loneliness- Not enough friends or attention	1%		2%
Personal problem	1%	1%	1%
Brain	1%	1%	
Drug addict	1%		1%
Money problems	1%		1%
Being stupid			1%

Table 3. Causes for depression

	Percentage that agree or strongly agree (n)	Eigenvalue/ Factor loading	Cronbach- <i>a</i>	Mean (SD)
Stress and pressure		0.72	0.79	3.65 (0.57)
A stressful family environment.	86% (357)	0.72		
Academic pressure or failure.	79% (362)	0.68		
Stress at work.	85% (357)	0.64		
Thinking too much	89% (360)	0.59		
Cold and uncaring parents.	71% (358)	0.61		
Evil done in a previous life.	58% (353)	0.60		
Being raised by parents or guardians who have depression.	64% (360)	0.49		
Loneliness or a lack of friends.	76% (362)	0.41		
The pressures of modern society.	57% (362)	0.44		
Having an overprotective mother.	44% (357)	0.44		
Supernatural and hereditary		3.10	0.8	2.63 (0.71)
Being controlled by Satan.	20% (363)	0.73		
Possession by ghosts, genies, or evil spirits.	23% (359)	0.70		
Destiny.	26% (356)	0.64		
Being controlled by a witch-doctor.	18% (359)	0.64		
Being the victim of black magic.	32% (361)	0.61		
Having blood relatives who have depression.	32% (359)	0.57		
Punishment from God.	20% (359)	0.53		
A test from God.	35% (356)	0.51		
Genetic factors.	35% (360)	0.48		
Lifestyle		8.96	0.83	3.13 (0.66)
An unhealthy diet.	43% (357)	0.75		
Smoking too much.	45% (361)	0.64		
A lack of exercise.	54% (361)	0.79		
Not drinking enough water.	26% (360)	0.66		
A lack of freedom in society.	53% (356)	0.47		
Drinking too much alcohol	58% (355)	0.46		
Individuals wanting to be different.	35% (358)	0.45		
Body temperature.	36% (355)	0.51		
Old age.	36% (356)	0.41		
A lack of sleep.	65% (360)	0.56		
Immoral behaviour.	60% (353)	0.41		
Biological		1.73	0.67	3.23 (0.63)
Germs or a virus that affects the brain.	36% (358)	0.65		
A chemical imbalance in the brain.	43% (363)	0.54		
Enlargement of certain areas of the brain.	22% (354)	0.54		
A brain neurotransmitter dysfunction.	32% (357)	0.52		
Taking illegal drugs.	69% (356)	0.51		
Environmental		1.86	0.77	3.72 (0.64)
Financial problems.	82% (358)	0.61		
Childhood trauma (e.g., physical or sexual abuse).	76% (362)	0.60		
Life trauma (e.g., separation, or loss of a relative/close friend)	76% (361)	0.58		
Repressed feelings and emotions in the subconscious.	83% (358)	0.57		
Unknown causes	52% (361)	0.47		
A side-effect of some other illness.	62% (357)	0.42		
Non loading				
A monotonous and mundane life.	43% (360)			
Searching too much for inner peace.	46% (360)			
Complications before or during birth.	29% (351)			
Day-dreaming too much.	55% (361)			
Not following religious commandments.	56% (358)			
Lack of will power.	69% (360)			

Table 3 shows the percentage of respondents endorsing each statement. Some of the respondents were noted to have given the same answer for every item (for example ticking 3 on all items). The data from these subjects was removed, leaving 173 rural and 192 urban participants. Examination of the scree plot, following principle component analysis showed that there were three strong factors in the steep part of the curve, which related to lifestyle issues, environmental issues and supernatural/biological issues. When five factors were retained, the supernatural and biological issues split into separate factors. Five factors were retained because this was the most parsimonious solution. Hereditary factors still factored together with the supernatural items, but this can be explained by the local belief that *Jin* (a kind of spirit) can be inherited from previous generations and the word for this in Malay is the same as the word for biological inheritance. These five factors together accounted for 42% of the variance and were named: “Lifestyle” (11 items), “Stress and Pressure” (10 items), “Supernatural” (9 items), “Environmental” (6 items) and “Biological” (5 items). Cronbach’s alpha was determined for each of these scales, and all were acceptable and retained for further analysis. “Stress and pressure” and “Environmental” items were most likely to be endorsed, with the supernatural and genetic items least likely to be endorsed (Table 4).

Significant differences between urban and rural residents were found on the “Stress and Pressure” ($F[1,362]=4.31$, $p=0.033$), “Environmental” ($F[1,362]=9.40$, $p=0.002$), and “Supernatural,” ($F[1,362]=4.4$, $p=0.037$) with the urban populations more likely to endorse “Stress and Pressure” and “Environmental” and the rural participants more likely to endorse “Supernatural”. There were significant differences with respect to ethnicity ($F[8,355]=6.40$, $p<0.001$), with post-hoc analysis showing Malay and Bajau respondents significantly more likely to endorse supernatural causes than Kadazan, Dusun or Rugus respondents. Significant differences were found between Muslim and Christian respondents on the “Supernatural” scale ($F[3,347]=11.09$, $p<0.001$), with Muslim respondents more likely to endorse supernatural causes. There was significant effect of gender ($F[1,347]=8.76$, $p=0.003$) and education ($F(3,353)=5.04$, $p=0.001$) in endorsement of “Stress and Pressure”, with women and better educated people significantly more likely to endorse these items. Better educated people were also more likely to endorse “Environmental” items ($F[3,352]=7.46$, $p<0.001$) items.

Treatments for depression

Vignette identification.

Table 4. Percentage of respondents that mention each treatment in response to the vignette

	Total	Rural (n=180)	Urban (n=198)
Counselling or professional motivation	38%	34%	41%
Support or advice from family and friends	23%	18%	27%
Doctor	15%	22%	8%
Specialist	8%	4%	12%
Don't know	5%	9%	2%
Rest	4%	2%	6%
Religion	4%	1%	7%
Exercise/increasing activity	3%	3%	3%
Positive thinking	2%	1%	4%
Mental hospital/old folks home	2%	1%	2%
Change her job or circumstances	1%	1%	1%

The most frequently cited treatment for the vignette identification was counselling, cited by 38% of respondents (Table 4). Urban respondents were more likely to answer that

they would visit a specialist ($\chi^2 [1, N=378] = 7.17$, $p = 0.008$) or to seek help from religion ($\chi^2 [1, N=378] = 7.36$, $p=0.007$), with rural participants more likely to state that they

would visit a doctor ($\chi^2[1, N=378] = 16.27$, $p < 0.001$). Respondents with more education were more likely to suggest counselling or professional motivation ($\chi^2[3, N=371] = 21.02$, $p < 0.001$), whereas respondents with less education were more likely to answer "Don't know" ($\chi^2[3, N=371] = 30.45$, $p < 0.001$).

The percentage of respondents endorsing each statement is shown in Table 5. Examination of the scree plot showed no clear cut-off point, so we decided to retain 13 factors, which was the number of factors with an Eigenvalue of more than one. These factors accounted for 64.0% of the variance. There were seven factors with more than two items, which were named "Psychological treatment and lifestyle," "Traditional" and "Lifestyle", "Religion", "Psychology", "Psychologist and Escape" and "Social". The first five factors had acceptable Cronbach's Alpha and so were retained for further analysis. The most heavily endorsed of these scales was the "Religion" scale, and the least endorsed was the "Traditional" scale.

Significant differences between urban and rural residents were found on the "Psychological treatment and lifestyle" ($F[1,359] = 4.47$, $p = 0.035$) and "Psychology" ($F[1,359] = 34.55$, $p < 0.001$) scales, with urban residents more likely to endorse the items on

these scales. There was a significant effect of gender on "Traditional" with men less likely to reject these items than women ($F[1,349] = 10.33$, $p = 0.001$). There were significant effects of religion and ethnicity on "Traditional" with Malay respondents more likely to endorse these items than Kadazan respondents ($F[8,351] = 4.30$, $p < 0.001$) and Muslim respondents more likely to endorse these items than Christian respondents ($F[3,356] = 7.49$, $p = 0.001$). More educated respondents were more likely to endorse "Psychological treatment and lifestyle" ($F[3,350] = 3.25$, $p = 0.022$) and "Psychology" ($F[3,350] = 4.10$, $p = 0.007$) scales and less likely to endorse "Traditional" items ($F[3,353] = 3.85$, $p = 0.01$). There was no significant effect of whether a male or female vignette was given.

The effect of knowledge

PCA of the five knowledge items revealed a single factor, which accounted for 54% of the variance, with Cronbach's Alpha of 0.73. Knowledge about depression was correlated with the "Biological" ($R = 0.14$, $p = 0.028$), the "Environmental" ($R = 0.203$, $p = 0.002$) scales for the cause of depression, the "Religious" ($R = 0.27$, $p < 0.001$), and "Psychological treatment and lifestyle" ($R = 0.33$, $p < 0.001$) scales for the treatment of depression.

Table 5. Treatments for depression

	Percentage that agree or strongly agree (n)	Eigenvalue/ Factor loading	Cronbach- α	Scale mean (SD)
Psychological treatment and lifestyle		9.85	0.74	4.00 (0.53)
Family counseling	87% (359)	0.82		
Becoming more physically active	83% (360)	0.75		
Seeing a psychiatrist	86% (359)	0.67		
Eating well	83% (359)	0.64		
Cognitive behavioral therapy CBT	64% (359)	0.42		
Traditional		4.12	0.73	2.64 (0.72)
Drinking coconut water	32% (356)	0.80		
Taking herbal medicine	37% (351)	0.65		
Seeing a faith healer or <i>bomoh</i>	17% (358)	0.63		
Exorcism	17% (351)	0.61		
Dealing with symptoms on one's own	33% (358)	0.55		
Hypnosis	17% (357)	0.49		
Lifestyle		2.10	0.73	3.81 (0.66)
Drinking more water	62% (351)	0.80		
Changing ones diet	45% (357)	0.73		
Quitting smoking	71% (348)	0.64		
Cutting down or stopping alcohol	76% (333)	0.52		
Quitting illegal drugs	78% (358)	0.47		
Religion		1.92	0.76	4.08 (0.59)
Seeing a priest or religious teacher	83% (357)	0.71		
Following religious commandants	83% (354)	0.69		
Prayer	92% (360)	0.68		
Regular exercise	84% (354)	0.47		
Psychology		1.80	0.69	3.80 (0.61)
Being strong emotionally	71% (355)	0.78		
Stress management	74% (358)	0.64		
Meditation or yoga	70% (356)	0.64		
Thinking positively	70% (359)	0.54		
Psychologist and escape		1.68	0.65	
Seeing a psychologist	81% (348)	0.76		
Electroconvulsive therapy ECT	13% (351)	-0.62		
Taking up a hobby	78% (356)	0.62		
Going on holiday	82% (356)	0.60		
Social		1.57	0.60	
Getting help from close friends	87% (357)	0.63		
Seeing a social worker	38% (356)	0.56		
Socialising more	87% (359)	0.51		
Getting help from ones close family	92% (357)	0.43		
Non loading				
Resting more	77% (356)			
Seeing a counsellor	82% (357)			
Finding new friends	74% (359)			
Being more religious	87% (358)			
Being kind to others	69% (357)			
Going for a physical checkup	71% (358)			
Being admitted to a mental hospital	38% (358)			
Seeing a GP or doctor	87% (359)			
Using telephone counselling service eg Befrienders	58% (358)			
Taking some time off work	44% (353)			
Not doing anything	11% (357)			
Acupuncture	37% (351)			
Taking prescribed medication or drugs.	78% (360)			
Buying books on depression	73% (359)			

Discussion

Stress is by far the most common vignette response, suggesting that one of the reasons that depression is not detected is because people normalise the symptoms. Only 17% of urban and 10% of rural respondents labeled the vignette as depression, compared to studies in West Malaysia, which showed recognition of depression in 62.1% of urban and 4.2% of rural Malay respondents [13] and 51% of urban and 31.2% of rural Chinese [18]. Internationally, people from Sabah ranked far beneath Australian (65.3%) and Japanese (22.6%) respondents, using a similar vignette. Similarly, the environmental stress items were the most commonly endorsed in the quantitative results; more than 80% of respondents agreed or strongly agreed with these items. This may reflect a more exogenous model of depression in Sabah, related to working or environmental factors.

No respondents cited supernatural causes for the vignette identification, and the spiritual items were the least likely to be endorsed. This compares with the West Malaysian study where no respondents cited supernatural causes or suggested visiting a Bomoh in the vignette identification, and the spiritual items were the least endorsed in the questionnaire. This contrasts with other studies in Malaysia, which show that most patients visit a traditional healer prior to seeking help from psychiatric services [9–11]. Clinical experience suggests that the reason for this is that the symptoms of depression are seen as mainly due to environmental causes whereas psychotic symptoms are attributed to supernatural causes. Most psychiatric admissions in Malaysia are due to psychotic symptoms. It may also have been due to social acceptability bias. Nonetheless, around 20–30% of respondents still agreed or strongly agreed with supernatural items on the questionnaire, indicating that belief in supernatural causation is present, but not seen as the primary cause. The low endorsement of the “Supernatural” items contrasted with the high levels of endorsement of the “Religious” items, indicated that the respondents saw these things differently.

The most heavily endorsed treatment option was to seek help from family and friends,

which was endorsed by 92% of respondents in the questionnaire and accounted for 23% of vignette acknowledgements. This suggests that the acceptability of psychiatric treatment will be higher if family members are involved in the treatment plans of people with depression in Sabah. Increasing mental health literacy of family members can also help pick up undiagnosed conditions as pressure by family members (Zola’s sanctioning) can be a trigger to consultation [19]. Despite low identification rates of depression, over 60% of respondents suggested seeking help external to the family. Urban populations were significantly more likely to suggest help seeking behaviours, be it medical-related or religious. This either suggests a higher awareness of treatment options in urban settings, or simply a reflection of higher internal locus of control, possibly secondary to higher socioeconomic status [20,21]. The most frequently cited treatments for the vignette identification were counselling (39%). This is corroborated in the quantitative results, with 80% of respondents endorsing counselling-related items. Counselling, alongside standard treatments, e.g. seeing a doctor or specialist and taking prescription drugs, were preferred over alternative treatments in the quantitative results. This compares with the studies in West Malaysia [13,18].

Both the vignette and the multiple-item Likert scale showed there is a lack of public knowledge in both urban and rural populations in successfully identifying “depression”. Training courses, such as the Mental Health First-Aid course, have been shown to improve mental health literacy, stigma and improve confidence in offering help [22]. There are currently efforts underway to start a similar training program in Sabah. Our results suggest that we should focus on training community and religious leaders in recognition of depression, rather than traditional healers. Few of our respondents had spiritual explanations for depression, and most did not believe traditional healers are helpful for these symptoms.

Efforts need to be made by health service providers to provide treatment options that are more acceptable to the public. Counselling was the preferred treatment option, but the availability in the health service is low.

Psychotherapy services are not available in primary care in Sabah and there is only one counsellor available in the main psychiatric hospital. There are no psychological treatments available in rural areas, such as Kudat. Informal supportive counselling from doctors is also difficult, because doctors in both primary and secondary care typically have less than five minutes to spend with each patient. Counsellors are available in schools and colleges, and some religious organisations provide counselling, but this is only to a limited population. Increasing the availability of psychosocial treatments is thought to be cost effective according to the WHO [2] and should be considered in Sabah.

Limitations

As convenience sampling was employed in some areas, proportions and comparisons between groups need to be interpreted cautiously. However, sampling was systematic in most areas and the results from these areas were not significantly different in the areas where sampling was less systematic. Purposeful attempts were made to ensure adequate sampling of the different demographic groups in urban areas. Some of the responses from the vignettes could have benefited from greater exploration, for example, through a focus group's study. The most common response to the vignette was "Counselling," but it was unclear whether they thought counselling from family and friends or from professionals was appropriate. Also there is a demographic difference between the urban and rural group, but it is unlikely to significantly affect the results. The Rungus have a similar culture to the Kadazan and Dusun, and the Rungus, Kadazan and Dusun groups are frequently classified together as Kadazandusun, or Non-Muslim Bumiputra. The poor sampling of men in the rural areas is likely to be because the sample was collected during the daytime, when the men were at work. The difference in education level between rural and urban areas is expected.

Conclusion

This study shows that although people did not label the depressive symptoms as depression, most agreed that help was required. Although stress was more likely to be cited than

depression, the same respondents were amenable to treatments of a biological and medical nature. Public education campaigns need to focus on differentiating between depression and normal stress responses. Supports from family and friends and counselling are seen as important components of the treatment of depression. This should alert mental health services in Sabah to incorporate family and friends into treatment plans as well as increasing the provision for psychological therapies. Supernatural treatments are less acceptable than religious treatments, indicating that the most useful partnership with mental health services will be with religious leaders, rather than traditional healers. More research is needed, particularly qualitative research, to better understand mental health literacy in Sabah.

Highlights

1. The most common label for the depression vignette as "stress", indicating that many people have problems distinguishing between stress and depression. Education campaigns need to help people understand the difference between a normal stress response and depression.
2. Religious methods, lifestyle modification and psychological treatments were the most widely endorsed methods of treating depression. Traditional/supernatural methods were the least endorsed, indicating that these things are seen differently to mainstream religious methods. Services to treat depression need to collaborate with religious practitioners as well as offering psychological treatment and help with lifestyle modification.

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Conflicts of Interest

None. The funders did not play a role in project design

References

- Lopez A, Mathers CD, Ezzati M, Jamison DT, Murray CJL. Global burden of disease and risk factors. New York: The World Bank and Oxford University Press: 2006.
- Chisholm D, Saxena S, Van Ommeren M. Dollars, DALYs and Decisions: economic aspects of the Mental Health System. Geneva: World Health Organisation: 2006.
- Kohn R, Saxena S, Levav I, Saraceno B. The treatment gap in mental health care. Bull World Health Organ 2004;82:858–66.
- The WHO World Mental Health Survey Consortium. Prevalence, Severity, and Unmet Need for Treatment of Mental Disorders in the World Health Organization World Mental Health Surveys. JAMA 2004;291:2581–90.
- Jorm AF, Korten AE, Jacomb PA, Christensen H, Rodgers B, Pollitt P. “Mental health literacy”: a survey of the public’s ability to recognise mental disorders and their beliefs about the effectiveness of treatment. Med J Aust 1997;166:182–6.
- Ganasen K, Parker S, Hugo C, Stein D, Emsley R, Seedat S. Mental health literacy: focus on developing countries. Afr J Psychiatry 2008;11:23–8.
- Francis C, Pirkis J, Dunt D, Blood R, Davis C. Improving mental health literacy: A review of the literature. Centre for Health Program Evaluation, The University of Melbourne; 2002. Available from [http://www.hirc.health.gov.au/internet/main/publishing.nsf/Content/4649FF5B003BDD5BCA257BF0001E034F/\\$File/literacy.pdf](http://www.hirc.health.gov.au/internet/main/publishing.nsf/Content/4649FF5B003BDD5BCA257BF0001E034F/$File/literacy.pdf).
- Hatta ZA, Ali I. Poverty Reduction Policies in Malaysia: Trends, Strategies and Challenges. Asian Cult Hist 2013;5:48–56.
- Phang C, Marhani M, Salina A. Prevalence & Experience of Contact with Traditional Healers among Patients with First-Episode Psychosis in Hospital Kuala Lumpur. Malaysian J Psychiatry 2010;19.
- Razali SM, Najib M a. M. Help-Seeking Pathways Among Malay Psychiatric Patients. Int J Soc Psychiatry 2000;46:281–9.
- Razali SM, Yassin AM. Complementary treatment of psychotic and epileptic patients in malaysia. Transcult Psychiatry 2008;45:455–69.
- Abdullah AF. Common mental disorders in primary care in Kota Kinabalu. 16th Malaysian Conf. Psychol. Med., 2011.
- Swami V, Loo P, Furnham A. Public knowledge and beliefs about depression among urban and rural Malays in Malaysia. Int J Soc Psychiatry 2010;56:480–96.
- Noar SM. A 10-year retrospective of research in health mass media campaigns: where do we go from here? J Health Commun 2006;11:21–42.
- Burns D. Systemic Action Research. Policy Press; 2007; 12-19.
- Creswell JW, Clark DVLP. Designing and Conducting Mixed Methods Research. Sage Publications, Inc; 2006; 38-52.
- Lasimbang H, Shoesmith W, Singh J, Kaur N, Amir L, Daud MNBM, et al. Making Private Troubles a Public Issue: Empowering Communities to Reduce Alcohol Related Harm in

Sabah, Malaysia. Health Promot Int
2015; Epub Sept 2015.

18. Loo P-W, Furnham A. Public knowledge and beliefs about depression among urban and rural Chinese in Malaysia. *Asian J Psychiatr* 2012; 5:236–45.
19. Zola IK. Pathways to the doctor-from person to patient. *Soc Sci Med* 1973;7:677–89.
20. Bailis DS, Segalla, Mahon MJ, Chipperfield JG, Dunn EM. Perceived control in relation to socioeconomic and behavioral resources for health. *Soc Sci Med* 2001;52:1661–76.
21. Poortinga W, Dunstan FD, Fone DL. Health locus of control beliefs and socio-economic differences in self-rated health. *Prev Med (Baltim)* 2008;46:374–80.
22. Kelly CM, Jorm AF, Wright A. Improving mental health literacy as a strategy to facilitate early intervention for mental disorders. *Med J Aust* 2007;187:1–5.

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