The Level and Associated Factors of Mental Health Literacy among Women Attending a Breast-Screening Programme in Kelantan

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ABSTRACT

INTRODUCTION: Understanding mental health literacy among women is important in improving mental health outcomes and promoting help-seeking. Despite increasing attention to mental health, little is known about the mental health literacy of women in Kelantan. This study aimed to assess the level of mental health literacy (MHL) and identify the associated factors among women in Kelantan, Malaysia. **MATERIALS AND METHODS**: A cross-sectional survey was conducted from November 2023 to March 2024, involving 431 women aged 18 to 60 years selected through convenience sampling. Data were collected using the Malay versions of the Mental Health Literacy Scale (MHLS) and Mental Help Seeking Attitudes Scale (MHSAS). **RESULTS:** Participants had a mean age of 39.7(9.9) years, with the majority being Malay (98.6%), Muslim (99.1%), and married (77.5%). Most had completed secondary (43.4%) or tertiary education (55.9%), and 64% were from the B40 income group. The mean MHL score was 111.9(13.5). Multiple linear regression analysis revealed that higher education (b=8.36, p<0.001), higher monthly income (b=3.31, p=0.002), and higher scores of attitudes toward mental help-seeking (b = 2.70, p < 0.001) were significantly associated with better MHL scores. Married women had significantly lower MHL scores (b=-3.82, p=0.004) and a family history of mental illness (b=-3.41, p=0.014). **CONCLUSION:** These findings underscore the need for targeted mental health awareness programmes for those with lower education and socioeconomic groups to improve their awareness and mental help-seeking behaviour.

KEYWORDS: mental health literacy, help-seeking behaviour, women, stigma, Kelantan

INTRODUCTION

Mental health is a crucial component of overall well-being, significantly impacting an individual's ability to cope with life's stresses, work productively, and contribute to their community. Globally, mental health conditions represent a significant public health burden, with significant social and economic consequences.[1] However, the issue of stigma, lack of awareness, and limited access to services remain pervasive challenges, particularly in developing regions, despite the growing recognition of mental health's importance.[2] Mental health literacy (MHL), defined as knowledge and ideas about mental disorders that aid their recognition, management, or prevention, plays a pivotal role in addressing these challenges.[3] A higher MHL is associated with better recognition of mental health problems, reduced stigma, and increased willingness to seek professional help.[4,5]

Mental health issues have become a central issue and a rising concern in Malaysia. The National Health and Morbidity Survey (NHMS) has consistently reported an increasing prevalence of mental

health problems among adults.[6] So far, however, there has been little discussion about MHL in specific populations, especially women, in our local diverse cultural contexts. Women face unique mental health challenges influenced by socio-cultural factors, gender roles, and economic disparities.[7,8] Understanding their MHL levels and associated factors is therefore crucial for developing effective, culturally sensitive interventions.

A large and growing body of literature has investigated the concept of MHL since its introduction, with numerous studies examining its various dimensions across diverse populations. Several studies of MHL have primarily focused on defining MHL and developing instruments to measure it.[9] Subsequent studies have investigated MHL levels among diverse groups, including students, healthcare professionals, and the general public.[9-15] These studies consistently highlight the importance of MHL in promoting positive mental health outcomes and reducing the treatment gap.

Several factors have been identified as determinants of MHL. Education level is frequently cited as a significant predictor, with higher educational attainment generally correlating with better MHL.[13,14] Socioeconomic status, often measured by income or occupation, also plays a crucial role, as individuals from higher socioeconomic backgrounds tend to exhibit greater MHL.[14,15] Age and gender have shown mixed results, with some studies indicating higher MHL among younger individuals and women, while others report no significant differences or even lower MHL in certain female populations.[8-10]

The influence of cultural context on MHL is also a critical area of research. Studies in Asian countries, including Malaysia, have revealed unique cultural barriers to mental health help-seeking, such as strong family ties, religious beliefs, and the pervasive fear of stigma.[9,16] For instance, a systematic review on MHL in Malaysia highlighted varying levels of knowledge and beliefs about mental disorders, underscoring the need for context-specific interventions.[9] Recent studies in other Muslim-majority countries also suggest that religious beliefs, cultural and community perceptions significantly shape attitudes towards mental health and help-seeking.[17,18]

Help-seeking attitudes are closely intertwined with MHL. Individuals with a higher level of MHL are more likely to hold positive attitudes towards professional mental health services and are more receptive to seeking help when needed.[19-21] Conversely, negative attitudes, often fuelled by stigma and misinformation, act as significant barriers to seeking timely and appropriate care.[2,22,23] Family history of mental illness can also influence MHL and help-seeking, though the direction of this influence can vary, with some studies suggesting increased awareness and others indicating heightened stigma or denial.[22,24]

Despite the growing body of literature on MHL, a notable research gap exists regarding specific populations within Malaysia, particularly women in states such as Kelantan. Kelantan, a culturally

conservative and predominantly Malay-Muslim state, presents a unique socio-cultural context that may influence MHL levels and help-seeking behaviours differently from more urbanized or diverse regions of Malaysia. Previous studies in Malaysia have often focused on broader national samples or specific demographic groups, such as university students, leaving a paucity of data on the MHL of women in distinct regional settings.[10]

Thus, this study aims to assess the level of MHL and identify the associated factors among women in Kelantan. The findings will contribute to the existing literature by offering a nuanced understanding of MHL within a unique socio-cultural context. Furthermore, the identification of specific determinants, such as education, income, marital status, and family history of mental illness, will be instrumental in informing the development of targeted and culturally appropriate mental health promotion strategies.

MATERIALS AND METHODS

This study implemented a cross-sectional survey design conducted from November 2023 to March 2024. The study population involved a total of 431 women aged 18 to 60 years residing in five districts of Kelantan: Kota Bharu, Tumpat, Bachok, Machang, and Pasir Puteh. Convenience sampling was employed, and the respondents were those attending a breast cancer screening programme in the five districts.

Data were collected using a structured questionnaire administered in Malay, consisting of several sections: (1) sociodemographic characteristics, (2) mental health literacy, and (3) mental help-seeking behaviour. Sociodemographic variables included age, ethnicity, religion, marital status, educational level, monthly income, presence of chronic medical conditions, presence of mental health conditions, and family history of mental illness.

Mental health literacy was measured using the Malay version of the Mental Health Literacy Scale (MHLS).[7] The MHLS is a self-report questionnaire designed to assess knowledge and attitudes about mental disorders, their causes, treatments, and help-seeking strategies. It consists of 35 items scored on 4- and 5-point Likert scales, producing a total score ranging from 35 to 160. A higher score indicates a greater level of MHL. It demonstrated good internal consistency (Cronbach's α=0.759).[7] Mental help-seeking attitudes were measured using the Malay version of the Mental Help-Seeking Attitude Scale (MHSAS).[25] The MHSAS consists of 9 items, which produce a single mean score. It utilizes a seven-point semantic differential scale, with the resulting mean score ranging from a low of 1 to a high of 7. It has a good internal consistency reliability (Cronbach's α=0.892).[25]

Descriptive statistics were used to present the sociodemographic characteristics of the participants and their MHL levels. Continuous variables were displayed as means and standard deviations, while categorical variables were shown as frequencies and percentages. Simple linear regression (SLR) and

multiple linear regression (MLR) analyses were performed to determine the variables related to MHL. To identify independent indicators of MHL, variables with a p-value of less than 0.25 in the SLR analysis were included in the MLR model. In the MLR model, a p-value of less than 0.05 was statistically significant. The Statistical Package for the Social Sciences (SPSS) version 29.0 was used for all statistical analyses.

RESULTS

Sociodemographic characteristics of participants

A total of 431 women participated in the study. The mean age of the participants was 39.7(9.90) years. The majority of the participants were Malay (98.6%) and Muslim (99.1%). Most were married (77.5%). In terms of education, 43.4% had completed secondary school, while 55.9% had tertiary education. A significant portion of the participants (64%) belonged to the B40 income group. Detailed sociodemographic characteristics are presented in Table I.

Table I: Sociodemographic characteristics of the participants (n=431)

SOCIODEMOGRAPHIC CHARACTERISTICS		n (%)
Age		39.7 (9.90)*
Monthly income	B40	276 (64.0)
	M40	138 (32.0)
	T20	17 (4.0)
Ethnicity	Malay	425 (98.6)
	Chinese	2 (0.5)
	Indian	1 (0.2)
	Others	3 (0.7)
Religion	Islam	427 (99.1)
	Christian	-
	Hindu	-
	Buddhist	4 (0.9)
	Others	-
Marital status	Single	97 (22.5)
	Married	334 (77.5)
Education level	Primary school	3 (0.7)
	Secondary school	187 (43.4)
	Tertiary	241 (55.9)
	No formal education	-
Having any chronic illness	Yes	88 (20.0)
	No	343 (80.0)
Having any mental illness	Yes	3 (0.7)
	No	438 (99.3)
Family history of mental illness	Yes	86 (20.0)
	No	346 (80.0)

**mean (SD)*

Score of mental health literacy

The overall mean mental health literacy (MHL) score among the participants was 111.9 (13.5). The mean scores for individual items of the MHLS varied, reflecting different levels of understanding across various aspects of mental health. For instance, participants showed better scores for items related to seeking information from professionals (e.g., *"Bertemu professional untuk dapatkan maklumat penyakit mental"/ "seeing a mental health professional"* =4.18, SD=0.83) and perceived access to mental

health information sources (e.g., *"Yakin ada akses terhadap sumber untuk dapatkan maklumat penyakit mental"/" I am confident I have access to resources that I can use to seek information about mental illness"* =4.09, SD=0.87). Conversely, lower scores were observed for items related to the willingness to accept individuals with mental illness into their family (e.g., *"Sanggup menerima individu berpenyakit mental berkahwin dengan ahli keluarga"/ "how willing would you be to have someone with mental illness marry into your family"* =2.48, SD=0.92) and voting for politicians with mental illness (e.g., *"Sanggup mengundi ahli politik berpenyakit mental"/ "how willing would you be to vote for a politician if you knew they had suffered a mental illness"*=1.71, SD=0.84), suggesting areas where stigma might still be prevalent. Detailed mean scores for each item are presented in Table II.

Table II: Level of mental health literacy among participants (n=431)

	ITEM	Mean score (SD)
1	Gejala kecelaruan fobia sosial *(Social Phobia)*	3.08 (0.89)
2	Gejala kecelaruan keresahan menyeluruh *(Generalised Anxiety Disorder)*	3.22 (0.89)
3	Gejala kecelaruan kemurungan major *(Major Depression)*	3.35 (0.89)
4	Kecelaruan personaliti *(Personality Disorder)* ialah penyakit mental	3.23 (0.95)
5	Gangguan kemurungan berterusan ialah penyakit mental	3.47 (0.82)
6	Gejala kecelaruan agoraphobia	3.16 (0.86)
7	Gejala kecelaruan bipolar *(Bipolar Disorder)*	3.43 (0.84)
8	Gejala kecelaruan penyalahgunaan bahan (*Substance Use Disorder)*	3.06 (0.94)
9	Penyakit mental lebih kerap berlaku pada wanita di Malaysia	3.21 (0.90)
10	Penyakit mental lebih kerap berlaku pada lelaki di Malaysia	2.11 (0.89)
11	Tidur yang baik membantu kawal emosi	3.20 (0.83)
12	Mengelakkan diri dari situasi tertentu membantu kawal emosi	2.13 (0.92)
13	Terapi tingkahlaku kognitif (CBT) untuk mengatasi pemikiran negatif	3.38 (0.69)
14	Pengecualian dalam menjaga kerahsiaan pesakit (situasi 1)	3.35 (0.83)
15	Pengecualian dalam menjaga kerahsiaan pesakit (situasi 2)	2.07 (0.99)
16	Sumber maklumat berkaitan penyakit mental	4.03 (0.80)
17	Penggunaan komputer untuk dapatkan maklumat penyakit mental	4.01 (0.87)
18	Bertemu professional untuk dapatkan maklumat penyakit mental	4.18 (0.83)
19	Yakin ada akses terhadap sumber untuk dapatkan maklumat penyakit mental	4.09 (0.87)
20	Penyakit mental boleh diatasi sendiri	3.09 (1.22)
21	Penyakit mental tanda kelemahan seseorang	3.43 (1.22)
22	Penyakit mental bukan penyakit perubatan sebenar	3.10 (1.10)
23	Individu berpenyakit mental berbahaya	2.67 (1.20)
24	Individu berpenyakit mental perlu dijauhi	3.58 (1.17)
25	Tidak memberitahu sesiapa jika ada penyakit mental	3.64 (1.08)
26	Berjumpa pakar psikiatri bermakna individu itu tidak kuat	3.56 (1.34)
27	Tidak akan berjumpa pakar psikiatri jika ada penyakit mental	4.11 (1.08)
28	Rawatan pakar psikiatri tidak berkesan	4.18 (1.01)
29	Sanggup berjiran dengan individu berpenyakit mental	2.94 (0.82)
30	Sanggup meluangkan masa dengan individu berpenyakit mental	3.21 (0.88)
31	Sanggup berkawan dengan individu berpenyakit mental	3.27 (0.87)
32	Sanggup bekerja dengan individu berpenyakit mental	2.97 (0.95)
33	Sanggup menerima individu berpenyakit mental berkahwin dengan ahli keluarga	2.48 (0.92)
34	Sanggup mengundi ahli politik berpenyakit mental	1.71 (0.84)
35	Sanggup melantik individu berpenyakit mental bekerja	2.23 (0.98)
	TOTAL MEAN SCORE	111.9 (13.5)

Factors associated with mental health literacy

Both simple linear regression (SLR) and multiple linear regression (MLR) analyses were conducted to identify factors associated with MHL. In the SLR analysis, several variables showed a significant association with MHL ($p<0.25$), including age, marital status, education level, monthly income, family history of mental illness, and the mean score for mental help-seeking behaviour. These variables were then included in the MLR model.

The multiple linear regression analysis revealed that several factors were independently and significantly associated with MHL ($p<0.05$). Specifically, higher education level (b=8.36, 95% CI: 6.06, 10.67, $p<0.001$) and higher monthly income (b=3.31, 95% CI: 1.18, 5.45, p=0.002) were positively associated with better MHL scores. Higher education level was defined as those participants with diplomas, degrees, or higher qualifications. Furthermore, higher attitude scores toward mental help-seeking (b=2.70, 95% CI: 1.22, 4.18, $p<0.001$) were also significantly associated with better MHL scores.

A significant inverse relationship was found between MHL scores and both marital status (married: b=-3.82, 95% CI: -6.44, -1.19, p=0.004) and a family history of mental illness (b=-3.41, 95% CI: -6.12, -0.71, p=0.014). The detailed results of the regression analyses are presented in Table III.

Table III: Association between independent variables and mental health literacy by simple linear regression and multiple linear regression analysis.

VARIABLES	Simple Linear Regression			Multiple Linear Regression [a]		
	b†	95% CI‡	*p*-value	b†	95% CI‡	*p*-value
Age (years)	-0.24	(-0.37, -0.16)	<0.010*			
Ethnicity						
Malay	0	0	0.123*			
Non-Malay	-8.54	(-19.42, 2.34)				
Religion						
Islam	0	0	0.035*			
Others	-14.30	(-27.56, 1.05)				
Marital status						
Single	0	0	0.033*	0	0	0.004#
Married	-3.30	(-6.35, -0.26)		-3.82	(-6.44, -1.19)	
Education level						
Low	0	0	<0.010*	0	0	<0.001#
High	11.68	(9.36, 14.40)		8.36	(6.06, 10.67)	
Monthly income						
B40	0	0		0	0	
M40	3.09	(0.95, 5.22)	<0.010*	3.19	(1.48, 7.33)	0.002#
T20	3.27	(1.13, 5.40)		3.31	(1.18, 5.45)	
Medical illness						
Yes	0	0	0.405			
No	1.34	(-1.82, 4.51)				
Mental illness						
Yes	0	0	0.092*			
No	-13.17	(-28.49, 2.15)				
Family history of mental illness						
Yes	0	0	<0.010*	0	0	0.014#
No	-6.43	(-9.57, -3.29)		-3.41	(-6.12, -0.71)	
Mental help-seeking behaviour mean score	4.01	(2.31, 5.73)	<0.010*	2.70	(1.22, 4.18)	<0.001#

Abbreviations: †b, unstandardized beta coefficent; ‡CI, confidence interval
* $p<0.25$ # $p<0.05$

DISCUSSION

The current study found that the overall MHL score was 111.9. These findings suggest that although a basic level of understanding about mental health exists, there are opportunities for improvement, especially in dealing with stigmatizing ideas and encouraging acceptance of those with mental illness. This is consistent with previous research indicating varying levels of MHL in different populations and the persistent challenge of stigma.[22,23]

Interestingly, the mean score in this study was higher than that reported in a previous study conducted among housewives in Selangor.[7] This difference may reflect the inclusion of women from more varied sociodemographic backgrounds in the present study, compared to the more specific population examined previously. Variations in education level and household income, both of which were identified as significant determinants of MHL, may also contribute to this disparity.[8]

Consistent with global literature, the findings of this study showed that higher education and monthly income emerged as significant positive predictors of MHL.[13,14] This highlights the crucial role of socioeconomic factors in influencing health literacy. Women with greater educational attainment are likely to have better access to information, critical thinking skills, and exposure to diverse perspectives, all of which can enhance their understanding of mental health.[7,8,20]

Similarly, higher income may correlate with better access to healthcare resources, educational opportunities, and a more supportive environment that fosters MHL. These results align with those of previous studies, supporting the association between higher income with better MHL.[15] Women with lower household income, on the other hand, may face greater stressors and limited access to mental health information or services, placing them at higher risk of mental health problems.[14,26] These findings highlight the need for targeted interventions that address educational and economic disparities to improve MHL in vulnerable populations.

Another important finding was the significant positive association between mental help-seeking attitudes and mental health literacy. These findings are supported by prior research that demonstrated a similar association.[19-21] Hence, these underline the interdependent relationship among knowledge, beliefs, and behaviour. Individuals who hold more positive views about seeking professional help are more likely to engage with mental health information, thereby improving their literacy. This suggests that interventions aimed at reducing stigma and fostering positive attitudes towards help-seeking can simultaneously enhance MHL.

Conversely, the negative association between being married and MHL is important and warrants further investigation. This finding is somewhat contrary to some literature that suggests social support from marriage could be beneficial for mental health.[8] However, in a culturally conservative context like Kelantan, married women might face unique societal expectations, domestic

responsibilities, or cultural norms that limit their access to external information or open discussion about mental health, potentially leading to lower MHL.[26] Alternatively, it could reflect a tendency for married women to prioritize familial obligations above personal mental health information seeking, or a heightened exposure to traditional beliefs about mental illness within their social circles. Further qualitative research could shed light on the underlying reasons for this observation.

It is also interesting and somewhat surprising that a family history of mental illness is linked to reduced MHL. One might expect that direct experience with mental illness in the family would lead to increased awareness and knowledge. However, this raises the possibility of higher levels of stigma, denial, or a lack of effective coping mechanisms within families affected by mental illness. Families may avoid discussing about mental health problems because they are afraid of what other people will think, which can lead to a lack of information and lower literacy in the household.[22] This may impact their knowledge and capacity to recognize symptoms and their attitude toward seeking assistance. This highlights the need for sensitive and supportive family-focused interventions to break cycles of stigma and improve MHL in these situations.

This study has a few limitations. First, a cross-sectional design prevents the establishment of causal relationships between the identified factors and MHL. Longitudinal studies are crucial for understanding the temporal dynamics of these associations. Second, the use of convenience sampling limits the generalizability of the findings to all women in Kelantan or other populations. Future research should employ probability sampling methods to enhance external validity. Third, the dependence on self-report questionnaires could lead to social desirability bias, especially for sensitive subjects such as mental health. This study specifically examines women who engaged in a breast cancer screening programme, indicating that these individuals may exhibit increased awareness, which may not extend to other sub-populations with differing psychological values.

CONCLUSION

This study provides valuable insights into the factors that influence mental health literacy among women who attended breast screening programmes in Kelantan, Malaysia. The results showed the presence of mental health literacy among these Kelantanese women, but it is significantly influenced by socioeconomic characteristics, including education and household income, as well as their help-seeking attitudes. The negative association between marital status and family history of mental illness points to specific cultural and socioeconomic factors that need more study in the future. These findings highlight the critical necessity for focused public health initiatives to improve mental health literacy, especially among married women and individuals from lower socioeconomic strata, and to combat the widespread stigma around mental illness within families.

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CONFLICT OF INTEREST

There were no conflicts of interest between the contributors of this research.

INSTITUTIONAL REVIEW BOARD (ETHICS COMMITTEE)

The study protocol was approved by the Human Research Ethics Committee of USM (USM/JEPeM/KK/23040348) prior to the commencement of the study.

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