Assessing mental health literacy among patients with chronic physical diseases and its associated sociodemographic factors

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Abstract

Background: Mental health literacy (MHL) remains insufficiently addressed in Vietnam, especially among individuals with chronic diseases, who face increased vulnerability to mental health problems. This study examines MHL levels among patients with chronic physical diseases and explores the associated sociodemographic factors, aiming to inform targeted interventions for enhanced mental health care. **Methods:** A cross-sectional study was conducted with 200 adult inpatients at Hue University of Medicine and Pharmacy Hospital from August to December 2023. The Vietnamese version of the Mental Health Knowledge Questionnaire (MHKQ) was used to measure MHL. Univariate logistic regression was used to identify factors associated with lower MHKQ scores. Factors with a p-value <0.05 in univariate analysis were included in a multivariate logistic regression model. **Results:** The mean MHKQ score was 7.7, indicating limited MHL, with prevalent misconceptions about mental disorders and low awareness of mental health days. Multivariate analyses highlighted significant associations with lower MHL among those with primary education (OR: 20.23). However, rural residents (OR: 5.35) were more likely to have lower MHKQ score compared with urban residents. **Conclusion:** The study reveals low MHL among pariticipants, influenced by sociodemographic factors like rural residency and education level. These findings suggest the need for targeted mental health education, especially for rural and low-education populations, to improve comprehensive care and mental health outcomes for patients with chronic conditions in Vietnam.

Keywords: *mental health literacy, mental disorders, chronic disease, Vietnam.*

1. INTRODUCTION

Vietnam, a rapidly developing country in Southeast Asia, has undergone significant industrialization, urbanization, and lifestyle changes in recent years. Consequently, the country is experiencing an epidemiological transition characterized by an increasing burden of chronic physical diseases such as cardiovascular diseases, diabetes, and cancer [1]. For instance, the proportion of deaths attributed to noncommunicable diseases rose sharply from less than half in 1976 to 73.41% in 2015 [1]. In 2019, stroke, ischemic heart disease, and diabetes were the leading causes of death in Vietnam [2].

The picture is further complicated by a growing burden of mental health disorders, which is receiving heightened attention. Before the COVID-19 pandemic, approximately 14.2% of the Vietnamese population was affected by mental health disorders, with depressive disorders alone contributing to about 2.45% of the cases [3]. However, the pandemic markedly exacerbated this situation, with the prevalence of depression reportedly increasing sixfold to approximately 14.6% in 2021 [4].

Mental health literacy (MHL) - the knowledge and beliefs that facilitate the recognition, management, and prevention of mental disorders - is a critical factor in supporting mental health [5]. Research underscores the increased vulnerability to mental health disorders among patients with chronic physical diseases, who experience psychological distress from managing long-term health conditions [6]. In low- and middle-income countries, individuals with chronic diseases are three times more likely to suffer from mental health conditions [7]. Thus, promoting MHL among these populations is essential for comprehensive healthcare.

Numerous studies have shown unsatisfactory MHL among the general population in Vietnam [8, 9]. However, there remains a significant gap in understanding MHL among patients with chronic physical diseases in Vietnam and worldwide. This study aims to address this gap by evaluating MHL levels among patients with chronic physical diseases, and identifying its associated sociodemographic

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factors. Understanding these patterns can inform targeted interventions, ultimately enhancing mental health outcomes for individuals coping with chronic illness in Vietnam.

2. METHOD:

2.1. Study Design and Participants

This cross-sectional study was conducted on adult inpatients (≥18 years) with chronic physical diseases at Hue University of Medicine and Pharmacy Hospital, specifically within the Department of Internal Medicine - Endocrinology - Rheumatology and the Department of Cardiology, from August to December 2023. Chronic disease status was defined as any illness persisting for at least three months, according to established criteria [10].

Hue University of Medicine and Pharmacy Hospital is a leading, first-level hospital recognized by the Ministry of Education and Training and the Ministry of Health, with a mission to serve residents from the Central-Western Highlands region. Every year, the hospital receives and treats 250,000 patient visits, of which more than 10,000 involve surgical procedures. Consequently, a diverse range of chronic diseases are treated here. Specifically, the Department of Internal Medicine - Endocrinology - Rheumatology and the Department of Cardiology are the hospital's top two departments in terms of examination and treatment for patients with chronic diseases.

Eligible participants were those fluent in Vietnamese and able to respond accurately to the study questionnaire. Exclusion criteria included cognitive impairment, inability to complete the interview, providing excessive missing or unreliable responses, or having conditions persisting for less than three months. Participants were chosen randomly from the two departments and patients admitted multiple times to the specified departments during the study were only interviewed once.

2.2. Sample Size Calculation

The required sample size was calculated using a formula below for estimating proportions

$$n = \frac{Z^2_{1-a/2}\, p\,(1-p)}{d^2}$$

Where: n is the smallest reasonable sample size needed

$Z_{1-a/2}$ is the desired confidence level for this topic (1.96 for 95% confidence level). d is the margin of error and set to be 0.05. The proportion (P) was derived from a previous study indicating that 89.1% of respondents agreed with seeking psychological or psychiatric services for suspected mental disorders [11]. The minimum sample size needed for this study was estimated to be 151.

2.3. Data Collection

Data were gathered through a structured interview questionnaire, which consisted of sections on sociodemographic factors (e.g., marital status, education, occupation and monthly income per person in the household) and medical history. Social support was assessed using the Oslo Social Support Scale (OSSS-3). This is a concise and cost-effective tool designed to assess social support levels. Comprising just three items, the OSSS-3 assesses the quantity of close confidants, feelings of concern from others, and interactions with neighbors with a focus on the availability of practical assistance. Scores between 3 and 8 indicated low social support, 9 to 11 meant moderate support, and 12 to 14 meant strong social support. This set of questions exhibits fairly good internal consistency with α = 0.640, a reasonable value for a set of questions comprising only 3 items) [12].

MHL was assessed using the Vietnamese version of the Mental Health Knowledge Questionnaire (MHKQ), developed by the Chinese Ministry of Health in 2009 Li, Zhang [11]. It was translated into Vietnamese by two psychiatrists with extensive experience in mental health and cultural contexts relevant to Vietnam. Both psychiatrists were proficient in English.

Comprising 20 self-administered items, the questionnaire is structured into two sections. The first section, items 1-16, asks respondents to indicate whether statements regarding mental health are "true," "false," or "unknown." Responses to specific items in this section are scored differently: for items 1, 3, 5, 7, 8, 11, 12, 15, and 16, a "true" response receives one point, while a "false" or "unknown" response receives a score of 0. Conversely, for items 2, 4, 6, 9, 10, 13, and 14, a "false" response is attributed one point, while "true" or "unknown" responses obtain a score of 0. The second section, items 17 - 20, addresses participants' prior knowledge concerning the "four mental health promotion days." Total scores on the MHKQ range from 0 to 20, with higher scores indicative of a superior grasp of mental health concepts. Since no consensus exists on the ideal cut-off score for good MHL, we used the median score to separate lower and higher MHL groups. The reported Cronbach's alpha coefficient for the Chinese version of MHKQ is 0.61 [11]. For our Vietnamese version, the Cronbach's alpha coefficient is 0.72, with no item being deleted that can lift this value up.

2.4. Statistical Analysis

Data were analyzed using SPSS 26.0. Descriptive statistics were calculated for socialdemographic and clinical characteristics. Univariate logistic regression was used to identify factors associated with lower MHKQ scores (defined as ≤7, the median value). Factors with a p-value <0.05 in univariate analysis were included in a multivariate logistic regression model, with significance set at p<0.05.

2.5. Ethics

This study was approved by the Scientific Council of Hue University of Medicine and Pharmacy, Hue University (Approval code: 109/23). This study was conducted in accordance with the principles of the Declaration of Helsinki. All participants were provided with detailed explanations of the study's purpose, and procedures. Participation in the study was entirely voluntary, and participants were informed of their right to withdraw from the study at any time without any negative consequences. All data collected were anonymized to ensure participant confidentiality.

3. RESULTS

Table 1. Sociodemographic and clinical characteristics of respondents

Characteristics		n	%
Age	Mean (± SD)	57.49 (± 14.68)	
	Min - Max	18 - 92	
Gender	Male	100	50.0
	Female	100	50.0
Residence	Rural	84	42.0
	Urban	116	58.0
Ethnicity	Kinh	198	99.0
	Tà Ôi	2	1.0
Religion	None	133	66.5
	Buddhism	56	28.0
	Christian	11	5.5
Marital status	Married	175	87.5
	Single	8	4.0
	Widowed	17	8.5
Educational status	Illiterate	14	7.0
	Primary school (1-5)	70	35.0
	Junior high school (6-9)	57	28.5
	Senior high school (10-12)	27	13.5
	Intermediate/junior college	12	6.0
	University	19	9.5
	Post graduate	1	0.5
Occupational status	Old/retired	86	43.0
	Merchant	16	8.0
	Unemployed	24	12.0
	Daily laborer	20	10.0
	Farmer	32	16.0
	Others	22	11.0
Level of social support	Low social support	35	17.5
	Moderate social support	140	70.0
	Strong social support	25	12.5

Current chronic physical diseases	Hypertension	71	35.5
	Other cardiovascular diseases	18	9.0
	Musculoskeletal disease	23	11.5
	Respiratory diseases	18	9.0
	Metabolic diseases	49	24.5
	Others	48	24.0
Number of years with physical illness	Under 2 years	26	13.0
	2 - 6 years	99	49.5
	Over 6 years	75	37.5
	Mean (± SD)	2.2 (± 0.7)	
Monthly income per person in the household	Mean (± SD)	3,797,529.8 (± 2,614,599.9) VND	

The study sample consisted of 200 participants with a mean age of 57.49 (± 14.68) years and an age range of 18-92 years. There was an equal gender distribution, with 50% male and 50% female participants. A majority (58%) resided in urban areas, while 42% came from rural regions. The predominant ethnicity was Kinh (99%), with a small minority of Tà Ôi (1%) representation. Most participants reported no religious affiliation (66.5%), followed by Buddhism (28%) and Christianity (5.5%). The marital status was primarily married (87.5%), with some widowed (8.5%) and single (4%) individuals. Educational levels varied, with the largest groups having completed primary school (35%) or junior high school (28.5%). In terms of occupation, a significant portion were retired/old (43%), while others worked as farmers (16%), daily laborers (10%), merchants (8%), or were unemployed (12%). Social support levels were moderate for most (70%), with 17.5% reporting low support and 12.5% strong support. Prevalent chronic physical diseases included hypertension (35.5%), metabolic diseases (24.5%), musculoskeletal diseases (11.5%), respiratory diseases (9%), and other cardiovascular diseases (9%). The number of years living with a physical illness was 2-6 years for nearly half (49.5%), over 6 years for 37.5%, and under 2 years for 13%. The mean (± SD) monthly income was 3,797,529.8 (± 2,614,599.9) VND.

Table 2. Correct response rate of the MHKQ

Item	n	Percentage of correct answers (%)
1. Mental health is a component of health. (true)	150	75.0
2. Mental disorders are caused by incorrect thinking. (false)	77	38.5
3. Many people have mental problems but do not realise it. (true)	106	53.0
4. All mental disorders are caused by external stressors. (false)	73	36.5
5. Components of mental health include normal intelligence, stable mood, a positive attitude, quality interpersonal relationship and adaptability. (true)	33	16.5
6. Most mental disorders cannot be cured. (false)	59	29.5
7. Psychological or psychiatric services should be sought if one suspects the presence of psychological problems or a mental disorder. (true)	148	74.0
8. Psychological problems can occur at almost any age. (true)	105	52.5
9. Mental disorders and psychological problems cannot be prevented. (false)	60	30.0
10. Even for severe mental disorders (eg, schizophrenia), medications should be taken for a given period of time only; there is no need to take them for a long time. (false)	50	25.0

11. Positive attitudes, good interpersonal relationships and healthy life style can help maintain mental health. (true)	155	77.5
12. Individuals with a family history of mental disorders are at a higher risk for psychological problems and mental disorders. (true)	91	45.5
13. Psychological problems in adolescents do not influence academic grades. (false)	132	66.0
14. Middle-aged or elderly individuals are unlikely to develop psychological problems and mental disorders. (false)	100	50.0
15. Individuals with a bad temperament are more likely to have mental problems. (true)	65	32.5
16. Mental problems or disorders may occur when an individual is under psychological stress facing major life events (eg, death of family members). (true)	108	54.0
17. Have you heard about International Mental Health Day? (yes)	6	3.0
18. Have you heard about the International Day against Drug Abuse and Illicit Drug Trafficking? (yes)	21	10.5
19. Have you heard about the International Suicide Prevention Day? (yes)	3	1.5
20. Have you heard about World Sleep Day? (yes)	2	1.0
Total score: Min-Max, Mean (SD), Median	2 - 17, 7.7 (3.3), 7	

The results from MHKQ reveal varying levels of understanding among the 200 participants regarding mental health concepts. A significant portion (75.0%) correctly identified that mental health is a component of overall health, while only 38.5% correctly rejected the misconception that mental disorders are caused by incorrect thinking. Less than half (36.5%) knew that external stressors are not the sole cause of mental disorders. Awareness of the importance of professional help was high, with 74.0% recognizing the need to seek psychological or psychiatric services when suspecting mental health issues, and 77.5% understanding that positive attitudes, good relationships, and a healthy lifestyle are crucial for maintaining mental health. However, misconceptions were prevalent; for example, only 29.5% rejected the idea that most mental disorders are incurable. The participants' familiarity with mental health awareness days was notably low, with only 3.0% aware of International Mental Health Day, and even fewer recognizing other key events, such as International Suicide Prevention Day (1.5%). The total scores on the MHKQ ranged from 2 to 17, with an average score of 7.7 (±3.3) and a median of 7, highlighting limited MHL in this population (Table 2).

Table 3. Univariate and multivariate logistic regression analysis of factors relating to a lower MHKQ score

Characteristics	n	%	Odd ratio (95% CI) of univariate analysis	Odd ratio (95% CI) of multivariate analysis
Age				
<57	93	46.5	1	
≥57	107	53.5	1.26 (0.72 - 2.19)	
Gender				
Male	100	50	1	
Female	100	50	1.04 (0.60 - 1.81)	

Occupation				
Elderly/Retired	86	43	1	1
Business	16	8	1.41 (0.48 - 4.13)	3.84 (0.93 - 15.84)
Unemployed	24	12	1.3 (0.52 - 3.22)	3.01 (0.87 - 10.39)
Manual labor	20	10	0.47 (0.17 - 1.34)	0.92 (0.24 - 3.57)
Farming	32	16	5.93 (2.09 - 16.83)*	2.69 (0.74 - 9.76)
Other	22	11	0.76 (0.29 - 1.96)	3.37 (0.78 - 14.58)
Level of social support				
Low	35	17.5	1	
Medium	140	70	1.12 (0.53 - 2.35)	
High	25	12.5	1.88 (0.66 - 5.39)	
Living area				
Rural	84	42	7.24 (3.79 - 13.84)*	5.35 (2.17 - 13.23)*
Urban	116	58	1	1
Religion				
None	133	66.5	1	
Buddhism / Christianity	67	33.5	1.55 (0.86 - 2.81)	
Education level				
University and Postgraduate	20	10	1	1
Intermediate/College	12	6	11.33 (2.04 - 63.08)*	17.26 (2.52 - 118.47)*
High school	27	13.5	1.62 (0.35 - 7.45)	1.07 (0.16 - 7.22)
Secondary school	57	28.5	4.43 (1.17 - 16.81)*	5.4 (1.04 - 27.93)*
Primary school	70	35	24.85 (6.33 - 97.51)*	20.23 (3.68 - 111.14)*
Illiterate	14	7	4.25 (0.84 - 21.49)	2.5 (0.33 - 19.2)
Marital status				
Married	175	87.5	1	
Single	8	4	0.92 (0.22 - 3.81)	
Widowed	17	8.5	1.32 (0.48 - 3.62)	
Monthly income per person in the household				
Below 2,500,000	46	23	1	1
2,500,000 to 4,000,000	97	48.5	0.90 (0.43 - 1.88)	1.18 (0.46 - 3.06)
Above 4,000,000	57	28.5	0.17 (0.07 - 0.41)*	0.44 (0.14 - 1.35)
Years with chronic disease				
< 2 years	26	13	1	
2-6 years	99	49.5	1.85 (0.77 - 4.44)	
>6 years	75	37.5	1.33 (0.54 - 3.27)	

* $p<0.05$

As the median value of MKHQ score was 7, we define lower MHKQ score as having MHKQ equal or below 7, with 105 (52.5%) qualified for this criteria. Table 3 presents the results from univariate and multivariate logistic regression analyses, examining sociodemographic and clinical factors associated with lower MHKQ scores. Notably, individuals from rural areas had significantly higher odds of possessing a lower MHKQ score (OR = 5.35, 95% CI: 2.17-13.23, $p < 0.05$), indicating a lower level of mental health literacy compared to those from urban areas. Educational attainment was also a significant factor, with primary school education being strongly associated with lower MHKQ scores (OR = 20.23, CI: 3.68 - 111.14) compared to university-educated individuals. Occupational categories showed that individuals engaged in farming had elevated odds of lower MHKQ scores in the univariate analysis, though in the multivariate analysis the difference did not reach statistically significance.

4. DISCUSSION

4.1. General findings

This study identifies significant gaps in mental health literacy (MHL) among Vietnamese patients with chronic physical diseases and highlights sociodemographic disparities, specifically regarding education and rural residency. The average MHKQ score of 7.7 reflects prevalent misconceptions and limited knowledge, with low awareness of mental health awareness days. These findings align with prior studies reporting poor MHL among the general population in Vietnam [9]. Notably, the mean MHKQ score of 7.7 in our study is significant lower than that of numerous studies in China (Chinese rural population (11.6) [13], college students (17) [14], and the whole Chinese population (15.89) [11]). This indicates that there is an urgent need to improve the MHL in patients with chronic diseases in Vietnam.

4.2. Influence of Sociodemographic Factors on MHL

Our multivariate analysis model suggests that education and living area as significant predictors of poor MHL. Patients with only primary school education were 20.23 times more likely to score low on the MHKQ than those with university-level education, underscoring a strong association between education and mental health knowledge. This result align with previous literature [13, 15] and suggests that education level is a key factor in developing mental health knowledge, highlighting the need for targeted interventions for individuals with limited education. The rural-urban divide also appeared substantial in this study, with rural residents showing significantly worse MHL than their urban counterparts (OR = 5.35, 95% CI: 2.17-13.23, $p < 0.05$). This divide is consistent with results from studies in China [11, 16]. Limited healthcare access and fewer educational resources in rural areas may contribute to this disparity.

4.3. Implications for Health Policy and Practice

The findings underscore the need for integrated care addressing both physical and mental health, especially in rural and lower-education populations, for patients with chronic diseases. Targeted mental health promotion, expanded to rural areas, and training healthcare providers to improve patient understanding are essential steps. Facilities like Hue University of Medicine and Pharmacy Hospital could act as community hubs for mental health education, helping to increase awareness and reduce stigma.

4.4. Study Limitations

This study's cross-sectional design limits causal inferences, and reliance on self-reported data may introduce response bias.

Additionally, focusing on a single hospital may limit the broader applicability of the findings.

5. Conclusion

Urgent efforts are needed to enhance MHL among Vietnamese patients with chronic illnesses, with specific attention to rural and less-educated groups. Integrating MHL into chronic disease care and expanding mental health education programs could improve outcomes for this vulnerable population.

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