



Depression Literacy and Its Relationship with Depression Stigma and Attitude Toward Seeking Help in Iranian Women



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ABSTRACT

Aims Depression, anxiety, and psychiatric symptoms are more prevalent among women than men. Given the significance of depression literacy and its associated factors, this study aimed to explore the level of depression literacy and its correlation with depression stigma and attitudes toward seeking help among Iranian women attending health centers in Saveh City.

Instrument & Methods This cross-sectional study assessed 280 women aged 18-65 selected through cluster sampling from September 2023 to December 2023 in Saveh County, Iran. Reliable and validated tools, including the D-Lit Questionnaire, Attitude Toward Seeking Professional Psychological Help Scale, and DSS-Personal Subscale were utilized for data collection. Data analysis was conducted using independent samples t-test and one-way ANOVA. Predictors were identified through hierarchical linear regression analysis.

Findings The lowest correct answer rate was associated with knowledge of available treatment methods (15.4%). The mean scores for D-Lit, attitude toward seeking help, and personal depression stigma were 41.36 ± 4.83 , 23.63 ± 3.69 , and 25.39 ± 4.36 , respectively. Education level, consultation with a psychologist, attitude toward seeking help, and depression stigma collectively accounted for approximately 23% of the variance in depression literacy.

Conclusion The level of depression literacy among Iranian women is insufficient.

Keywords Depression; Social Stigma; Women

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- [1] Depression and other common mental disorders ...
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- [3] Psychometric properties of Persian version of depression literacy ...
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- [5] Prevalence of anxiety, depression and stress in CABG candidate patients and factors ...
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- [38] Quantifying and predicting depression literacy of undergraduates ...

Introduction

Loneliness encompasses an individual's subjective perception of emotional distress stemming from inadequate social connections in terms of quality or quantity [1]. In contrast, social isolation denotes an objective absence of social interactions [2]. Both loneliness and social isolation have been linked to declining health and heightened mortality rates in elderly populations [3, 4]. Despite their correlation, these two phenomena are distinct; a person experiencing loneliness may not necessarily be socially isolated, and vice versa [5, 6].

The issue of elderly individuals living alone is a significant societal concern often overlooked, and its prevalence has surged due to growing economic pressures [7]. The circumstance arises from various factors like separation from a spouse, children, or a desire for independence [8].

Loneliness encompasses a complex range of emotions tied to unmet social and personal needs and is closely intertwined with social isolation, particularly prevalent among older adults. A longitudinal study conducted over eight years revealed that 9% of the elderly population in the UK experience severe loneliness, while 30% have mild loneliness, indicating the importance of strong social networks and good health in preventing loneliness. Furthermore, the growth of the elderly population has resulted in a surge in the number of seniors residing in long-term care institutions [9].

Numerous research endeavors spanning various countries, such as Australia, Iran, Malaysia, and the United States have delved into the escalating issue of loneliness among older individuals [10-12]. These studies primarily focused on examining the correlation between community engagement and feelings of loneliness. In Malaysia, particular attention was given to exploring the link between loneliness and the involvement of older adults in religious activities, which often serve as a cornerstone for social interactions in numerous cultures and offer external support. As the global population ages at a swift pace, fostering a sense of community becomes increasingly crucial, especially considering the revelation of the World Health Organization (WHO) regarding the substantial surge in older people living in solitude worldwide, including in rural areas [13].

The literature discusses different forms of social isolation, categorizing them as subjective and objective. Subjective social isolation refers to the personal perception of inadequate social resources, like companionship or support from others [14]. Studies have consistently shown a direct link between both types of social isolation and conditions like sleep disruptions, depression, and fatigue. Emotional loneliness, a form of subjective social isolation rooted in inadequate support from peers, is strongly linked to reduced sleep quality [15].

Wakefield *et al.* [16] reported that individuals with strong social connections experience better sleep. Interrupted sleep, and insufficient time for recuperation, have been proposed to interfere with typical hormonal, metabolic, and neurological functions [17], leading to declining health [18], diminished life satisfaction [19], and heightened mortality rates [20]. Additionally, numerous other factors contributing to sleep disorders and disruptions have been identified, such as being female, economic hardship [21], loss of a spouse [22], early signs of cognitive decline [23], feelings of depression [24], respiratory issues, cardiovascular conditions [25], and even cancer [26].

The previous systematic review elucidated the correlation between social relationships, particularly close ones, and individuals' sleep patterns. However, these studies encompassed a broad spectrum of research across different age groups and health statuses [27]. The present review aimed to thoroughly examine the existing body of literature regarding the connection between loneliness, social isolation, and sleep. A systematic investigation was carried out to analyze the current state of research on the correlation between feelings of isolation and sleep patterns, giving particular attention to how samples were selected and measurements were conducted.

Instrument and Methods

Study design and participants

This cross-sectional study was carried out from August to September 2023 involving 280 women receiving routine prenatal care at health centers in Saveh City. Using G-power, the sample size was initially estimated to be 138 ($p=0.05$ (two-tailed), power=95%, and correlation coefficient=0.3). Considering the utilization of cluster sampling, the sample size was adjusted to 207 by incorporating a design effect of 1.5. Furthermore, accounting for a projected 10% attrition rate, the final sample size was determined to be 228.

Inclusion criteria comprised having a health center file, a reachable phone number, and a basic level of education (i.e., reading and writing skills). Exclusion criteria included lack of cooperation and incomplete questionnaire completion.

Initially, the www.random.org website was utilized to select five health centers in Saveh, representing a quarter of all health centers. The researcher accessed Iran's Integrated Health System (SIB) to obtain the list of women registered under the specified health centers along with their contact numbers. Subsequently, participants were randomly selected in proportion to the number of women served by each center. The researcher then contacted the participants via telephone to explain the study's objectives and procedures and assess their eligibility based on the inclusion and exclusion criteria. If participants agreed to take part and met the criteria,

the questionnaires were sent electronically (via platforms, like Telegram, WhatsApp, Ita, and Shad). Data collection was done using the following questionnaires:

1) The socio-demographic questionnaire: This questionnaire was developed by the authors and validated by ten academics from the Iran University of Medical Sciences and included inquiries about respondents' age, level of education, occupation, income, number of children, and other relevant details.

2) Depression Literacy Questionnaire (D-Lit): This questionnaire was developed and validated by Griffiths *et al.* and comprises 22 items aimed at assessing depression literacy status [24]. Responses to these questions are graded on a three-point scale (true, false, or I don't know), with a scoring range of 22 to 66 points. Each correct answer is assigned a score, with higher scores indicating a better depression literacy status. In Griffiths *et al.*'s study, Cronbach's alpha and the three-month test-retest reliability were reported to be 0.70 and 0.71, respectively [24]. In Tehrani's study, the validity and reliability of the Persian version of the D-Lit questionnaire were examined. Through exploratory factor analysis, five factors with eigenvalues exceeding one were identified, explaining 56.30% of the variance (knowledge of psychological symptoms, knowledge of treatment method effectiveness, knowledge of cognitive-behavioral symptoms, knowledge of medication usage and side effects, and knowledge of disease severity) [3]. Confirmatory factor analysis validated these five factors, resulting in the elimination of one question and confirming a final questionnaire with 21 items and a scoring range of 21 to 63. The Cronbach's alpha coefficient for the whole scale was 0.89 [3].

2) Attitude Toward Seeking Professional Psychological Help (ATSPPH) Scale: This scale was employed to assess attitudes toward seeking help. It consists of ten questions rated on a Likert scale from "1" (completely disagree) to "5" (completely agree). Participants with higher scores on the questionnaire demonstrate a positive attitude towards seeking help [25]. Sharifi *et al.* [26] conducted psychometric testing on this questionnaire. In Iran, factor analysis results indicated the validity of the ATSPPH-S model. Additionally, we obtained a Cronbach's alpha value of 0.84.

3) The DSS-Personal Subscale: This tool comprises nine items rated on a five-point Likert scale (0=strongly disagree, 4=strongly agree) [24]. The total score (ranging from 0 to 36) is obtained by summing the scores of each item, with higher scores indicating a higher level of stigma toward mental illness. It has been widely used in population surveys [27, 28]. The internal consistency within our sample was calculated to be 0.824. We combined the categories of agree and strongly agree for each item to determine if the respondent exhibited personal stigma.

Individuals with fewer than six entries indicating personal stigma were identified as having a personal stigma toward mental disorders.

Statistical analysis

Using SPSS 21, the obtained data were analyzed. Using the Kolmogorov-Smirnov test, the normality of the quantitative data was analyzed. Using central and dispersion indicators and frequencies (percent), respectively, the quantitative and qualitative variables were evaluated. Spearman's rank correlation coefficient test was used to examine the correlation between self-care performance and perceived stress levels in the bivariate correlation analysis. Adjusting for the confounding effects of sociodemographic and obstetric variables, univariate and multivariate regression analyses were also conducted to determine the correlation between self-care performance and perceived stress levels.

Findings

All 228 studied participants were women, with the majority of them (48%) having a high school diploma or higher, and a significant portion (77.7%) being housewives. About 61% of the women reported having a moderate financial situation, and the vast majority (85%) were married (Table 1).

Table 1. Frequency of demographic variables and mean score of depression literacy according to general characteristics

Parameter	Classification	Frequency	Mean depression literacy	p-Value
Age (year)	18-35	93(33.2)	40.12±3.96	0.059**
	36-50	102(36.4)	40.89±4.16	
	>50	85(30.3)	41.51±4.52	
Financial status	Good	57(20.3)	41.86±4.36	0.45**
	Moderate	171(61.0)	41.63±4.11	
	Low	52(18.5)	41.31±3.95	
Education level	Elementary	68(24.2)	40.23±3.83	0.04**
	High school	136(48.7)	41.33±4.17	
	Academic	73(26.0)	42.29±4.38	
Employment status	Housewife	63(22.5)	41.73±4.19	0.26*
	Employee	217(77.5)	41.54±4.31	
Marital status	Married	239(85.3)	41.14±4.09	0.09*
	Single	41(14.7)	41.64±3.97	
Consulting with a psychologist/psychiatrist for the mental condition	Yes	39(13.9)	43.8±4.67	0.01*
	No	231(86.1)	40.36±3.86	

*One-way ANOVA; **Independent t-test

Among the components of the D-Lit Questionnaire, the highest percentage of correct answers was related to knowledge of disease severity (58.5%), while the lowest correct response rate was linked to knowledge of available treatment methods (15.4%; Table 2).

The mean scores of the D-Lit Questionnaire subscales, attitude toward seeking help, and personal depression stigma is shown (Table 3).

In step 1, demographic characteristics emerged as significant predictors of depression literacy scores.

Table 2. Participants' response to the D-Lit Questionnaire

Items	% of correct answers
Knowledge of the psychological symptoms	45.52
1. People with depression may feel guilty when they are innocent (true)	58.9
2. Loss of confidence and low self-esteem may be a sign of depression (true)	57.3
3. Too little or too much sleep can be a symptom of depression (true)	55.4
4. Eating too much or losing interest in food may be a symptom of depression (true)	46.4
5. People may move more slowly or become agitated due to their depression (true)	48.2
Knowledge about the effectiveness of available treatment methods	15.4
6. Clinical psychologists can prescribe antidepressant medications (true)	23.8
7. Many treatments for depression are more effective than antidepressant medications (false)	8.9
8. The effects of counseling are similar to those of cognitive-behavioral therapies for depression (false)	5.7
9. The effect of cognitive-behavioral therapies is the same as that of antidepressant medications for mild to moderate depression (true)	23.2
Knowledge about cognitive-behavioral symptoms	34.2
10. People with depression often speak sporadically and irrelevantly (false)	38.6
11. Reckless and foolhardy behavior is a common symptom of depression (false)	23.2
12. Not walking on cracked and broken sidewalks may be a symptom of depression (false)	35.9
13. People with depression often hear sounds that are not normally heard (false)	25.6
14. Depression does not affect your memory and concentration (false)	64.9
15. Having several distinct personalities can be a symptom of depression (false)	17.5
Knowledge about taking medications and their side effects	39.7
16. If all the alternative and lifestyle therapies for depression, vitamins are the most beneficial (false)	33.9
17. People with depression should stop taking antidepressant medications as soon as they feel better (false)	69.6
18. Antidepressant medications are addictive (false)	25.4
19. Antidepressant medications are usually rapid-acting (false)	30.4
Knowledge of the severity of the disease	58.05
20. Most people with depression need to be hospitalized (false)	67.9
21. Many celebrities have suffered from depression (true)	52.2

These factors accounted for 9% of the variance in depression literacy scores ($F=2.39$; $p\text{-value}=0.03$), signifying that demographic variables contribute to approximately 9% of the variation in depression literacy scores. Subsequently, in step 2, the inclusion of attitude toward seeking help explained an additional 5% of the variance ($F=18.02$; $p\text{-value}=0.01$). Furthermore, the incorporation of depression stigma in step 3 elucidated an additional 9% of the variance ($F=17.24$; $p\text{-value}=0.001$). Collectively, variables, such as education level, attitude towards seeking help, and depression stigma could account for approximately 23% of the variation in D depression literacy scores (Table 4).

Table 3. Mean scores of the D-Lit Questionnaire subscales

Subscales	Range	Mean score
Knowledge of the psychological symptoms	5-15	11.56±2.69
Knowledge about the available effectiveness of treatment methods	4-12	6.23±1.73
Knowledge about cognitive-behavioral symptoms	6-18	10.39±2.36
Knowledge about taking medications and their side effects	4-12	8.52±1.39
Knowledge of the severity of the disease	2-6	4.31±1.06
Attitude toward seeking help	10-30	23.63±3.69
Personal depression stigma	0-36	25.39±4.36
Total score of the D-Lit Questionnaire	21-63	41.36±4.83

Table 4. Hierarchical regression analysis for variables predicting depression literacy

Parameter	Step 1		Step 2		Step 3	
	Beta	t	Beta	T	Beta	t
Constant						
Age (year)	0.07	1.53	0.05	1.44	0.04	1.49
Financial status	0.13	1.63	0.12	1.59	0.09	1.96
Education level	0.69	2.29	0.63	2.15	0.59	2.09
Employment status	0.03	0.52	0.03	0.51	0.02	0.39
Marital status	0.11	1.38	0.09	1.23	0.08	1.05
Consulting a psychologist/psychiatrist for mental status	0.98	1.45	0.95	3.19	0.87	2.79
Attitude toward seeking help			0.58	2.98	0.55	2.31
Depression stigma					-1.35	-2.36
R²	0.09		0.14		0.23	
F	2.39		6.39		8.69	
p-Value	0.03		0.01		0.001	

Discussion

This study assessed the level of depression literacy and its association with depression stigma and attitudes toward mental health services among Iranian women in Saveh City. The study's outcomes revealed that depression stigma stands out as the most influential predictor of depression literacy among the female participants. These findings align with those of Pruksarungruang *et al.* in Thailand, who highlight that there is a significant correlation between depression literacy and personal stigma [21]. The study underscored the necessity for comprehensive mental health literacy initiatives that extend beyond merely imparting knowledge about depression to actively challenging and reshaping societal attitudes and perceptions. In addition to focusing on the clinical facets of depression, educational efforts should also tackle the social determinants that fuel stigma, including stereotypes, discrimination, and misinformation. These results underscore the importance of adopting a multifaceted approach to enhance depression literacy. This approach involves not only disseminating accurate information but also confronting societal norms, fostering empathy, and fostering supportive environments for individuals grappling with depression. The attitude toward mental health services emerged as another predictor of depression literacy among the women involved in this study. This finding aligns with prior research exploring the connection between mental health

literacy and attitudes toward seeking help [23, 29]. Negative perceptions of mental health services, often stemming from societal stigma, can act as barriers that hinder individuals from seeking the vital support they require [30]. It is crucial to address these adverse attitudes to promote early intervention and enhance mental health outcomes.

Consistent with previous research [31, 32], this study revealed that the highest percentage of correct responses was linked to understanding the severity of the disease, while the lowest proportion was related to knowledge of the effectiveness of available treatment methods. The study's findings suggest that the awareness campaign in Iran prioritizes patient awareness over information about treatment options. Nearly half of the participants were informed that numerous well-known figures have faced challenges with depression. In line with a Korean study [33], following media coverage of a celebrity's suicide attributed to depression, there is an increase in individuals seeking psychiatric treatment the subsequent month. Such celebrity news helps the public understand that depression can impact anyone and provides insights into prevention and treatment strategies.

The study's results highlighted a deficiency in participants' awareness of the effectiveness of available treatment methods. A significant portion of the participants demonstrated a lack of knowledge about cognitive behavioral therapy (CBT). Specifically, nearly all participants (94.3%) mistakenly perceived counseling to be as effective as CBT for depression, which is consistent with a previous study [34]. A meta-analysis of 409 clinical trials conducted in 2023 revealed that CBT is as effective as drug therapy in the short term and more effective than supportive therapy in the long term [35]. Moreover, the majority of participants exhibited a lack of understanding regarding drug therapy. Almost all participants (92%) incorrectly believed that various treatments for depression were more effective than antidepressants. These findings have substantial implications for mental health professionals and the healthcare community. The participants' limited knowledge concerning depression treatment methods suggests that current efforts to educate individuals about these treatments have been ineffective. It is crucial to undertake efforts aimed at delivering thorough and precise information regarding the available treatments for depression. Furthermore, the findings of this study underscore the significance of enhancing communication between healthcare providers and the general public to guarantee that individuals seeking treatment for depression are adequately informed about their treatment alternatives and the potential advantages of different treatment methods. The study unveiled that participants had inadequate knowledge concerning the cognitive-behavioral symptoms of depression. For example,

approximately 77% of the women in the study identified irresponsible and foolish behavior as common symptoms of depression, while 83% recognized that having multiple personalities could indicate depression. Failing to distinguish depression symptoms from those of other mental health disorders can lead to the stigmatization of individuals with depression and impede their access to timely treatment [11]. To foster precise comprehension and prompt individuals to seek help for depression and related mental health concerns, mental health education, and awareness initiatives should address and rectify these misconceptions.

In the realm of knowledge therapy and its impacts, more than half of the women provided incorrect responses to the inquiries. For instance, around 70% of the women in this study believed that antidepressants were addictive and acted rapidly. Misunderstandings regarding the addictive nature of antidepressants and the speed of their effects could dissuade individuals from seeking treatment, leading to untreated depression. To address these misconceptions, efforts should focus on promoting the use of reliable sources of mental health information. Numerous studies have explored the link between folate, vitamin D, B vitamins, and depression. However, systematic reviews have revealed a lack of evidence regarding the role of vitamins in treating individuals with depression [36]. Despite these scientific findings, approximately 88% of our participants perceived vitamins as the most effective alternative and lifestyle treatment for depression, mirroring the findings of an audio-recording investigation involving hospital employees in Iran [31]. In Iran's healthcare system, such misinformation can pose a significant obstacle.

In line with Reavley *et al.*'s study in Australia, this research indicated that factors, like higher education levels and a background of consulting with a psychologist or psychiatrist can impact depression literacy [37]. Education, exposure to the disorder, and receiving professional support can influence depression literacy among Sri Lankan students [38]. This study underscored the critical importance of addressing depression stigma as a primary predictor of depression literacy among the participants. Negative attitudes towards mental health services, often stemming from social stigma, must be addressed to ensure individuals seek the necessary support. There is a necessity for more effective dissemination of information regarding depression treatment and the advantages of various methods. Improving communication between healthcare providers and the public is essential to empower individuals seeking depression treatment with informed choices. Efforts should also focus on correcting misconceptions surrounding depression symptoms and dispelling myths about treatments, including the role of vitamins and alternative therapies. Promoting credible mental health

information sources is crucial to combat these misconceptions. Also, there are significant knowledge gaps concerning depression treatment methods, cognitive-behavioral symptoms, and misconceptions about therapy options.

Our study had limitations. First, due to the cross-sectional study design, a causal relationship cannot be established. Second, the measurement of depression literacy was evaluated by self-report method. Third, this study was conducted only on the women in Saveh City, which may limit the generalization of the findings to women throughout Iran. Sampling in this study was done from public health centers, and it is suggested to include private centers in future works.

Conclusion

The level of depression literacy among Iranian women is insufficient. Factors, such as education level and prior exposure to mental health services affect depression literacy, aligning with findings from other countries.

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Ethical Permissions: This study was conducted in compliance with the Helsinki Declaration and all relevant laws and received approval from the Ethics Committee of Iran University of Medical Sciences (IR.IUMS.REC.1401.713).

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