



The Mental Health Literacy Status of Pregnant Women in Eastern Iran Regarding Postpartum Depression and its Associated Factors

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Abstract

Background and aims: Reducing the burden of mental health disorders can be achieved by increasing mental health literacy. The purpose of the current study was to investigate mental health literacy regarding postpartum depression among pregnant women in eastern Iran.

Methods: This cross-sectional study was conducted on 277 pregnant women referred to health centers of Sarayan City (eastern Iran) in 2022. A standard health literacy questionnaire was used for data collection. The collected data were analyzed by SPSS version 19.0 using independent *t*-test, one-way analysis of variance, and regression analysis. The significance level was set at 0.05.

Results: The mean age of participants was 20.28 ± 1.5 years. In total, 96% had a diploma or a lower education level, and 59.6% had an average monthly income of less than 5 million Tomans. The mean total mental health literacy score regarding postpartum depression was 110.96 ± 20.28 (score range: 31-155). The highest score was related to the attitude towards postpartum depression (3.73 ± 0.91), and the lowest was related to the field of awareness of health services (3.09 ± 1.36). The regression analysis showed that there is a significant relationship between mental health literacy ($P < 0.0001$) and income ($B = 0.4$) and education ($B = 0.3$).

Conclusion: The findings showed that the pregnant women participating in the research had an average level of mental health literacy. Since low health literacy prevents the correct understanding of health messages, it is recommended that mental health literacy should be increased and pregnant women should be empowered through education, especially mothers with lower income and educational levels.

Keywords: Mental health literacy, Depression, Postpartum period, Pregnant women

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Introduction

Pregnancy and postpartum are sensitive periods for many women, which can lead to mental disorders. Postpartum mental disorders can be divided into three categories: postpartum grief, postpartum depression, and postpartum psychosis.¹ Postpartum depression is a common mental disorder associated with pregnancy.² Depression after childbirth is twice as prevalent as it is in other parts of a woman's life.³ In general, postpartum depression is experienced by 30% of all mothers.⁴ Postpartum depression is more prevalent in low-income countries than in middle- and high-income countries.⁵ The prevalence of postpartum depression has been reported to be 17.7% worldwide, with the lowest rate being reported in countries such as Singapore with a prevalence rate of 3%, Nepal with 7%, and the Netherlands with 8%. Chile, South Africa, and Hong Kong have the highest

rates of postpartum depression, with prevalence rates of 38%, 37%, and 30%, respectively.⁶ In our country, the prevalence of postpartum depression has been estimated to be 13-22% at 6-8 weeks postpartum.⁷

Not only does postpartum depression have immediate adverse effects on the mother, baby, and her family, but it can also lead to long-term complications such as chronic or recurrent depression.⁸ Mothers who suffer from postpartum depression often have less patience and tolerance and are less responsive to their baby's needs.⁹

Postpartum depression is a common disorder that is often undiagnosed, or even when it is identified, many women choose not to receive professional help despite its availability.¹⁰ If postpartum depression is not diagnosed, it can progress to more severe degrees and become postpartum psychosis. The woman's ability to perform maternal duties is severely affected, resulting in emotional,

social, and cognitive problems for the child in the future.¹¹ Only 40% of women with postpartum depression are diagnosed by healthcare providers. A significant number do not receive treatment for their depression symptoms.¹² The stigma of postpartum depression prevents women from recognizing it and asking for help. Mothers feel embarrassed and ashamed to disclose their depression symptoms and think it is a sign of weakness and inability to play the role of a mother.¹³ Patients are reluctant to provide information about depression symptoms due to the label of mental illness.¹⁴ According to evidence, 90% of individuals who require medical services do not receive these services.¹⁵ The adverse effects of postpartum depression on women, babies, and their family members can be minimized by providing women with the necessary knowledge and skills to recognize it and receive adequate treatment.¹⁶

Mental health literacy is a crucial approach to reducing the burden of mental health disorders.¹⁷ Mental health literacy is defined as knowledge and beliefs about mental disorders that aid in recognizing, controlling, or preventing postpartum depression.¹⁸ Studies have shown that mothers with low mental health literacy are unable to recognize postpartum depression signs and symptoms and help-seeking behaviors, and insufficient health literacy may lead women to normalize depressive symptoms.¹⁶ Studies have revealed that individuals with mental health literacy have better healthcare behaviors and a more professional approach to using health-related information, leading to a better quality of life. Additionally, individuals with low mental health literacy fail to seek mental health services, which results in the worsening of their mental health conditions.¹⁹ Low mental health literacy is an issue that hinders the provision of treatment to those who require it, and it is a matter of concern in countries with low and middle-income levels like Iran. Despite this fact, no comprehensive research has been conducted to evaluate the state of mental health literacy in Iran.¹⁸ Given the importance of mental health literacy in women's use of health services and early diagnosis of mental disorders, the objective of the present study was to investigate the mental health literacy status of pregnant women in Sarayan city in 2022 regarding postpartum depression.

Materials and Methods

This cross-sectional study was conducted on 277 pregnant women referred to healthcare centers in Sarayan City (Eastern Iran). The sample size was calculated based on the study by Mirsalimi et al,¹⁴ taking into account a confidence interval of 95%, margin of error of 0.05, and standard deviation of 0.39 using the formula $n = \frac{Z_{1-\alpha/2}^2 * \sigma^2}{\delta^2} = 233$. Considering the nonresponse rate of 15%, the final sample size was determined to be 277 participants. First, the list of pregnant women was received from all health centers in Sarayan City. Then, 277 pregnant women were selected from the list by simple random sampling method, and the chosen participants completed the mental health literacy

questionnaire. The inclusion criteria were as follows:

- Informed consent to participate in the study,
- Residence in Sarayan city, and
- Being pregnant (regardless of the week of pregnancy).

Incomplete questionnaires were excluded from the study. The purpose of completing the questionnaire was described to the pregnant women, and written consent was received from them to comply with ethical considerations. Moreover, the mothers were assured that the information contained in the questionnaire would be kept entirely confidential.

A standard questionnaire with two parts was used as a data collection tool.¹⁴ The first one addressed the demographic information, including the participant's age, income, mother's education, number of births, desired or unwanted pregnancy, and mother's occupation. The second part was the mental health literacy questionnaire that included 31 questions and seven domains (ability to recognize postpartum depression, awareness of causes and risk factors, awareness of self-care activities, awareness of public health services, beliefs about public health services, attitudes towards postpartum depression, and awareness of how to access information), which is graded on a 5-point Likert scale from completely agree to completely disagree. The validity and reliability of this questionnaire have been confirmed in the study by Mirsalimi et al. Cronbach's alpha coefficient for different parts of the questionnaire was reported to be between 0.70 and 0.83, and for the whole questionnaire, it was 0.7.¹⁴ To assess the reliability of the questionnaire in this study, 20 women from the target population completed the questionnaire. The questionnaire's reliability was confirmed using internal consistency ($\alpha=0.71$).

After collecting the data, it was entered into SPSS 19.0, and mean, standard deviation, and frequency distribution tables were used to describe the data. The normality of the data was checked with the Kolmogorov-Smirnov test, and independent *t* test, analysis of variance, and backward regression analysis were used to analyze the data. The significance level was set at 0.05.

Results

The mean age of mothers was 20.28 ± 1.5 years. The highest percentage of mothers were in the age group of 30-34, with 19.9%, and then in the age group of 26-30 years, with 18.8. In total, 96% of the participants had a diploma or lower level of education, and only 4% had a university degree. Additionally, 59.6% of the participants had an average monthly income of less than 5 million. Besides, 64.6% of the participants were experiencing their first pregnancy, and more than 97% of the participants in the study were housewives. Additional information about the demographic characteristics is given in [Table 1](#). The mean (\pm SD) score for the domain of the ability to diagnose postpartum depression was equal to 20.83 ± 6.49 (score range: 6-30), it was 17.08 ± 5.65 (score range: 5-25) for the domain of a person's awareness of causes and risk

factors, 18.59 ± 5.56 (score range: 5-25) for the knowledge and belief of the individual about self-care activities, 6.85 ± 2.76 (score range: 2-10) for the domain of awareness of available health services, 6.19 ± 2.73 (score range: 2-10) for the individual's belief about the public health services, 22.41 ± 5.48 (score range: 6-30) for the domain of attitude towards postpartum depression, and 15.94 ± 5.98 (score range: 5-25) for the domain of knowing how to access information about postpartum depression. The mean total score of mental health in terms of postpartum depression in the studied subjects was 110.96 ± 28.20 (score range: 31-155). To facilitate the comparison of data with similar studies, the mean score of each domain was calculated by dividing the score obtained by the total number of questions in the domain (Table 2). As shown in Table 3, the one-way analysis of variance results showed a significant relationship between income and mental health literacy of participants ($P < 0.0001$). Tukey's test showed a significant difference between incomes below 3 million Tomans, 5 to

10 million Tomans (0.001), and incomes above 10 million Tomans. Furthermore, the regression results showed that there is a relationship between mental health literacy and income ($B = 0.4$, $P < 0.0001$) and education level ($B = 0.3$, $P < 0.0001$) (Table 4).

Discussion

Based on the results of the present research, which was conducted to investigate the state of mental health literacy among pregnant women in eastern Iran, the mean score of mental health literacy regarding postpartum depression was 3.42 ± 1.38 , which is considered moderate. This result is consistent with the results of studies conducted by Mirsalimi et al in Tehran,¹⁴ Huang et al in China,²⁰ Poreddi et al in India,²¹ Fonseca in Portugal,²² and Recto in Spain.²³ Moreover, based on the results of the study by Ghanbari et al, which was conducted to investigate the health literacy status of pregnant women using the Functional Health Literacy Questionnaire of Adults in Tehran, participants' health literacy was classified into three levels: insufficient, borderline, and sufficient. According to the results, 30% of the studied participants had insufficient health literacy, 24.6% had borderline health literacy, and 45.4% had sufficient health literacy. The results of the study by Ghanbari et al showed that the health literacy level of pregnant mothers is average. Limited health literacy is a common problem in pregnant women referred to health centers.²⁴ Since limited health literacy can prevent the correct understanding of health messages and recommendations, it is necessary for health workers to use effective methods of information transfer for these participants.²³ The results of similar studies conducted in the field of mental health literacy regarding postpartum depression indicate that many pregnant mothers do not have enough information about postpartum depression, and this requires more attention to education about postpartum depression and identifying facilitators of help-seeking behavior (mental health literacy).¹⁴

Based on the results of the present study, the mean score of mental health literacy regarding postpartum depression in the ability to recognize the symptoms of postpartum depression, awareness of the causes and risk factors, and awareness of self-care activities was at an average level, which is in agreement with the results of the study by Mirsalimi et al.¹⁴ Therefore, to improve people's awareness of the symptoms of postpartum depression and information

Table 1. Demographic Information of Women Participating in the Research

Variable	Number	Percent	
Age (y)	<18	22	7.9
	18-22	48	17.3
	22-26	44	15.9
	26-30	52	18.8
	30-34	55	19.9
	34-38	37	13.4
	38-42	19	6.9
Education	Less than diploma	144	52
	Diploma	72	26
	University	61	22
Income (million Tomans)	<5	165	59.6
	Between 5-10	87	31.4
	>10	25	9.
Job	Housewife	271	97.8
	Employed	6	2.2
Type of pregnancy	Wanted	264	95.3
	Unwanted	13	4.7
Gravida	First	179	64.6
	Second	66	23.8
	Third	25	9
	≥ Fourth	7	2.5

Table 2. Mean Mental Health Literacy Scores Regarding Postpartum Depression (277 Participants)

Area	Mean	SD	Number of Questions Per Area
The ability to recognize postpartum depression symptoms	3.47	1.08	6
Awareness of the causes and risk factors	3.41	1.13	5
Awareness of self-care activities	3.42	1.38	5
Awareness of available health services	3.09	1.36	2
Beliefs about available health services	3.67	1.11	2
Attitudes towards postpartum depression	3.73	0.91	6
Knowing how to access information	3.18	1.19	5

Table 3. Comparison of Mean Score of Mental Health Literacy Regarding Postpartum Depression According to Demographic Variables

Variables		Mean	SD	F	P Value
Age (years)	<18	113.07	21	0.75	0.6
	18-22	111.68	19.44		
	22-26	106.73	21.64		
	26-30	109.44	26.06		
	30-34	108.86	20.70		
	34-38	117.65	13.68		
	38-42	112.73	13.01		
Job	Housewife	110.83	20.10	0.27	0.59
	Employed	116.25	30.21		
Education	Diploma and less than diploma	223.43	40.28	0.34	0.84
	University	349.19	26.7		
Number of births	1	110.45	19.01	0.61	0.61
	≥2	113.8	17.47		
Type of pregnancy	Wanted	111.02	20.43	0.02	0.87
	Unwanted	110.08	18.78		
Income (million Tomans)	<5	107	17.87	11.36	<0.0001
	5-10	112.61	22.95		
	>10	130.58	13.27		

Table 4. Backward Regression Adjusted for Factors Related to the Mental Health Literacy of Pregnant Women

Variable	B	Standard Error	Beta	t-value	P Value
Education*	5.32	1.49	0.30	3.55	<0.0001
Income**	15.05	2.59	0.49	5.79	<0.0001

*) education in analysis is considered an ordinal variable (less than diploma=1, diploma=2, and university=3).

**) Income in analysis is considered an ordinal variable (less than 5 million Tomans=1, 5-10 million Tomans=2, and higher than 10 million Tomans=3). R2=0.16.

about the causes, risk factors, and self-care activities to prevent postpartum depression, education should be provided to pregnant mothers by health care providers and midwives. In addition, the results showed that the highest score in the field of mental health literacy was related to attitudes toward postpartum depression, and the lowest score was related to the field of awareness of available health services, which is inconsistent with the results of the studies of Poreddi et al²¹ and Huang et al.²⁰ However, it is consistent with the results of the study conducted by Mirsalimi et al.¹⁴ The differences can be attributed to the differences in the cultures of countries, the level of access to existing health services, and the prevailing health care system in developed countries. Therefore, more attention should be paid to de-stigmatization of postpartum depression. Additionally, people should be informed about available health services in the country.

Finally, examining demographic variables and mental health literacy revealed a significant relationship between mental health literacy and income and education. The relationship between health literacy and income in this research is consistent with the results of the studies of Fonseca et al,²² Poreddi et al,²¹ and Tehrani Banihashemi et

al.²⁵ The relationship between income and mental health literacy can be seen in having better learning opportunities to increase mental health literacy. It can also be inferred that having a job provides a suitable income and having a proper social and economic position increases health literacy in participants.

In addition to the relationship between income and mental health literacy, there is also a relationship between mental health literacy and education, which is consistent with the results of the studies conducted by Huang et al,²⁰ Khosravi et al,²⁶ and Tehrani Banihashemi et al.²⁵ However, the findings of the present study are different from the results of the study by Zaree et al.²⁷ The existence of a relationship between education and mental health literacy can be seen in the ability of educated participants to recognize symptoms of depression better and search for information. The level of general literacy is the basis for the level of health literacy. The discrepancy between the results of the present study and the results of the study by Zaree et al²⁷ can be attributed to the fact that the education level of the majority of the participants in our study was less than a diploma.

Other demographic variables such as age, number of births, and type of birth were not influential factors, which is consistent with the findings of Mirsalimi et al.¹⁴ This may be due to the fact that most of the studied participants were experiencing their first pregnancy and the majority of pregnant women in the region preferred natural delivery.

It can be noted that there needs to be more research on this topic in the eastern part of the country, which is one of the limitations of the research. In future studies, it is suggested that more focus should be placed on mental health literacy. The cross-sectional nature of the study

makes it impossible to investigate causal relationships. Further research should be conducted with a larger sample size throughout the country.

Conclusion

The findings showed that the pregnant women participating in the research had an average level of mental health literacy. Since the low level of health literacy prevents the correct understanding of health messages and recommendations, it is recommended that mental health literacy should be increased and pregnant mothers should be empowered through education, especially mothers with poor socioeconomic status and low education.

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Authors' Contribution

Conceptualization: Maryam Khani, Hamid Salehiniya, Ensiyeh Norozi.

Data Curation: Ensiyeh Norozi, Hamid Salehiniya.

Formal Analysis: Hamid Salehiniya.

Data Collection: Maryam Khani.

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Competing Interests

There is no conflict of interests.

Ethical Approval

The present study was approved by the Ethics Committee of Birjand University of Medical Sciences (IR.BUMS.REC.1401.313). All study participants provided written informed consent. Confidentiality and anonymity were ensured.

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