

Predictors of seeking mental health services among Iranian middle-aged people based on health belief model: evidence from a crosssectional study in a developing country



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Abstract

Background There is limited information about people's beliefs regarding how they deal with mental health problems, especially in developing countries. This study was conducted with the aim of determining predictors of seeking mental health services (SMHS) among Iranian middle-aged people.

Method The current study is a cross-sectional study on 384 middle-aged people from Jahrom city that was selected with random cluster sampling. The data collection tool is a researcher-made questionnaire consisting demographic information and health beliefs about SMHS based on the health belief model. To examine the prediction of variables explaining SMHS, a linear regression analysis was carried out. *P-value < 0.05 was considered* statistically significant.

Results Perceived susceptibility ($\beta = 0.22$; p < 0.001), perceived severity ($\beta = 0.13$; p = 0.002), perceived barriers ($\beta = 0.39$; p < 0.001) and perceived self-efficacy ($\beta = 0.37$; p < 0.001) could explain 44% of variance of SMHS (F = 61.46; p < 001).

Conclusion SMHS was related to people's perceptions and beliefs, and middle-aged people's perceived barriers were stronger predictors. It is necessary for health planners to develop and implement educational intervention programs that include health beliefs.

Keywords Mental health, Middle-aged people, Health belief model

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Introduction

Mental disorders are one of the main causes of the increasing global disability burden [1]. According to the statistics of the World Health Organization, 970 million people around the world were living with a mental disorder in 2019, with anxiety and depressive disorders the most common [2]. The majority of people with mental disorders do not receive any mental health treatment from health care staff. According to the National Institute of Mental Health in 2021, among the 57.8 million American adults with any mental-illness, only 47.2% received mental health services in the past year that most of them

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were women aged 26–49 years old [3]. The results of a study in France showed almost half of the participants with any type of mental disorder reported no lifetime use of mental health treatment [4]. The prevalence of mental disorders in Iran has been reported to vary between 25.42 and 31.03% and most of these people do not utilize mental health services for various reasons [5, 6]. Some scientific evidence shows that middle-aged people reported worse mental health and well-being than younger adults and they do not use mental health services [7]. Meanwhile, access and utilization of health care services during midlife is critical for early identification and treatment of chronic health conditions such as mental illness that are more likely to emerge during this stage of life [8].

Untreated mental disorders, can have some adverse consequences including conflicts with friends and family, financial difficulties, suicidal thoughts, discontinuation from university or work, decline in academic performance, and poor quality of life [9, 10]. Moreover, mental health problems that have not been treated result in large economic and social losses [11]. Therefore, recognizing the factors that prevent people from seeking help for mental health problems is very important in order to implement targeted interventions to improve the wellbeing of affected people. Help-seeking for mental health concerns is defined as an adaptive coping process that involves obtaining external assistance from a variety of sources, including formal and informal sources of help [12]. Early professional help-seeking for mental health problems is crucial to decrease the burden of mental illness and future social and personal problems and improve social functioning and quality of life in general [13]. Results of previous studies show that factors such as individual factors, perceived need, mental health awareness, mental health attitudes and beliefs, and mental health literacy are related to people's decision to seek mental health [14, 15]. Tesfaye et al. reported that more than 46% of the 18 to 80-year-old Ethiopian population had a generally unfavorable attitude towards mental illness and most of them mentioned that they would not refer to the health care system if they suffered from mental disorders [16]. Also, the results of a systematic review by Aguirre Velasco et al. showed that stigma and negative beliefs about mental health services and professionals were the most barriers for appropriated help seeking and one of the facilitators recognized the previous positive experience in health services centers [17].

It is necessary to evaluate the beliefs and behavior of the community, in order to develop a proper health promotion program and increase people's use of mental health care, especially in developing countries [16]. The Health Belief Model is a behavioral model that assumes healthbased behaviors are influenced by a person's beliefs. This model has the constructs of perceived susceptibility (a person's perception of susceptibility to the disease), perceived severity (a person's perception of the seriousness of the disease), perceived benefits (a person's perception of the benefits of the behavior), perceived barriers (a person's perception of the problems on the way to perform the behavior), the action guide (motivators to speed up the behavior), and self-efficacy (belief in the ability to perform the behavior). The health belief model can be used as a framework for health studies [18]. However, mental health issues are understudied in most regions of developing countries, and limited information is available on people's perceptions and beliefs about mental health problems based on health behavioral models. There are some studies based on behavioral theories in the elderly or young adults [19–21], but it is limited among middleaged people. This study was conducted with the aim of determining predictors of seeking mental health services among Iranian middle-aged people based on the Health Belief Model.

Methods

Participants and setting

The current study is a cross-sectional study that was conducted on 384 middle-aged adults living in Jahrom, Iran, in 2022. The sampling sites (health centers) were selected by random cluster sampling, and the patients were selected using the convenience method.

Sampling was done using a random cluster sampling method. The health centers of Jahrom city (8 health centers) were divided into four strata: north, south, east, and west, and then four of them were selected randomly. Afterward, from each health center, a list of people who met the criteria for entering the study was extracted from the existing files, and according to the table of random numbers, 96 samples were found in each center (including men and women), and a total of 384 people will be included in the study. The inclusion criteria were reading and writing literacy, living in Jahrom city and being in the age group of 30–59 years. The exclusion criterion was having chronic mental illnesses diagnosed by a medical professional.

Data collection and measures

A research-made questionnaire was designed and validated for collecting data. By reviewing relevant and similar studies related to the research topic and conducting group discussions, the researchers extracted the most important items based on the constructs of the HBM. Finally, this questionnaire consists of two parts, including demographic information and questions related to health beliefs with perceived susceptibility (5 items), perceived severity (6 items), perceived benefits (7 items), perceived barriers (10 items), perceived self-efficacy (6 items), and mental health-seeking behavior (7 items). Scoring all constructs was based on the Likert scale (from completely disagree=1 to completely agree=5) and each question was given a score from 1 to 5. To measure the validity of the questionnaire, the content validity method was used by a panel of experts (9 health education experts), and the Content Validity Ratio (CVR) and Content Validity Index (CVI) were calculated. The reliability was achieved through Cronbach's alpha analysis in a population similar to the target group. CVI, CVR and Cronbach's alpha of constructs are shown in Table 1.

Table 1 CVR, CVI and Cronbach's of HBM constructs

Constructs of HBM	Number of items	CVI	CVR	Cron- bach's alpha
Perceived susceptibility 1. It's possible for me to develop a mental disorder in my middle age. 2. Mental health issues are exclusive to certain people in community, not me. 3. My family history increases my chances of having a mental health issue 4. Mental health problems are more likely to occur in women 5. People who have experienced mental problems before are the only ones who have a chance of experiencing them	5	0.93	0.8	0.87
Perceived severity 1. Having a mental health disorder makes it difficult for me to do my daily activities 2. Having a mental health problem changes how I feel about myself 3. Having a mental health problem can lead to adverse health outcomes 4. Having a mental health problem negatively affects my relationships with my family and friends 5. My social and work lives are impacted negatively by my mental health issue 6. Mental health problems can lead to long-term consequences	6	0.96	1	0.81
 Perceived benefits 1. getting early mental health care from professional can prevent my mental health problem getting worse 2. My relationship with others can be improved by treatment mental health problems 3. Negative thoughts and feelings can be addressed through therapy 4. Talking about things that bother me can be facilitated by seeking a mental health professional 5. By seeking treatment for current problems, I can prevent future ones 6. Therapy can assist me in improving my interactions with my family 7. Seeking treatment for mental disorders can help me improve my whole life 	7	0.80	1	0.82
 Perceived barriers 1. I am worried that the psychiatrist will prescribe me medicines that I will become addicted to 2. I avoid seeking mental health treatment due to the fear of stigma from others. 3. Talking to a professional about my mental health problem is embarrassing for me 4. I am concerned that I won't be able to effectively communicate my mental health issue to a professional 5. My privacy concerns prevent me from seeking mental health services 6. Visiting a psychologist/psychiatrist can be stressful 7. Mental health services are very expensive 8. It's hard to access to mental health service centers in our city 9. I do not want a psychologist/psychiatrist to have control over my life 10. I believe I handle my problems better than anyone else 	10	0.90	0.8	0.75
Perceived self-efficacy 1. It is easy for me to found mental health care center 2. If I have mental health issues, I can consult with a psychologist/psychiatrist 3. I am confident that I can attend therapy sessions regularly to resolve mental health issues 4. I have the ability to make the necessary cognitive changes to enhance myself 5. I am confident that I can make the necessary changes to improve my feelings 6. It is easy for me to manage the costs of receiving the services of mental health centers	6	0.90	1	0.79
Seeking mental health services If I have mental problems, 1. I go to religious meetings or services and ask for support 2. I consult with a psychologist or psychiatrist 3. I seek help from a member of my family 4. I am getting help from one of my close friends 5. I am seeking internet information to solve it 6. I talk with a relative with whom I am more comfortable 7. I do nothing	7	0.83	1	0.73

Table 2 Participant characteristics and HBM constructs (n = 384)

Variables		Men (<i>n</i> = 189; 49.2%)	Women (<i>n</i> = 195; 50.8%)	Total sample (n = 384)	P-value
Educational level, n (%)	< 12 grade	26 (13.8)	38 (19.5)	64 (16.7)	0.28
	12 grade	56 (29.6)	58 (29.7)	114 (29.7)	
	>12 grade	107 (56.6)	99 (50.8)	206 (53.6)	
Occupational status, n (%)	Housewife	0	110 (55.9)	110 (28.6)	0.001**
	Employee	95 (50.3)	58 (29.7)	153 (39.8)	
	Self-employment	93 (49.2)	28 (14.4)	121 (31.5)	
Marital status, n (%)	Single	20 (10.6)	37 (19)	57 (14.8)	0.01*
	married	169 (89.4)	158 (81)	327 (85.2)	
Economic status, n (%)	Low	28 (14.8)	37 (19)	65 (16.9)	0.5
	Middle	137 (72.5)	137 (70.3)	274 (71.4)	
	High	24 (12.7)	21 (10.8)	45 (11.7)	
History of mental illness in the family, n (%)	Yes	23 (12.2)	26 (13.3)	49 (12.8)	0.42
	No	166 (87.8)	169 (86.7)	335 (87.2)	
History of mental problems in the past, n (%)	Yes	40 (21.2)	57 (29.2)	97 (25.3)	0.04*
	No	149 (78.8)	138 (70.8)	287 (74.7)	
Perceived susceptibility (mean \pm SD)		17.25±2.73	17.10±2.77	17.17±2.75	0.6
Perceived severity (mean \pm SD)		21.37 ± 4.65	22.42 ± 4.39	21.90 ± 4.54	0.02*
Perceived benefits (mean \pm SD)		27.90 ± 5.56	29.47 ± 4.62	28.70±5.16	0.003**
Perceived barriers (mean \pm SD)		35.84 ± 7.92	33.90 ± 8.36	34.86±8.20	0.02*
Perceived self-efficacy (mean \pm SD)		23.01 ± 4.71	24.26±4.01	23.64 ± 4.40	0.005**
Seeking mental health services (mean \pm SD)		19.92±4.38	21.09 ± 4.30	41.02±7.18	0.008**

Pearson correlation coefficients. * p<0.05; ** p<0.01

Table 3 Correlation matrix for health beliefs and seeking mental health services (n = 384)

Variables	1	2	3	4	5	6
1. Perceived susceptibility	1					
2. Perceived severity	0.16*	1				
3. Perceived benefits	0.22**	0.40**	1			
4. Perceived barriers	-0.13*	-0.21**	-0.08	1		
5. Perceived self-efficacy	0.16*	0.20**	0.34**	-0.06	1	
6. Seeking mental health services	0.34**	0.29**	0.18**	-0.47**	0.44**	1

Pearson correlation coefficients. * p<0.01; ** p<0.001

Statistical analysis

Statistical analysis was performed using the Statistical Package of Social Sciences (SPSS) version 18 (SPSS Inc., Chicago, IL, USA). Frequencies and percentages were calculated to describe the data. Pearson's correlation was calculated to find a correlation between the relationship between health beliefs and the SMHS. To examine the prediction of variables explaining mental help-seeking services, a linear regression analysis was carried out. p < 0.5 will be considered a significant level.

Results

Participants' characteristics are shown in Table 2. The mean age of the participants was 41.02 ± 7.18 years. Among the 384 participants, 189 (49.2%) were male, and 195 (50.8%) were female; 16.7% were under a diploma, 29.7% had a diploma and 53.6% had academic education; 39.8% were employees, 31.5% were self-employed, and 28.6% were housewives. Also, 85.2% of the participants

were married. Most people's income (71.4%) was reported at the average level. 12.8% of the participants had a history of mental illness in their families. Moreover, 25.3% reported a history of mental problems such as anxiety, depression, and long-term sadness, and there was a statistically significant difference based on gender (p=0.04).

According to the findings of the independent t-test, perceived severity (p=0.02), perceived benefits (p=0.003), perceived barriers (p=0.02), perceived self-efficacy (p=0.005) and SMHS (p=0.008) in women had a higher score, which is statistically significant (Table 2).

Except for a history of mental illness in the family (p=0.03), there is no significant difference between other demographic variables and seeking mental health care (p>0.05).

The associations between health beliefs, and SMHS are presented in Table 3. According to the findings of Pearson correlation coefficients, perceived susceptibility

(r=0.34), perceived severity (r=0.29), perceived benefits (r=0.18), and self-efficacy (r=0.44) had a positive and direct relationship with SMHS in middle-aged people. Also, the perceived barriers had a negative and inverse relationship (r=-0.47) with SMHS.

Predictors of SMHS among the Iranian middle-aged population are *shown* in Table 4. According to linear regression, perceived susceptibility (β =0.22; *p*<0.001), perceived severity (β =0.13; *p*=0.002), perceived barriers (β =0.39; *p*<0.001), and perceived self-efficacy (β =0.37; *p*<0.001) could explain 44% of the variance of SMHS (F=61.46; *p*<001). Perceived barriers was recognized as the strongest predictor of SMHS.

Discussion

The present study was conducted with the aim of investigating the predictors of SMHS among middle-aged Iranian. Despite the widespread prevalence of mental health issues, they remain a major cause of disability worldwide, and SMHS levels have been observed to be low in middle-aged and other age groups [7, 22]. It's crucial to conduct studies that can reveal which behavioral constructs impact SMHS at different ages. However, behavioral models and theories are not widely utilized in research on middle-aged.

The result of the study showed that perceived susceptibility, perceived severity, perceived barriers and perceived self-efficacy could have predicted 44% of the variance of SMHS. A range of personality characteristics, attitudes, and health beliefs can predict care seeking for mental health problems in middle-aged people. Results of Langley et al. indicated that 49% of the variance in intention to seek help from a psychologist accounted by age, gender, education, remoteness, and HBM constructs such as perceived susceptibility, symptom severity, perceived treatment benefits, perceived treatment barriers, and self-efficacy among Australians with a mean age of 35 years [23]. Also, the effectiveness of HBM in predicting SMHS for other age groups has also been confirmed [24, 25]. Other variables are also known predict SMHS in middle-aged individuals. For example, Li et al. reported attitude, stigma, depression knowledge, depression symptoms, and family function were the most factors that predict professional help-seeking intention in people

Table 4 Predictors of seeking mental health services among Iranian middle-aged population (n = 384)

Variables	В	SE	Beta	P-value		
constant	12.04	1.74		< 0.001		
Perceived susceptibility	0.34	0.06	0.22	< 0.001		
Perceived severity	0.12	0.04	0.13	0.002		
Perceived benefits	0.06	0.03	0.07	0.08		
Perceived barriers	0.20	0.02	0.39	< 0.001		
Perceived self-efficacy	0.37	0.04	0.37	< 0.001		

aged 15–54 years [26]. Considering the predictive value of SMHS in the present study, the HBM could provide a valuable framework for understanding and preventing psychological disorders. This model can be applied to consider health programs for individuals with mental disorders.

According to the results of this study, perceived barriers, as the strongest predictor of SMHS, had a negative and inverse relationship with SMHS. This finding is consistent with the results of some studies. The results of a systematic review conducted by Lavingia et al. showed negative attitudes toward mental health care and lack of perceived need for treatment and lack of knowledge; comorbid medical conditions; health care providerrelated factors; cost, transportation, reliance on caregivers; and cultural barriers are the most important barriers of SMHS in the last decade of middle age (individuals 50 years) and older people [27]. Social stigma is identified by younger middle-aged (<40 years) as a major social barrier [28]. Seeking help from alternative sources, preference for self-reliance, low perceived need for helpseeking, a lack of affordability, negative attitude toward, or poor experiences with help-seeking were also reported in Chinese young and middle-aged adults [29]. Removing the perceived barriers is related to more utilization of mental health services. So, it is necessary that heath policymakers and health care providers, strive to identify and employ some strategies to decrease barriers. These efforts can include providing confidential care, along with building trust based on client culture, removing social stigmas, creating a culture in the community to identify symptoms of mental disorders and early referral, increasing insurance coverage, making mental health services more affordable, and raising awareness, especially the vulnerable subgroups [30]. Rathod et al. stated effective inter-professional communication, flexible policies, evidence-based training, and adequate resources are necessary for scaling up mental health services in low and middle-income countries (LMICs) combined with an evaluation plan to measure success against specific benchmark criteria. They emphasize that it is important that mental health treatments and training programs in LMICs are tailored to the local culture and include a public health approach while also acknowledging the diverse needs of the population [31].

The findings of this study showed that perceived selfefficacy was the second strongest predictor of SMHS. People with low self-efficacy were more likely to experience barriers to mental health care [32]. Garrey et al. found for every one-unit increase in self-efficacy score, a 6% increase occurred in the odds of having mental treatment 4 to 12 months ago among adults. They suggested individual self-efficacy may help improve mental health treatment in order to provide more tailored and helpful care [33].

In this study, perceived susceptibility and perceived severity were also able to predict SMHS. Henshaw and Freedman-Doan proposed that targeting perceived severity and susceptibility, may improve treatment linkage by people who are identified through mental health screening [34].

Factors such as attitude, culture, race, awareness of health status and the level of mental health literacy, make people consider themselves at risk of contracting mental illnesses, as well as being aware of the deterioration and seriousness of mental disorders and their impact on body function increase SMHS. There is some evidence showing that treat-based health promotion interventions have moderate-to-large effects on fearful emotions, perceived severity, and perceived susceptibility [35]. Therefore, health care providers should consider these factors in educational programs.

Although perceived benefits were not among the predictors, they were significantly associated with SMHS, as with other constructs. Similar to our study, Lily et al. reported depression treatment utilization was significantly associated with all domains of the HBM, and higher levels of perceived severity and self-efficacy, were associated with greater depression treatment utilization, whereas perceived benefits and perceived barriers were associated with lower depression treatment utilization [25]. On the other hand, the findings of the study by O'Connor et al. showed that perceived benefits were more important than barriers in predicting help-seeking for depressive symptoms by stigma and mental illness representations [36]. When people have a positive experience after receiving mental health services and their expectations are met, they will better perceive the benefits associated with SMHS, and the behavior will be repeated.

The results of the study indicated that all beliefs and SMHS in middle-aged women had a higher score than men. These findings have been repeated in some other studies. Results of a study by Wendt and Shafer showed men are less likely than women to display positive helpseeking attitudes, especially related to common mental health issues [37]. According to WHO, incorporating an understanding of gender differences in mental health care, including risks and help-seeking behaviors, will contribute to a more gender-sensitive approach to mental health policies [38]. Promoting and preventing mental health is cost-effective for preventing or reducing complications from mental illnesses, both at the community level and at the individual level. Therefore, conducting interventional studies to prevent and control mental problems, especially in middle-aged people, is helpful in future studies.

Strengths and limitations

The strength of this study is the use of a researcher-made questionnaire with a theoretical framework based on HBM which is an appropriate model for finding out why people don't SMHS.

One limitation of the study is the use of a self-report tool, and therefore the respondents' responses may have been subject to their personal interpretations. To mitigate this problem, the tool has been continuously reviewed by a panel of experts in order to develop a comprehensive questionnaire. In addition, participants in this study were selected from middle age in urban areas, and it is therefore recommended that the study be replicated among people in rural or other cultural settings.

Conclusion

SMHS was related to people's perceptions and beliefs, and middle-aged people's perceived barriers were stronger predictors. It is necessary for health planners to develop and implement educational intervention programs that include health beliefs.

Abbreviations

 SMHS
 Seeking mental health services

 HBM
 Health Belief Model

 CVR
 Content validity rate

 CVI
 Content validity index

 LMICs
 Low and middle-income countries

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Author contributions

TR proposed the study. ARY and EAA collected the data and FR performed the statistical analysis. TR and ARY prepared the first draft of the manuscript and the authors read, revised and approved the final manuscript.

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Data availability

The data sets used and/or analyzed during the current study are not publicly available due to confidentiality of data and subsequent research, but are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

The protocol of the study was approved by the ethics committee of Jahrom University of Medical Sciences (IRJUMS.REC.1400.067). A written informed consent was obtained from all participants.

Consent for publication

Not applicable: individual information has not been published.

Competing interests

The authors declare no competing interests.

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