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A cross-sectional study of the relationship between health literacy and health-promoting lifestyles in patients with hypertension in northwest Iran

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Abstract

Background Health literacy is a key factor in determining the use of health-related information, promoting health, and improving the quality of life. Therefore, the present study was conducted to investigate the relationship between health literacy and health-promoting lifestyle in patients with hypertension.

Methods The present study was conducted using a descriptive-correlation method on 406 patients with hypertension who visited the emergency room of a northwestern Iranian hospital in 2022. The sampling method was convenient in type. The data collection instrument consisted of three parts, including the demographic information section, followed by the health literacy and health-promoting lifestyle sections. The inferential data analysis was done using Pearson's correlation coefficient, and multiple linear regression in SPSS 24 (Inc., Chicago, Ill., USA). The significance level was set at 5%.

Results The mean and standard deviation of participants' age was 53.77 ± 13.79 years, within a range of 47 to 65 years. The results showed that a health-promoting lifestyle has a positive and significant relationship with health literacy ($r = 0.927$, $p < 0.001$). The health-promoting lifestyle had the highest correlation with the decision-making dimension ($r = 0.913$, $p = < 0.001$) and the lowest correlation with the reading dimension ($r = 0.772$, $p = < 0.001$). The results of linear regression showed that the dimensions of reading, understanding, appraisal, and decision-making were statistically significant in the regression model. The decision-making dimension with a coefficient of 0.592 had the greatest impact on the health-promoting lifestyle.

Conclusion The moderate health literacy level among patients with hypertension is associated with lower adherence to healthy lifestyle practices. Therefore, it is essential for community health policymakers to organize the design of educational program interventions in the areas of health literacy and healthy lifestyle practices to help improve the overall health of patients.

Keywords Health literacy, Health-Promoting lifestyle, Hypertension, Silent killer, Patient, Health behaviors, Chronic diseases, Cardiovascular diseases, Iran

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Background

High blood pressure, or hypertension, is recognized as one of the common cardiovascular disorders and a major risk factor for cardiovascular diseases, stroke, and kidney disease [1, 2]. It is estimated that by 2025, about 1.5 billion people around the world will bear the burden of hypertension [3]. Numerous studies suggest a significant rise in the prevalence of hypertension in the Middle East [3]. Park et al. showed that the prevalence of hypertension in Asian countries is high. For example, it is shown to be 30% in South Korea, 47% in Mongolia, and 39% in China [4]. The prevalence of hypertension is 13.9% in Iran [5]. In Asia and the Pacific region, hypertension accounts for 70% of cardiovascular diseases [6]. In Irani adults, the prevalence of hypertension ranges between 25 and 35%, reportedly [7], and in the population of 18 years or older, the prevalence of this disease is about 26% (1). In another survey in Iran, the prevalence of hypertension in the 15-64-year age group was reported as 26.6% [6]. According to the World Health Organization (WHO), hypertension is the third leading cause of mortality in the world and the reason for the mortality of one out of every eight people [8]. Although hypertension is known as an important cause of mortality in developed countries, its importance in developing countries is still unknown [9]. This disease has complications such as cardiovascular disease, heart attack, and kidney failure. Hypertension accounts for 51% of mortalities due to stroke and 45% of mortalities caused by cardiovascular diseases [10]. It is among the most frequent risk factors for cardiovascular diseases, which leads to myocardial infarction, stroke, heart failure, renal visual illnesses, and early death [11].

High blood pressure, like many other chronic diseases, has a close relationship with the patients' lifestyle. Having a health-promoting lifestyle can help these patients maintain their health and, as a result, reduce various disabilities [12, 13]. One of the main strategies for promoting healthy lifestyle behaviors is to strengthen health literacy. According to the World Health Organization (WHO), health literacy is "the ability to access, understand, evaluate, and communicate information as a means to promote, maintain, and improve health in different situations throughout life" [14, 15]." Health literacy helps patients obtain the necessary information about high blood pressure, allowing them to take an active role in managing their condition and make better decisions for their health [16].

Numerous studies show that increasing health literacy can be effective in well-being through improving health and reducing health inequalities [17]. Other studies show that in people with a low level of health literacy, arbitrary and indiscriminate use of drugs, failure to follow doctor's orders, unfavorable control of the disease condition, little health knowledge, lack of expressing health concerns, and improper communication with doctors prevail [16]. Despite the importance of potential outcomes of limited health literacy, healthcare providers are often not aware of patients' reading abilities [18]; therefore, limited health literacy is not a problem for the patient, but a challenge for healthcare providers and health systems [19].

A health-promoting lifestyle leads to maintaining individuals' functioning, improving quality of life, and reducing healthcare costs [20]. Today, given the high costs of healthcare, preventive approaches have replaced treatment methods. In other words, health sciences that used to focus on treating diseases are now concentrating on prevention through lifestyle improvements [21, 22]. Even though medical treatments today have been effective in reducing the incidence of cardiovascular diseases through managing blood pressure and lowering cholesterol levels, having a healthy lifestyle can significantly impact health and longevity [23, 24]. A health-promoting lifestyle is categorized in many scientific resources into six categories: healthy nutrition, physical activity, responsibility for health, stress management, interpersonal relationship management, and enhancing spiritual growth [25, 26].

Currently, a health-promoting lifestyle is emphasized due to its effectiveness in reducing the incidence and mortality rates of chronic diseases, including cancers and cardiovascular diseases, and in increasing life expectancy [27]. These factors highlight the vital role of a health-promoting lifestyle in disease prevention, improving quality of life, and reducing healthcare burdens [28]. On the other hand, the importance of a health-promoting lifestyle has been indicated by the World Health Organization as a critical strategy for achieving optimal quality of life [29]. Health-promoting lifestyles and health literacy are increasingly viewed as key factors in the quality of life for patients with high blood pressure, as well as in reducing healthcare costs. However, studies examining the overall impact of health literacy on health-promoting lifestyles are still limited. Understanding how health literacy influences health-promoting lifestyles is crucial, as it can play a determining role in developing health-promotion strategies [30]. Given the existing evidence and the importance of health literacy for the primary prevention of cardiovascular diseases, our study aimed to determine the relationship between health literacy and health-promoting lifestyle in patients with high blood pressure visiting hospitals in northwest Iran.

Methods

Study design and data collection

The present study used a descriptive and correlational method to study 406 patients with hypertension visiting the emergency room of a northwestern Iranian hospital in 2022. The participants were selected using a

convenience sampling method based on the inclusion criteria.

Inclusion criteria

The inclusion criteria were informed consent, having hypertension, being at least 18 years old, ability to read and write, having passed at least one year since the diagnosis, a history of hypertension drug treatment, a confirmed diagnosis of hypertension by a qualified physician, Ability to participate in the interview and complete the questionnaire in Persian, Willingness and readiness to fully complete the study questionnaires and, Sufficient cognitive ability to respond to the questionnaires (i.e., absence of severe cognitive impairments).

Exclusion criteria

The exclusion criteria were a history of cardiovascular disease, a history of hospitalization, a history of open-heart surgery, and a history of psychological disorders diagnosed by a psychiatrist, The presence of any acute or emergency conditions related to hypertension (such as an acute hypertensive crisis) that may interfere with the proper completion of the questionnaire, the presence of significant comorbidities that could affect the accuracy of responses or the interpretation of health information (e.g., severe cognitive impairments) and, Inability to communicate effectively due to language or cognitive difficulties.

The data collection instrument includes three Sect. (1) demographic information, (2) health literacy questionnaire, and (3) health promoting lifestyle.

The demographic characteristics questionnaire includes gender (female, male), age (under 46 years, 46–64 years, over 65 years), body mass index (Underweight, Healthy weight, Overweight, Obese), marital status (single, married, divorced, widowed), insurance status (yes, no), History of hypertension (less than 2 years, 3–7 years, 8 years and above), smoking status (yes, occasionally, no), Family history of hypertension (yes, no), Place of residence (Urban, Rural), Monthly income (Inadequate, Adequate, More than adequate), Occupation (Unemployed, Freelance, Farmer, Housewife, Office work, Retired), Education (< Diploma, Diploma, Associate degree, Bachelor's degree, Master's degree, Ph.D.), Exercise (No, Yes, occasionally), and Consumption of antihypertensive drugs (yes, no).

Health literacy for Iranian adults (HELIA)

This questionnaire was developed by Montazeri et al., who translated the original version of the Health Literacy Questionnaire into Persian in 2013 [31]. There are 33 items included which are divided into 5 dimensions. The *reading* dimension is related to reading educational materials about health (4 items). The *access* dimension deals with access to health information (6 items), The *understanding* dimension explores the extent to which information about the disease and health is understood (7 items). The *appraisal* dimension explores one's assessment of health-related information (4 items). The *decision-making* dimension explores how decisions are made on health-related behaviors (12 items). All questions in this section are answered on a 5-point Likert scale (always, most of the time, sometimes, rarely, not at all) with respective scores of 5 to 1. The range of scores in this instrument is between 33 and 165. The scores are calculated as "sub-scale score" and "total score". The scores of this instrument (sub-scale score and total score) are calculated from the sum of the scores of items. The range of sub-scale scores for the *reading* dimension is 4–20, the *access* dimension is 6–30, the *understanding* dimension is 7–35, the *appraisal* dimension is 4–20, and for the *decision-making* dimension it is 12–60. In interpreting the total score of the instrument, a score of 33–66 was considered weak, 67–132 was moderate and 133–165 was favorable. A higher score indicated better health literacy. This instrument was psychometrically evaluated by Montazeri et al. (2013) and Cronbach's alpha of items could be taken as acceptable (0.72 to 0.89) [31]. In the present study, the reliability of the questionnaire was calculated by Cronbach's alpha for the entire questionnaire as 0.91. In addition, Cronbach's alpha was calculated for Health literacy and Health-promoting lifestyle as 0.976 and 0.960.

Health promoting lifestyle profile-II (HPLP-II)

It was developed by Walker based on Pender's health promotion model. This questionnaire includes 52 questions in 6 sections: nutrition (7 questions), physical activity (5 questions), health responsibility (10 questions), stress management (7 questions), interpersonal support (7 questions) and self-actualization or spiritual growth (13 questions). Questions are rated on a four-point Likert scale (never, sometimes, often, and always). The total score of this instrument ranges between 52 and 208. In the scoring system, *never* gets 1 point, *sometimes* 2, *often* 3 and *always* 4 points. The participants are required to declare their level of agreement with each question. Based on the guidelines for scoring the questionnaire, the scores for questions in each dimension are summed up and divided by the number of questions in each dimension. The score obtained in each question ranges from 1 to 4. A higher score indicates a healthier lifestyle [32]. The range of the total score of health-promoting behaviors is 52–208, which is calculated separately for each dimension. Walker et al. reported Cronbach's alpha of 0.94 for the entire health-promoting lifestyle questionnaire and reported a range of 0.79 to 0.94 for its six subscales [33, 34]. This instrument was translated into

Persian by Mohammadi Zaidi et al. in Iran, and its psychometric qualities have been substantiated. Cronbach's alpha coefficient of the whole instrument is 0.82 and for the sub-scales, it is found to range between 0.64 and 0.94. Its reliability was also 0.91 [35]. In the present study, the reliability of the questionnaire was calculated using Cronbach's alpha for the whole questionnaire as 0.83.

After the approval of the ethics committee and gaining permission from the research vice-chancellor of the university, the study with the code IR.KUMS.REC.1401.457 received approval from the Ethics Committee of Kermanshah University of Medical Sciences. arrangements were made to visit the hospital. After introducing himself and gaining consent from participants to take part in the study, the researcher explained the purpose of the study. If a subject met all the inclusion criteria and provided written and informed consent to participate in the study, he could enter the study. Also, the researcher assured participants of the anonymity of questionnaires, and the confidentiality of information and asked the participants to fill out all information carefully. Incomplete or distorted questionnaires were excluded from the sample.

Statistical analysis

The data were analyzed in Statistical Package for the Social Sciences (SPSS) version 24 (Inc., Chicago, Ill., USA). To describe the data, descriptive statistics were used such as frequency, percentage, mean and standard deviation as well as inferential statistics such as the Pearson correlation test with independent and dependent variables (health literacy and health-promoting lifestyle). The relationship between the subscales of health literacy domains and health-promoting lifestyle was examined using linear regression with the forward selection method. The model-building process with the forward method begins with a null model lacking predictors. Variables are added iteratively, with the algorithm evaluating candidate variables based on the Akaike Information Criterion (AIC) to determine the most advantageous addition. This continues until no remaining variables significantly improve the model according to AIC [36]. A statistical significance level of 0.05 was considered.

Results

As the data analysis showed, among 406 participants, 43.3% ($n=176$) were male and 56.7% ($n=230$) were female. The mean and standard deviation of the participants' ages were 53.77 ± 13.79 years. Most participants (45.60%) were in the age range of 47 to 65 years. Further, 63.5% ($n=258$) were married, 36.7% were overweight, 44.8% ($n=182$) had education below a diploma and 28.3% ($n=115$) were housewives. The income of 56.4% ($n=229$) participants was inadequate, 83.0% ($n=337$) were urban residents, and 48.0% of patients had a family history of hypertension($n=195$). The mean and standard deviation of the history of hypertension was 5.35 ± 1.98 years. In most patients (50.79%), the history of hypertension was 3 to 7 years. The majority of patients (66.7%) ($n=271$ people) were taking antihypertensive drugs. Most participants (57.6%, $n=234$) did not exercise,25.4% of patients ($n=103$) smoked cigarettes and 14.5% ($n=59$) sometimes smoked cigarettes (Table 1).

The mean and standard deviation of health literacy was 105.83 ± 27.11 years. This indicates an average level of health literacy in patients. Patients had the highest score of health literacy in decision-making (38.52 ± 9.17) and the lowest score in reading (12.93 ± 4.84). The mean and standard deviation of the health-promoting lifestyle was 135.44 ± 29.53. Patients had the highest health-promoting lifestyle score in physical activity (41.86 ± 11.34) and the lowest corresponding score in self-actualization (12.04 ± 3.02) (Table 2).

Pearson's correlation test was used to explore the correlation between the health-promoting lifestyle and health literacy components. The results showed that a health-promoting lifestyle has a positive and significant relationship with health literacy ($r=0.927$, $p<0.001$). The health-promoting lifestyle had the highest correlation with decision-making ($r=0.913$, $p=<0.001$) and the lowest correlation with reading ($r=0.772$, $p=<0.001$) (Table 3).

Multiple linear regression was used to predict a health-promoting lifestyle. The results of the regression model that the dimensions of reading, understanding, appraisal and decision-making have a direct and significant relationship with the health-promoting lifestyle ($p<0.05$). For each unit increase in decision-making, while holding other variables constant, the health-promoting lifestyle increased by 1.921. Furthermore, the dimension of decision-making, with a standardized coefficient of 0.592, had the greatest impact on the health-promoting lifestyle. The value of R2 and Adjusted R2 was 0.897 and 0.895 respectively (Table 4).

Discussion

The present study was conducted to examine the relationship between health literacy and a health-promoting lifestyle in patients with high blood pressure visiting the emergency department of Imam Ali Hospital in Kermanshah. The results showed that the health literacy of patients with high blood pressure is lower than the acceptable level. Other studies, including Protheroe et al. [37], Cangussú et al. [38], Lee et al. [39], and Castro et al. [40], research, has shown similar results. In the study by Akova et al. [41], patients with low health literacy, compared to those with adequate health literacy, had fewer visits to the doctor's office, relied more on emergency departments, and experienced more potentially

Table 1 Demographic variables of patients with hypertension

Variable	*n* (%)	Variable	*n* (%)
Sex		**Place of residence**	
Female	230(56.7%)	Urban	337(83.0%)
Male	176(43.3%)	Rural	69(17.0%)
Age (year)		**Monthly income**	
≤ 46	112(30.77%)	Inadequate	229(56.4%)
47–65	116(45.60%)	Adequate	143(35.2%)
≥ 65	86(23.63%)	More than adequate	34(8.4%)
BMI		**Occupation**	
Underweight	55(13.5%)	Unemployed	57(14.0%)
Healthy weight	155(38.2%)	Freelance	86(21.2%)
Overweight	149(36.7%)	Farmer	29(7.1%)
Obese	46(11.3%)	Housewife	115(28.3%)
Marital status		Office work	84(20.7%)
Single	41(10.1%)	Retired	35(8.6%)
Married	258(63.5%)	**Education**	
Divorced	30(7.4%)	< Diploma	182(44.8%)
Widowed	77(19.0%)	Diploma	74(18.2%)
Insurance status		Associate degree	24(5.9%)
Yes	296(72.9%)	Bachelor's degree	73(18.0%)
No	110(27.1%)	Master's degree	44(10.8%)
History of hypertension (years)		Ph.D.	9(2.2%)
<2	61(19.37%)	**Exercise**	
3 −7	160(50.79%)	No	234(57.6%)
≥ 8	94(29.84%)	Yes, occasionally	127(31.3%)
Smoking state		Yes, less than once a week	43(10.6%)
Yes	103(25.4%)	**Consumption of antihypertensive drugs**	
Occasionally	59(14.5%)	Yes	271(66.7%)
No	243(59.9%)	No	135(33.3%)
Family history of hypertension			
Yes	195(48.0%)		
No	211(52.0%)		

Table 2 Health literacy, health-promoting lifestyle and dimensions in patients with hypertension

Variable	Dimension	Mean ± SD	number of items	Min–Max	Cronbach's alpha
(Independent variable) Health literacy	Access	19.14 ± 4.94	6	7–30	0.945
	Reading	12.93 ± 4.84	4	4–20	0.963
	Understanding	23.43 ± 6.86	7	7–35	0.953
	Appraisal	11.96 ± 4.08	4	4–20	0.881
	Decision-making	38.52 ± 9.17	12	12–60	0.920
	Total	105.83 ± 27.11	33	36–165	0.976
(Dependent variable) Health-promoting life style	Nutrition	24.14 ± 7.77	11	11–44	0.937
	Physical activity	41.86 ± 11.34	13	13–65	0.913
	Health responsibility	25.49 ± 6.37	8	8–40	0.887
	Stress management	13.54 ± 3.70	6	6–24	0.799
	Interpersonal support	18.29 ± 3.81	8	11–31	0.631
	Self-actualization	12.04 ± 3.02	8	6–23	0.638
	Total	135.44 ± 29.53	54	61–220	0.960

preventable hospitalizations [42]. Based on the results of the present study, the highest score among patients with hypertension was related to the dimension of decision-making and understanding health information. In the study of Ishikawa et al. [43], the most desirable dimensions of health literacy were related to the dimensions of the ability to extract relevant information, the ability to understand and communicate with information, and the ability to make decisions, which is consistent with the present findings. Having information and

Table 3 Pearson correlation coefficient of health literacy and health-promoting lifestyle in patients with hypertension

Variable	Access	Reading	Understanding	Appraisal	Decision-making	Health literacy	Health-promoting life style
Access	1						
Reading	***0.782	1					
Understanding	0.826***	***0.857	1				
Appraisal	0.767***	0.757***	0.806***	1			
Decision-making	0.727***	***0.669	0.741***	0.751***	1		
Health literacy	0.898***	0.887***	0.934***	0.891***	0.898***	1	
Health-promoting life style	0.789***	0.772***	0.820***	0.826***	0.913***	0.927***	1

***Correlation was significant at the 0.001 level (two-tailed)

Table 4 Multiple linear regression of health literacy dimensions on health-promoting lifestyle in patients with hypertension

Variable	Unstandardized Coefficients	SD	Test Statistic	95% confidence intervals	*P*-value
Decision-making	1.921	0.088	21.71	(1.75–2.09)	< 0.001
Appraisal	1.302	0.229	5.67	(0.85–1.75)	< 0.001
Understanding	0.573	0.174	3.30	(0.23–0.92)	0.001
Reading	0.472	0.214	2.20	(0.05–0.89)	0.028
Access	0.317	0.194	1.64	(-0.06–0.70)	0.103

awareness about the risk factors for hypertension is beneficial for at-risk individuals to assess themselves and increase their motivation to enhance their literacy in this area. Therefore, adopting behaviors and skills that reduce the risk of cardiovascular diseases should be a priority in the lives of these patients [44].

Research indicates that patients with hypertension who possess high health literacy have better blood pressure control, while low health literacy increases the risk of cardiovascular disease. All these findings underscore the importance of assessing health literacy in patients with hypertension [45, 46]. A lack of health-related knowledge and skills may act as a barrier to accessing preventive services, participating in healthy behaviors, and consequently managing chronic diseases. Considering the crucial role of education in boosting health literacy and improving health-promoting lifestyles, developing educational programs related to health-promoting lifestyles for these patients could play a significant role in enhancing their health. On the other hand, since most health information is currently presented in written form, which requires reading and decision-making skills that need to be taught, health policymakers should consider programs to increase health literacy and access to health information and evaluate healthcare services for this group of individuals.

In this study, the mean and standard deviation of the health-promoting lifestyle was 135.44 ± 29.53. Among the dimensions, exercise and physical activity had the highest average (41.86), while self-actualization had the lowest average (12.04). In other studies, done on patients with chronic diseases, the highest averages were also related to exercise and physical activity [47, 48]. Health-promoting behaviors, such as stress management, proper nutrition, weight control, and physical activity, are the foundation for preventing cardiovascular diseases. These factors can reduce the incidence of heart disease by up to 90%, and on the other hand, a healthy lifestyle can help manage these modifiable risk factors [44]. In one study, the lowest average pertained to the self-actualization aspect [49]. It seems that patients with chronic conditions like hypertension may not have accurate and comprehensive information about the benefits of self-actualization and may lack the motivation needed for self-actualization [50]. Therefore, suitable educational interventions to promote health behaviors with an emphasis on the importance of self-actualization for a health-promoting lifestyle, which can play a significant role in reducing stress and improving the quality of life of patients with hypertension, are essential. Additionally, physical activity can strengthen a health-promoting lifestyle through a chain reaction. Physical activity can be effective in promoting a health-oriented lifestyle by fostering harmonious interpersonal relationships, enhancing spiritual growth, maintaining a proper diet, and managing stress [51, 52].

The findings of this study highlight the importance of health literacy as a predictor of a health-promoting lifestyle in patients with high blood pressure. Based on our study results, dimensions of health literacy—reading, comprehension, health information evaluation, and decision-making—are significant predictors of a health-promoting lifestyle. Additionally, the results of this study support previous findings that health literacy is a positive and meaningful predictor of a health-promoting lifestyle [53–55]. This means that in this study, individuals with a higher level of health literacy are more likely to adopt a health-promoting lifestyle. A high level of health literacy indicates a better understanding of health knowledge for selecting more accurate health information, which can facilitate a health-promoting lifestyle [48]. According to

the results, low health literacy can be associated with a wide range of negative health outcomes [56, 57]. Moreover, studies indicate that health literacy plays a crucial role in enhancing health-related quality of life [58, 59]. The ability to grasp, evaluate, and apply health information enables patients with high blood pressure to make informed decisions regarding their healthcare, disease prevention, and health promotion in their lives [60, 61]. It is suggested that health officials and policymakers take steps to promote the lifestyles of patients.

The limitations of this study should be considered. Among these is the cross-sectional design of the study, which restricts causal conclusions between variables; hence, causal relationships need to be examined in future prospective studies. In this study, data collection was done using a self-report method. Another limitation of the study was the convenience sampling. Patients with high blood pressure were selected from only one hospital, which may limit the generalizability of the study findings; therefore, strategies for more comprehensive sampling need to be implemented in the future.

Conclusion

Our study results show that the health literacy and health-promoting lifestyle of patients with high blood pressure are below the desired level, highlighting the need for education and empowerment of patients to enhance their health literacy and lifestyle as part of the treatment and follow-up process in the community. Appropriate interventions should be implemented to improve the lifestyle of patients with high blood pressure, particularly their self-actualization functions. These efforts can lead to an improved quality of life for patients and encourage them towards healthier behaviors while also reducing overall healthcare costs.

Abbreviations

HL	Health literacy
HPL	Health-promoting lifestyles
PH	Patients hypertension
CSS	Cross-sectional study

Supplementary Information

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Supplementary Material 1

Supplementary Material 2

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Author contributions

All authors were responsible for the study. AZ and FD conceived and designed the survey. AZ, and PJ performed the investigation. AZ, SM and FR analyzed the data. AZ, FD and SM revised the paper. AZ reviewed and edited the paper. All the authors have read and approved the final manuscript.

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Data availability

The datasets generated and/or analysed during the current study are not publicly available due to consent not being obtained from participants for this purpose but are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

Ethical approval was obtained and approved for the study from the Ethics Committee at the Kermanshah University of Medical Sciences. The ethics code allocated to this study is IR.KUMS.REC.1401.457. The required permission was gained to enter the Imam Ali Hospital in Kermanshah. Informed consent and written approval were obtained from all subjects. The principle of confidentiality was adhered to by not distorting the participants' statements and using the same phrase in writing the research findings. To maintain the participants' confidentiality about the information provided, an identification number was assigned to each interviewee. All methods were carried out in accordance with relevant guidelines and regulations.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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