

## Designing a model of health literacy organization in health care centers in Iran

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### ABSTRACT

**Background and Objective:** The Health Literacy Organization plays an important role in promoting community health. A health literacy organization is an organization that facilitates the guidance, understanding, and use of information and services for health care. The aim of this study was to validate the model of health literacy organization in health care centers in Iran.

**Materials and Methods:** This study is a descriptive-analytic study that was conducted from February 2021 to May 2021. Amongst the health education and health promotion experts and health center staff from different cities in Iran, 30 people were purposefully selected. The proposed template of the Health Literacy Organization of the health care centers was sent to the participants via email or via cyberspace (depending on the choice of the specialist) and experts were asked to enter their comments into the template on a 5-point Likert scale. This study was performed in two rounds. The impact coefficient formula was used to analyze the pattern. Data analysis was performed using spss25 software.

**Results:** There were 30 participants with  $15.2 \pm 7.7$  years of experience, of which 53.3% were female participants and 46.6% were faculty members. In the first round of Delphi, the impact factor between 2.6 to 4.9 and the pattern was valid, but because the Delphi study is not feasible in less than two rounds, the second stage of Delphi was performed with an impact score between 3.5 to 4.9.

**Conclusion:** This study provided a valid model for the Health Literacy Organization in health care centers in Iran to help improve the level of health literacy in Iranian society.

**Paper Type:** Research Article

**Keywords:** Health Literacy Organization, Health Literacy, Health Care Centers

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## Introduction

The extent to which a person has the capacity to obtain, interpret, and understand the information and health services needed to make appropriate decisions is a definition of health literacy(1). But over time, health literacy has changed from a term-limited to the ability to read and understand medical prescriptions and labels to a multidimensional concept that has the potential to improve health and well-being and reduce health inequalities(2). Thus, health literacy, in its broadest sense, relates to the capacity of individuals, communities, people, populations, and the health system to meet the complex demands of health care in modern society(3, 4). Various studies around the world show that individual activity in the field of health literacy is not enough and to promote health literacy at the community level, it is necessary to go beyond the individual field and change at the level of health care organizations(4-6).

The Health Literacy Organization facilitates the guidance, understanding and use of information and services for health care(7). Brach et al. state ten attributes for a health literacy organization:(1) has leadership that makes HL integral to its mission, structure, and operations; (2) integrates HL into planning, evaluation measures, patient safety, and quality improvement; (3) prepares the workforce to be health literate and monitors progress; (4) includes populations served in the design, implementation, and evaluation of health information and services; (5) meets the needs of populations with a range of HL skills while avoiding stigmatization; (6) uses HL strategies in interpersonal communications and confirms understanding at all points of contact; (7) provides easy access to health information and services and navigation assistance; (8) designs and distributes print, audiovisual, and social media content that is easy to understand and act on; (9) addresses HL in high-risk situations, including care

transitions and communications about medicines; (10) communicates clearly what health plans cover and what individuals will have to pay for services(4).

For many reasons, health literacy interventions in the form of a health literacy organization are important. First, the Health Literacy Organization is recognized as useful for improving patient-service interactions. Second, all patients have easy access to information and health services to read and understand. Third, health systems today are not designed to maximize patients' ability to manage health information and navigate the health system and they do not have the proper equipment to deal with their multilingual and multicultural clients(6, 8, 9). Despite recent research on health literacy, research on global health literacy organizations is limited(10). In Iran, all studies on health literacy have been conducted at the individual level, while since 2012, scientific growth has been conducted worldwide toward health literacy organizations, and one of the ways to promote health literacy in communities is the formation of health literacy organizations(11), And since health literacy in Iran is insufficient(12), Researchers developed a proposed model for health literacy organization at the level of health care centers in Iran, And using the Delphi method to validate this model. Hence, the purpose of this study is to validate the model of health literacy organization in health care centers in Iran using the Delphi method.

## Materials and Methods

This study was conducted from February 2021 to May 2021 using the Delphi method. First, a qualitative study was performed to prepare the initial proposed model, then this model was included in the Delphi study. The Delphi method is used when we need to gather and combine the opinions of experts to reach a general conclusion

on a particular topic. Especially when the experts are geographically distant from each other, the names of the experts are unknown, but all their opinions on the subject will be published after reaching a consensus or agreement(13). The statistical population of this study is all the faculty and staff in the field of health education and health promotion, as well as all the personnel working in the Iranian health center, 47 of whom were selected purposefully. Inclusion criteria were: 1) willing to participate in the study, 2) be an Iranian, 3) faculty of medical universities in the field of health education and health promotion or working in health care centers in Iran. The proposed model was sent to 47 specially selected experts, 30 of whom eventually participated in the research, that is, the cooperation rate of this research was 63.8%. The method was that the participants were called by phone and during the phone call, the researcher, after introducing herself, explained the objectives and method of the research, then, with the permission of the expert, the desired pattern was sent to him via email or via cyberspace (depending on the choice of the expert) and the experts were asked to enter their opinions on a 5-point Likert scale in the questionnaire. The researchers then collected and analyzed the model. To analyze the pattern, the impact score was used using the following formula.

#### **Impact score=Frequency (%) × Importance**

In this formula, Frequency is the number of people who gave a score of 4 or 5 to the items in the template (as a percentage) and Importance was the average score given to each item based on the Likert range of responses (65-66). According to the rule of using the score factor, coefficients greater than 1.5 were approved and coefficients less than 1.5 were approved for the second Delphi stage. The data were then analyzed using spss25 software. According to the rules for the use of Impact score, coefficients greater than 1.5

are approved, and coefficients less than 1.5 are approved for use in the second stage of Delphi.

## **Results**

The average work experience of the participants was 15.2 years with a standard deviation of 7.7 and the range of work experience was between 3 and 33 years. 46.6% of the participants were men and 53.3% were women. In total, 46.6% of the samples were faculty members and 53.3% were non-faculty members. Participants were from Tehran, Mashhad, Yasuj, Maragheh, Bojnourd, Zahedan, Sari, Torbat Heydariyeh, Babol, Chenaran and Neishabour. Participants' fields of study were: Health Education, Health Education and Promotion, Community Health, Midwifery, Nursing Education, Anesthesia, Welfare, Health Policy, Reproductive Health, Health Services Management, Disease Control, Nursing, General Practitioner, Accounting and Traditional medicine. (table1)

**Table 1: Frequency distribution of individual-social attributes of participants in Delphi stages**

Variable	Frequency (percentage)	
Gender	Female	16(53.3)
	Man	14(46.6)
Job	Faculty member	14(46.6)
	Not a faculty member	16((53.3)
degree of education	Ph.D.	13(43.3)
	General Practitioner	1(3.3)
	Masters	10(33.3)
	Expert	5(16.6)
	Diploma	1(3.3)

Table 2 presents the attributes, dimensions, and concepts related to the pattern of the Health Literacy Organization in Iranian health care centers. In this table, the results related to the number and percentage of each concept along with the mean and standard deviation of each dimension and concept in the first stage of Delphi are presented. The impact factor of the first round is also expressed.

Table 2: Results from the first round of the Delphi study

Attributes of the OHL	Dimensions	concepts	Number (percent)					M± Sd	M± Sd	Impact score	
			Strongly disagree	disagree	neutral	agree	Strongly agree				
organization management	Manager Properties	Appreciate employees who implement HL in the organization	-	-	2(6.7)	3(10)	25 (83.3)	4.7±0.5	9.2±1.1	4.45	
		Encourage other organizations to use HL	-	1(3.3)	-	12(40)	17 (56.7)	4.50±0.68		4.35	
	Tasks of the manager	Appointment to supervise the implementation of HL	1(3.3)	-	2(6.7)	5(16.7)	22(73.3)	4.57±0.89	9.03±1.75	4.11	
		Handling people's complaints	-	2(6.7)	2(6.7)	6(20)	20(66)	4.47±0.90		3.84	
		HL in goals and statements	1(3.3)	-	2(6.7)	4(13.3)	23(76.7)	4.60±0.89		4.14	
	Integrate HL into the structure of the organization	Guidelines for promoting employee HL	-	1(3.3)	1(3.3)	6(20)	22(73.3)	4.63±0.71	1.86±2.30	4.31	
			Guidelines for promoting people HL	-	1(3.3)	1(3.3)	6(20)	22(73.3)		4.63±0.71	4.31
		Documents on the implementation of HL	1(3.3)	-	2(6.7)	3(10)	24(80)	4.63±0.89		4.63±0.88	4.16
			Documents for assessment of HL activities	1(3.3)	-	2(6.7)	3(10)	24(80)			4.63±0.37
	Integration of HL in the organization	Education	HL education to employees	-	-	-	5(16.7)	25(83.3)	4.83±0.37	1.83±1.96	4.83
Individuals are responsible for the HL education of employees			-	-	2(6.7)	7(23.3)	21(70)	4.63±0.61	4.31		
Train communication strategies to employees			-	-	3(10)	8(26.7)	19(63.3)	4.53±0.68	4.07		
Staff access to HL content			-	-	1(3.3)	3(10)	26(86.7)	4.83±0.46	4.67		
work force		Employment	Employing staff fluent in the clients' common languages	2(6.7)	2(6.7)	6(20)	4(13.3)	16(53.3)	4±1.28	1.76±3.09	2.66
			Employing staff familiar with HL	1(3.3)	2(6.7)	1(3.3)	11(36.7)	15(50)	4.23±1.04		3.66
			Existence of HL in the job description of employees	-	2(6.7)	1(3.3)	6(20)	21(70)	4.53±0.86		4.07





Media design and distribution	Preparation of educational materials using HL strategies in different formats and their distribution through several channels	-	-	-	4(13.3)	26(86.7)	4.87±0.34	1.40±1.42	4.87
	Availability of various media for clients with different levels of HL	-	-	2(6.7)	2(6.7)	26(86.7)	4.80±0.55		4.48
Media variety	Existence of educational media in the common languages of the clients	-	-	2(6.7)	4(13.3)	24(80)	4.73±0.58		4.41
	Limited number of messages and use of short sentences	-	-	-	5(16.7)	25(83.3)	4.83±0.37		4.83
	Clear and understandable messages	-	-	-	4(13.3)	26(86.7)	4.87±0.34		4.87
	Use images	-	-	-	4(13.3)	26(86.7)	4.87±0.34		4.87
	Economic cost-effectiveness of the media	-	1(3.3)	3(10)	4(13.3)	22(73.3)	4.57±0.81	4.60±3.34	3.95
	Prepare based on HL strategies	1(3.3)	-	-	3(10)	26(86.7)	4.80±0.61		4.64
	Fits the characteristics of the audience	-	-	1(3.3)	2(6.7)	27(90)	4.87±0.43		4.70
	Create attention	-	-	-	3(10)	27(90)	4.90±0.30		4.90
	Be reliable	-	-	-	2(6.7)	28(93.3)	4.93±0.25		4.93
	up to date	-	-	-	1(3.3)	29(96.7)	4.97±0.18		4.97
Provide understandable information	Continuous and transparent information in critical situations	-	-	-	3(10)	27(90)	4.90±0.30		4.90
	Ensure that informed consent forms are comprehensible to clients	-	-	1(3.3)	1(3.3)	28(93.3)	4.90±0.40	9.80±0.66	4.73
The role of the organization in critical situations	Existence and use of teaching aids	-	-	3(10)	4(13.3)	23(76.7)	4.67±0.66		4.20
	Providing facilities based on the needs of individuals	-	-	4(13.3)	3(10)	23(76.7)	4.63±0.71	9.30±1.36	4.01

The role of the organization in critical situations	Provide training	Educate employees about critical situations	-	-	-	7(23.3)	23(76.7)	4.77±0.43	1.36±1.23	4.77
		Educate clients in critical situations	-	-	1(3.3)	4(13.3)	25(83.3)	4.80±0.48		4.63
		Preparation and distribution of media appropriate to critical situations	-	-	1(3.3)	4(13.3)	25(83.3)	4.80±0.48		4.63
		Clearly inform clients about costs before providing any service	1(3.3)	-	1(3.3)	5(16.7)	23(76.7)	4.63±0.85		4.32
Costs	Information about costs	Providing information to clients about the amount of insurance coverage	1(3.3)	-	1(3.3)	5(16.7)	23(76.7)	4.63±0.85	1.70±9.26	4.32
		Allocate specific budgets to support HL activities	-	-	-	5(16.7)	25(83.3)	4.83±0.37		4.83
	The provision of necessary funds for HL activities in the organization	Existence of forms of attracting public aid in order to finance HL	-	3(10)	2(6.7)	8(26.7)	17(56.7)	4.30±0.89	9.13±1.33	3.58

As shown in Table 2, the first round of impact factors varied between 2.66 and 4.97, that is, the highest impact factor was 4.97 and the lowest impact factor was 2.66. So, the tool was approved in the first stage of Delphi. However, due to the fact that the Delphi study is not feasible in less than two rounds, the model entered the second stage of the Delphi study.



Table 3: Results from the second round of the Delphi study

attributes of the OHL	Dimensions	concepts	Number (percent)					M± Sd	M± Sd	Impact score
			Strongly disagree	disagree	neutral	agree	Strongly agree			
organization management	Manager Properties	Appreciate employees who implement HL in the organization	-	-	1(3.3)	8(26.7)	21(70)	4.67±0.54	9.20±1.12	4.51
		Encourage other organizations to use HL	-	-	2(6.7)	10(33.3)	18(60)	4.53±0.62		4.22
	Tasks of the manager	Appointment to supervise the implementation of HL	-	1(3.3)	-	6(20)	23(67.7)	4.70±0.65	9.50±1.08	4.12
		Handling people's complaints	-	-	-	6(20)	24(80)	4.80±0.40		4.80
Integration of HL in the organization	Integrate HL into the structure of the organization	HL in goals and statements	-	-	1(3.3)	5(16.7)	24(80)	4.77±0.50	1.43±1.19	4.61
		Guidelines for promoting employee HL	-	-	-	4(13.3)	26(86.7)	4.87±0.34		4.87
	Integrate HL into the functioning of the organization	Guidelines for promoting people HL	-	-	-	6(20)	24(80)	4.80±0.40	9.03±1.06	4.80
		Documents on the implementation of HL	-	-	1(3.3)	13(43.3)	16(53.3)	4.50±0.57		4.34
		Documents for assessment of HL activities	-	-	-	14(46.7)	16(53.3)	4.53±0.50		4.53
		HL education to employees	-	1(3.3)	1(3.3)	2(6.7)	26(86.7)	4.77±0.67		4.45
work force	Education	Individuals are responsible for the HL education of employees	-	2(6.7)	1(3.3)	7(23.3)	20(66.7)	4.50±0.86	1.63±2.64	4.05
		Train communication strategies to employees	-	-	1(3.3)	7(23.3)	22(73.3)	4.70±0.53		4.54
	Staff access to HL content	-	1(3.3)	1(3.3)	5(16.7)	23(76.7)	4.67±0.71	4.36		
	Employing staff fluent in the clients' common languages	1(3.3)	-	4(13.3)	10(33.3)	15(50)	4.27±0.94	3.55		
Employment	Employing staff familiar with HL	-	2(6.7)	1(3.3)	8(26.7)	19(63.3)	4.47±0.86	1.40±2.14	4.02	
	Existence of HL in the job description of employees	-	-	-	10(33.3)	20(66.7)	4.67±0.47		4.67	

Participation	People's participation	Survey of clients regarding the choice of treatment methods	1(3.3)	2(6.7)	2(6.7)	5(16.7)	20(66.7)	4.37±1.09	9±1.53	3.64			
		Planning to employ volunteers and health liaisons	-	1(3.3)	1(3.3)	6(20)	22(73.3)	4.63±0.71		4.31			
Participation	Employee participation	Existence of instructions for employee participation in HL planning	1(3.3)	1(3.3)	-	6(20)	22(73.3)	4.57±0.93	1.70±2.35	4.26			
		Existence of instructions for employee participation in implementing HL	-	2(6.7)	-	8(26.7)	20(66.7)	4.53±0.82		4.23			
		Existence of instructions for employee participation in HL assessments	-	1(3.3)	-	9(30)	20(66.7)	4.60±0.67		4.44			
		Welcoming and evaluating the needs of clients upon entering the organization	-	1(3.3)	1(3.3)	10(33.3)	18(60)	4.50±0.73		4.19			
		Ensuring that the client's needs are met when leaving the organization	-	1(3.3)	2(6.7)	4(13.3)	23(76.7)	4.63±0.76		4.16			
		Gather essential information from clients (only once in the organization)	-	2(6.7)	2(6.7)	6(20)	20(66.7)	4.47±0.90		3.87			
		Identify and guide clients in need of additional assistance	-	1(3.3)	1(3.3)	6(20)	22(73.3)	4.63±0.73		4.31			
		Determining the HL status of clients	-	1(3.3)	1(3.3)	9(30)	19(63.3)	4.53±0.73		4.38			
		Use simple, clear and understandable language	-	1(3.3)	-	3(10)	26(86.7)	4.80±0.61		4.64			
		Talk to clients with appropriate voice and medium speed	-	1(3.3)	-	6(20)	23(76.7)	4.70±0.65		4.54			
HL strategies	Observance of HL strategies by employees in the field of verbal interaction with clients	Ensure you understand the content provided by clients by getting feedback	-	1(3.3)	1(3.3)	3(10)	25(83.3)	4.73±0.69	2.66±2.98	4.41			
		Answering clients' questions and encouraging them to ask questions	-	-	2(6.7)	6(20)	22(73.3)	4.67±0.60		4.35			
		Allocate enough time for each interaction	-	-	-	3(10)	27(90)	4.90±0.30		4.90			
		Provide training clearly by stating the main and important points	-	-	-	4(13.3)	26(86.7)	4.87±0.34		4.87			
		Essential HL skills in relation to clients	Essential HL skills in relation to clients	Welcoming and evaluating the needs of clients upon entering the organization	-	1(3.3)	1(3.3)	10(33.3)		18(60)	4.50±0.73	4.19	
		The range of HL skills	Needs assessment using HL skills	Ensuring that the client's needs are met when leaving the organization	-	1(3.3)	2(6.7)	4(13.3)		23(76.7)	4.63±0.76	9.13±1.43	4.16
				Gather essential information from clients (only once in the organization)	-	2(6.7)	2(6.7)	6(20)		20(66.7)	4.47±0.90		3.87
		The range of HL skills	Needs assessment using HL skills	Identify and guide clients in need of additional assistance	-	1(3.3)	1(3.3)	6(20)		22(73.3)	4.63±0.73	1.63±2.28	4.31
				Determining the HL status of clients	-	1(3.3)	1(3.3)	9(30)		19(63.3)	4.53±0.73		4.38
				Use simple, clear and understandable language	-	1(3.3)	-	3(10)		26(86.7)	4.80±0.61		4.64
Talk to clients with appropriate voice and medium speed	-			1(3.3)	-	6(20)	23(76.7)	4.70±0.65	4.54				
Ensure you understand the content provided by clients by getting feedback	-			1(3.3)	1(3.3)	3(10)	25(83.3)	4.73±0.69	4.41				
Answering clients' questions and encouraging them to ask questions	-			-	2(6.7)	6(20)	22(73.3)	4.67±0.60	4.35				
Allocate enough time for each interaction	-			-	-	3(10)	27(90)	4.90±0.30	4.90				
Provide training clearly by stating the main and important points	-			-	-	4(13.3)	26(86.7)	4.87±0.34	4.87				

HL strategies	Observance of HL strategies by employees in the	Provide training according to the economic ability of clients	1(3.3)	5(16.7)	5(16.7)	5(16.7)	19(63.3)	4.40±0.89	8.96±1.49	3.52
		Provide written training to clients according to their characteristics	-	2(6.7)	2(6.7)	19(63.3)	4.57±0.62	4.26		
Access	Access to services and buildings	Easy access to information about the organization and services provided	-	2(6.7)	2(6.7)	24(80)	4.73±0.58	4.41		
		Use understandable boards and guides in the organization	-	-	3(10)	27(90)	4.90±0.30	4.90		
		Appropriate number and arrangement of chairs in the organization	-	1(3.3)	10(33.3)	19(63.3)	4.60±0.56	4.44		
		Easy access to appointment scheduling methods and their accuracy	-	-	5(16.7)	25(83.3)	4.83±0.37	4.83		
		Considering a suitable space for parking vehicles	-	1(3.3)	10(33.3)	18(60)	4.50±0.73	4.19		
		Possibility of clients' access to valid educational resources	-	-	8(26.7)	22(73.3)	4.73±0.45	4.73		
		Sending the needy to help and charity centers	-	3(10)	4(13.3)	23(76.7)	4.67±0.66	4.20		
		Design all forms and documents in simple and understandable language	-	-	5(16.7)	25(83.3)	4.83±0.37	4.83		
		Evaluate all content distributed in the organization by getting feedback from clients	-	-	6(20)	24(80)	4.80±0.40	4.80		
		Preparation of forms and documents in the common language of the clients	-	1(3.3)	7(23.3)	22(73.3)	4.70±0.53	4.54		
Media variety	Media design and distribution	Preparation of educational materials using HL strategies in different formats and their distribution through several channels	-	6(20)	24(80)	4.80±0.40	4.80			
		Availability of various media for clients with different levels of HL	1(3.3)	4(13.3)	24(80)	4.70±0.70	4.38			
		Existence of educational media in the common languages of the clients	-	3(10)	21(70)	4.60±0.67	4.14			

Media variety	Optimal media features	Limited number of messages and use of short sentences	-	-	-	5(16.7)	25(83.3)	4.83±0.37	4.60±3.34	4.83			
		Clear and understandable messages	-	-	-	2(6.7)	28(93.3)	4.93±0.25		4.93			
		Use images	-	-	1(3.3)	3(10)	26(86.7)	4.83±0.46		4.67			
		Economic cost-effectiveness of the media	-	-	2(6.7)	4(13.3)	24(80)	4.73±0.58		4.41			
		Prepare based on HL strategies	-	1(3.3)	-	2(6.7)	27(90)	4.83±0.59		4.67			
		Fits the characteristics of the audience	-	-	-	1(3.3)	29(96.7)	4.97±0.18		4.97			
		Create attention	-	-	-	3(10)	27(90)	4.90±0.30		4.90			
		Be reliable	-	-	-	2(6.7)	28(93.3)	4.93±0.25		4.93			
		up to date	-	-	-	3(10)	27(90)	4.90±0.30		4.90			
		Continuous and transparent information in critical situations	-	-	-	8(26.7)	22(73.3)	4.73±0.45		4.73			
The role of the organization in critical situations	Provide understandable information	Ensure that informed consent forms are comprehensible to clients	-	1(3.3)	-	6(20)	23(76.7)	4.70±0.65	9.43±1.04	4.54			
		Existence and use of teaching aids	-	1(3.3)	2(6.7)	8(26.7)	19(63.3)	4.50±0.77		4.05			
		Providing facilities based on the needs of individuals	-	-	2(6.7)	5(16.7)	23(76.7)	4.70±0.59		4.38			
		Educate employees about critical situations	-	-	1(3.3)	5(16.7)	24(80)	4.77±0.50		4.61			
		Educate clients in critical situations	-	-	2(6.7)	5(16.7)	23(76.7)	4.70±0.59		4.38			
		Preparation and distribution of media appropriate to critical situations	-	-	-	4(13.3)	26(86.7)	4.87±0.34		4.87			
		Costs	Provide training	Clearly inform clients about costs before providing any service	-	1(3.3)	-	4(13.3)		25(83.3)	4.76±0.62	9.43±1.38	4.59
				Providing information to clients about the amount of insurance coverage	-	2(6.7)	-	4(13.3)		24(80)	4.66±0.80		4.34
				Allocate specific budgets to support HL activities	-	-	1(3.3)	6(20)		23(76.7)	4.73±0.52		4.57
				Existence of forms of attracting public aid in order to finance HL	1(3.3)	1(3.3)	3(10)	4(13.3)		21(70)	4.43±1.04		3.69
The provision of necessary funds for HL activities in the organization	Information about costs			Existence of forms of attracting public aid in order to finance HL	1(3.3)	1(3.3)	3(10)	4(13.3)	21(70)	4.43±1.04	9.16±1.53		3.69
				Allocate specific budgets to support HL activities	-	-	1(3.3)	6(20)	23(76.7)	4.73±0.52			4.57
				Existence of forms of attracting public aid in order to finance HL	1(3.3)	1(3.3)	3(10)	4(13.3)	21(70)	4.43±1.04			3.69
				Allocate specific budgets to support HL activities	-	-	1(3.3)	6(20)	23(76.7)	4.73±0.52			4.57
				Existence of forms of attracting public aid in order to finance HL	1(3.3)	1(3.3)	3(10)	4(13.3)	21(70)	4.43±1.04			3.69
				Allocate specific budgets to support HL activities	-	-	1(3.3)	6(20)	23(76.7)	4.73±0.52			4.57
		Existence of forms of attracting public aid in order to finance HL	1(3.3)	1(3.3)	3(10)	4(13.3)	21(70)	4.43±1.04	3.69				
		Allocate specific budgets to support HL activities	-	-	1(3.3)	6(20)	23(76.7)	4.73±0.52	4.57				
		Existence of forms of attracting public aid in order to finance HL	1(3.3)	1(3.3)	3(10)	4(13.3)	21(70)	4.43±1.04	3.69				
		Allocate specific budgets to support HL activities	-	-	1(3.3)	6(20)	23(76.7)	4.73±0.52	4.57				

Then, like the first round, the impact score for each question was determined. As shown in the table below, the impact score varies from 3.52 to 4.97, that is, the highest impact score is 4.97 and the lowest impact score is 3.52. Therefore, if it is observed, the impact score in the second round is higher than the first round.

### Discussion

This study was conducted with the aim of validating the model of the Health Literacy Organization in health care centers in Iran in 2021. If the results showed that the model was valid in the first round, but considering that the Delphi study cannot be implemented in less than two rounds, The study was conducted in two rounds.

In this study, ten attributes were validated for Iran Health Literacy Organization, which are: management of the organization, integration of health literacy in the organization, workforce, participation, range of health literacy skills, health literacy strategies, access to information and services, media diversity, Organizational performance in critical situations and the cost. These attributes are most consistent with those described by Brach et al.(4) And the attributes mentioned in AHRQ, OHLO, HLHO-10 instruments (11, 14, 15). In our study, 21 dimensions and 67 concepts were obtained for 10 attributes of the Health Literacy Organization, which illustrated a comprehensive model for the Health Literacy Organization.

In 6 tools (AHRQ, OHLO, HLHO-10, VHLO, Org-HLR, C-CAT) leadership is introduced as one of the attributes of the Health Literacy Organization(5, 11, 14-18), which in our study is referred to as management. Organizational management in our study covers two dimensions and 4 concepts that have an impact score of 4.12 to 4.80 in the second round of Delphi.

The second attribute in some studies was the integration, which emerged in our study as the integration of health literacy in the organization(4, 11, 14, 15), It covers two dimensions and five concepts. In the second round of Delphi, the impact scores of these concepts ranged from 4.34 to 4.87.Abrams et al. (2014) It is recommended that health literacy be incorporated into organizational policies and procedures to improve and maintain medical care practices to establish a health literacy organization(19).

The third validation attribute in our study is the workforce that is present in a number of studies(4, 5, 11, 14-18). Employees of health literacy organizations play a key role in solving health literacy issues and helping to bridge the gap between limited health literacy and health-related outcomes(18, 20). In the present study, the attributes of the workforce have been created with two dimensions and 7 concepts that have an impact score of 3.55 to 4.67.

Another important attribute of health literacy organizations in health care is the increase in patient participation or patient participation in matters related to their health(4). A number of studies have identified "involving people" and "introduce in services" as a feature of the Health Literacy Organization, which in our study is referred to as participation due to localization. (4, 5, 11, 14-18, 21). Participation in this study covers two dimensions and 5 concepts, which in the second Delphi round of these questions had an impact factor of 3.64 to 4.44.

The fifth attribute of the Health Literacy Organization in this study is the range of health literacy skills that has been introduced in studies as one of the attributes of the Health Literacy Organization. This attribute includes two dimensions and five concepts, and the impact score in this study is 3.87 to 4.38.

In our research, health literacy strategy is the sixth attribute of health literacy organizations, but in some studies, communication standards are introduced as the sixth attribute of health literacy organizations (4, 11, 14, 15, 17, 22), which is different from our research. In the validated model in the present study, 2 dimensions and 8 concepts were obtained for the attribute of health literacy strategies, which had an impact score of 3.52 to 4.90.

Accessibility is the seventh attribute of the health literacy organization of the Iranian health care center. In many studies, accessibility is referred to as one of the attributes of the health literacy organization (4, 11, 14-17). This attribute has 2 dimensions and 10 concepts that had an impact score of 4.20 to 4.90 in this study.

Media diversity is the eighth attribute of the Health Literacy Organization, which in some studies has been introduced as one of the attributes of the Health Literacy Organization (4, 11, 14, 15). This attribute has two dimensions and 12 concepts, and its impact score is 4.14 to 4.97.

The Health Care Health Literacy Organization is effective in meeting the needs of health literacy in high-risk situations, including the transfer of care and the proper use of medications (9). High-risk situations is the ninth attribute of the Health Literacy Organization in a number of studies that have emerged in our study as the organization's performance in critical situations (4, 11, 14, 15), which includes 3 dimensions and 7 concepts that range from an impact score of 4.5 to 4.87. Improving the level of health literacy in critical situations means that health organizations carry out processes to help patients in critical situations (23). Critical situations are times like the use of a particular drug and situations like the corona epidemic in which the role of health literacy organizations is prominent.

The tenth attribute of a health literacy organization is effective communication with health plans and health care bills, such as co-payments, out-of-pocket expenses, and other important, but sometimes difficult to understand information about health insurance (4). This event was obtained in our research under the heading of program and service costs. In a number of studies, costs are one of the attributes of a health literacy organization. This attribute covers 2 dimensions and 4 concepts, and the impact score in this study is 3.69 to 4.59.

Limitations: The main limitation of this study was due to the paired condition of Covid 19, which affected our study in two ways: 1- Due to traffic restrictions, this research was conducted using email and cyberspace. 2. The time constraints of the experts and staff of the health care centers who are the main participants in the research have slowed the progress of the research.

## Conclusion

Ten attributes of management of the organization, integration of health literacy in the organization, workforce, participation, range of health literacy skills, health literacy strategies, access to information and services, media diversity, Organizational performance in critical situations, and the cost of programs and services for the Health Literacy Organization found that these attributes were most consistent with those found in the AHRQ, OHLO, and HLHO-10 instruments. This study is the first study conducted in Iran on the Health Literacy Organization, which is a comprehensive and complete model and has often described the necessary conditions for the Health Literacy Organization. This model examines and meets the needs of those who refer to the organization in four stages, before entering the organization, upon entering the organization, in the organization, and when

leaving the organization. It also depicts attributes for the manager of the organization and the employees of the organization. This model describes the attributes of the media available to clients in the organization and interprets the role of the organization in critical situations. In this organization, health literacy is an integral part and is integrated in the organization. Hence, this study was able to provide a model for health literacy organization in health care centers in Iran. Using this study, it is possible to form a health literacy organization for Iranians and increase the level of health literacy in Iranian society.

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**Authors' contributions:** E Ch-KH and NP conceptualized the study and led the project and writing. All authors contributed to the development of the coding scheme. HT, Ms M and M M conducted the coding and analyses and drafted the methods. AR, and HT reviewed the codes and results. All authors contributed to the writing and revision and approved the final version of the manuscript

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