Journal of Multidisciplinary Care (JMDC)
doi: 10.34172/jmdc.2022.02 2022;11(1):8-11 http://jmdc.skums.ac.ir

Original Article

Healthcare providers' knowledge, attitude, and practice respecting health literacy

Mahnoush Reisi[1], Elahe Tavassoli[2*], Homamodin Javadzade[1], Fariba Fathollahi-Dehkordi[3]

[1]Department of Health Education and Promotion, Faculty of Health, Bushehr University of Medical Sciences, Bushehr, Iran
[2]Assistant Professor, Department of Public Health, School of Health, Shahrekord University of Medical Sciences, Shahrekord, Iran
[3]Assistant Professor, Department of Community Medicine, School of Medicine, Social Determinants of Health Research Center, Shahrekord University of Medical Sciences, Shahrekord, Iran

Abstract

Background and aims: Health literacy (HL) is a factor with significant impact on the quality of communication between healthcare providers and clients and the outcomes of healthcare services. The aim of the study was to evaluate healthcare providers' HL-related knowledge, attitude, and practice.

Methods: This cross-sectional descriptive study was conducted in 2019–2020. Participants were all eligible healthcare providers in all eleven urban healthcare centers in Shahrekord, Iran. A demographic questionnaire and a researcher-made HL-related knowledge, attitude, and practice questionnaire were used for data collection and the SPSS software (v. 18.0) was used for data analysis.

Results: The mean scores of participants' HL-related knowledge, attitude, and practice were 39.62 ± 14.23, 37.54 ± 16.56, and 56.54 ± 19.19, respectively. There was a significant positive correlation between the mean scores of HL-related attitude and practice ($P = 0.001$).

Conclusion: Healthcare providers may have poor HL-related knowledge and attitude and moderate HL-related practice. Therefore, in-service educational programs are recommended to improve their HL-related knowledge, attitude, and practice.

Keywords: Health literacy, Knowledge, Attitude, Practice

***Corresponding Author:**
Elahe Tavassoli, Department of Public Health, School of Health, Shahrekord University of Medical Sciences, Shahrekord, Iran. Tel: +989132806883, Fax: +983833334678
Email: tavassoli.eb@gmail.com

Received: 8 November 2021
Accepted: 5 February 2022
ePublished: 30 March 2022

Introduction

Effective communication is the basis for quality patient-centered healthcare provision (1). A key prerequisite for effective communication is adequate health literacy (HL). By definition, HL is the ability to acquire, interpret, and understand health-related information for health-related decisions and actions and hence, is considered as a key component of effective communication between healthcare clients and providers (2). Nonetheless, studies showed that many people around the world have inadequate HL. For example, a study reported that 46% of individuals in the world had limited HL (3). Another study in Iran showed that 53.3% of adults had limited HL (4). A national survey also reported that the prevalence of inadequate HL was 56% (5). Limited HL is associated with different adverse consequences. For example, previous studies reported that limited HL can be associated with poor understanding of health information (6–8), failure to follow healthcare providers' recommendations, limited engagement in preventive measures (9), late diagnosis of illnesses (10), inability to use self-care skills (11), and poor adherence to healthy lifestyle behaviors (12). Moreover, chronic illnesses (13), frequent medical visits, and frequent re-hospitalizations (14) are highly prevalent among individuals with limited HL. These individuals also impose heavy financial costs on healthcare systems (15). Therefore, HL is currently a top research priority in developed countries in order to improve the quality of healthcare services (16,17).

Besides healthcare clients, healthcare providers should have adequate HL and adequate HL-related knowledge. Healthcare providers with adequate knowledge about HL are able to provide their clients with quality education, enhance their knowledge level, and empower them to better use educational materials (17-19). Moreover, they can improve their clients' HL, improve the quality of interpersonal communications with clients, improve the quality of patient education, and help their clients achieve optimum health status and more actively engage in self-care activities, and reduce inequalities in access to healthcare services (20).

Despite the significant effects of HL on health-related outcomes in healthcare settings, studies show that healthcare providers have problems in adherence to HL principles and effective communication during their daily practice (17). For example, a study reported that healthcare providers widely used technical jargons during their communication with patients, resulting in

patients' misunderstanding of health information and negative healthcare outcomes18. Two other studies also showed that healthcare providers had limited HL-related knowledge and poor HL-related performance (21,22). Therefore, healthcare providers with direct contact with patients, their families, and communities need to have the necessary HL-related skills17 and improve their HL in order to improve communication effectiveness and healthcare outcomes. Improvement of healthcare providers' HL-related knowledge, attitude, and practice is an important component of practical healthcare programs in many countries (23).

A key step to the improvement of healthcare providers' HL-related knowledge, attitude, and practice is to assess the status quo. Nonetheless, there is limited information in this area. The present study was conducted to bridge this gap. The aim of the study was to evaluate healthcare providers' HL-related knowledge, attitude, and practice.

Methods

Design

This cross-sectional descriptive study was conducted in 2019–2020.

Participants and setting

Study population included all 110 healthcare providers in all eleven urban healthcare centers in Shahrekord, Iran. All eligible healthcare providers were recruited to the study through a census. The inclusion criterion was agreement for participation and the exclusion criterion was incomplete answering to the study instruments.

Data collection

A demographic questionnaire and a researcher-made HL-related knowledge, attitude, and practice questionnaire were used for data collection. The items of the demographic questionnaire were on age, gender, level of education, major of education, employment status, and work experience. The HL-related knowledge, attitude, and practice questionnaire had fourteen multiple-choice items on HL-related knowledge, five items on HL-related attitude, and ten items on HL-related practice. Correct answers to the knowledge items were scored 1 and incorrect answers were scored zero. Items on attitude were scored on a five-point scale as follows: 4: "Strongly agree"; 3: "Agree"; 2: "No idea", 1: "Disagree"; and 0: "Strongly disagree". Items on HL-related practice were scored on a four-point scale as follows: 0: "Never"; 1: "Rarely"; 2: "Often"; and 3: "Always". The content validity of this questionnaire was confirmed with content validity ratio indices of 0.8–1 for all items. The reliability of the questionnaire was also confirmed through internal consistency assessment and with Cronbach's alpha values of 0.78 for the knowledge subscale, 0.81 for the attitude subscale, and 0.81 for the practice subscale (24).

Data analysis

The SPSS software (v. 18.0) was used for data analysis. Statistical methods for data analysis were the Pearson's correlation analysis, regression analysis, and one-way analysis of variance.

Results

Most participants aged 20–30 years (60%), were female (91.8%), and had bachelor's degree (70%). Moreover, 37.3% of them secured official employment and 45.5% of them had a work experience of less than five years (45.5%) (Table 1).

The mean scores of participants' HL-related knowledge, attitude, and practice were 39.62 ± 14.23, 37.54 ± 16.56, and 56.54 ± 19.19, respectively. There was a significant positive correlation between the mean scores of HL-related attitude and practice ($P = 0.001$; Table 2). The results of the regression analysis also showed that knowledge, attitude, and practice significantly predicted 45.2% of the total variance of HL (Table 3).

Discussion

The aim of this study was to evaluate healthcare providers' HL-related knowledge, attitude, and practice. Results showed that healthcare providers had limited knowledge and poor attitude towards HL and had inadequate HL-related skills to communicate with their clients. Participants' HL-related knowledge was particularly low in the print media design item. In line with our findings, a previous study reported low level of HL-related knowledge among nurses (25). Another study on the staff of a university-affiliated healthcare center in the United Kingdom revealed that participants had acceptable

Table 1. Participants' characteristics

Variable		No. (%)
Age (y)	20-30	66 (60.00)
	30-40	27 (24.5)
	40-50	17 (15.5)
Gender	Male	9 (8.2)
	Female	101 (91.8)
Educational level	Associate diploma	24 (21.8)
	Bachelor's	77 (70.00)
	Master's	9 (8.2)
Filed of education	Public health	60 (54.5)
	Nursing	28 (25.5)
	Midwifery	22 (20.00)
Employment Status	Human resource plan	34 (30.9)
	Contractual	22 (20.00)
	Treaty	13 (11.8)
	Official	41 (37.3)
Work experience (y)	>5	50 (45.5)
	5-10	26 (23.6)
	10-15	8 (7.3)
	15-20	14 (12.7)
	20-25	12 (10.9)

Table 2. Pairwise correlation among HL-related knowledge, attitude, and practice

Variable	Awareness	Attitude	Performance
Awareness	1	-	-
Attitude	$P=0.586$ r=0.055	1	-
Performance	$P=0.080$ r=0.180	$P=0.001$* r=0.346	1

Table 3. Regression analysis to determine the predictors of health literacy

Variable	Standardized beta	t	*P*	95% confidence interval	R^2
Knowledge	0.156	2.82	0.001	0.011–0232	
attitude	0.157	3.35	0.015	0.017–0.249	0. 452
Performance	0.146	2.74	0.009	0.001–0.041	

knowledge about the impact of HL on patients but had limited knowledge about its impact on the healthcare provision system (26). Similarly, a study reported low level of HL-related knowledge among senior bachelor's nursing students (27).

The results of the present study also indicated that the HL-related practice of healthcare providers was at moderate level which can be attributed to their limited knowledge and poor attitude about HL as well as the significant positive relationship of their HL-related attitude and practice. In line with our findings, a study reported that nurses had poor practice respecting the use of HL-related strategies (25). Another study on physicians, nurses, and pharmacists reported that they occasionally used HL-related techniques in their communications with their clients and hence, highlighted the importance of educational HL-related programs for healthcare providers (28). These results denote poor HL-related knowledge, attitude, and practice among different healthcare providers, probably due to the lack of quality HL-related education for healthcare providers (28-32). However, two studies reported acceptable level of HL among healthcare providers in Iran (29) and among adults in a southeastern European country (30).

Our findings also indicated HL-related knowledge, attitude, and practice as the significant predictors of HL among healthcare providers. A previous study also reported a significant relationship between knowledge and use of HL strategies in patient education among nurses (25). HL education for healthcare providers is one of the most important educational priorities in the healthcare system (25,32). HL should be integrated into the official university curriculum of all healthcare fields to improve HL-related skills and competence of all healthcare providers.

The most important limitation of the present study was the reluctance of some participants to completely respond to the study instruments due to their fear over the probable negative effects of their responses on their evaluation scores. We attempted to reduce the effects of this limitation through providing participants with complete explanations about the study aim and the confidentiality of their data.

What does this paper contribute to the wider global clinical community?

- Healthcare providers may have limited HL-related knowledge, poor HL-related attitude, and moderate HL-related practice.
- Educational interventions are needed to improve healthcare providers' HL-related knowledge, attitude, and practice.

Conclusion

This study suggests that some healthcare providers may have poor HL-related knowledge and attitude and moderate HL-related practice which can negatively affect their communications with their clients and their ability to provide education to them. Therefore, in-service educational programs are recommended to improve their HL-related knowledge, attitude, and practice. Healthcare authorities can use the findings of this study to improve healthcare providers' HL-related knowledge, attitude, and practice. Moreover, healthcare researchers can use our findings to design appropriate interventions in order to enhance HL among healthcare providers. Close interdisciplinary collaboration is also necessary to improve HL in the general public.

Acknowledgement

This study was approved by the Social Health Determinants Research Center of Shahrekord University of Medical Sciences, Shahrekord, Iran (code: 932). We would like to thank all healthcare providers who participated in the study.

Conflict of Interests

The authors declare no conflict of interest.

Ethical Approval

The Ethics Committee of Shahrekord University of Medical Sciences, Shahrekord, Iran, approved this study (code: IR.SKUMS.REC.1397.106). Necessary arrangements for sampling and data collection were made with the authorities of the study setting and clear information about the study aim was provided to participants. They were ensured that their data would be kept confidential and they would have access to the study results at will.

References

1. Ong LM, de Haes JC, Hoos AM, Lammes FB. Doctor-patient communication: a review of the literature. Soc Sci Med. 1995;40(7):903-18. doi: 10.1016/0277-9536(94)00155-m.
2. Ratzan S, Parker R. National Library of Medicine Current Bibliographies in Medicine: Health Literacy. Bethesda, MD: National Institutes of Health, US Department of Health and Human Services; 2000.
3. Paasche-Orlow MK, Parker RM, Gazmararian JA, Nielsen-Bohlman LT, Rudd RR. The prevalence of limited health literacy. J Gen Intern Med. 2005;20(2):175-84. doi: 10.1111/j.1525-1497.2005.40245.x.
4. Javadzade SH, Sharifirad G, Reisi M, Tavassoli E, Rajati F. Health literacy among adults in Isfahan, Iran. J Health Syst Res. 2013;9(5):540-9. [Persian].
5. Tehrani Banihashemi SA, Amirkhani MA, Haghdoost AA, Alavian SM, Asgharifard H, Baradaran H, et al. Health literacy

and the influencing factors: a study in five provinces of Iran. Stride Dev Med Educ. 2007;4(1):1-9. [Persian].
6. Cho YI, Lee SY, Arozullah AM, Crittenden KS. Effects of health literacy on health status and health service utilization amongst the elderly. Soc Sci Med. 2008;66(8):1809-16. doi: 10.1016/j.socscimed.2008.01.003.
7. Davis TC, Wolf MS, Bass PF, 3rd, Middlebrooks M, Kennen E, Baker DW, et al. Low literacy impairs comprehension of prescription drug warning labels. J Gen Intern Med. 2006;21(8):847-51. doi: 10.1111/j.1525-1497.2006.00529.x.
8. Gazmararian JA, Williams MV, Peel J, Baker DW. Health literacy and knowledge of chronic disease. Patient Educ Couns. 2003;51(3):267-75. doi: 10.1016/s0738-3991(02)00239-2.
9. Scott TL, Gazmararian JA, Williams MV, Baker DW. Health literacy and preventive health care use among Medicare enrollees in a managed care organization. Med Care. 2002;40(5):395-404. doi: 10.1097/00005650-200205000-00005.
10. Bennett CL, Ferreira MR, Davis TC, Kaplan J, Weinberger M, Kuzel T, et al. Relation between literacy, race, and stage of presentation among low-income patients with prostate cancer. J Clin Oncol. 1998;16(9):3101-4. doi: 10.1200/jco.1998.16.9.3101.
11. Schillinger D, Grumbach K, Piette J, Wang F, Osmond D, Daher C, et al. Association of health literacy with diabetes outcomes. JAMA. 2002;288(4):475-82. doi: 10.1001/jama.288.4.475.
12. von Wagner C, Knight K, Steptoe A, Wardle J. Functional health literacy and health-promoting behaviour in a national sample of British adults. J Epidemiol Community Health. 2007;61(12):1086-90. doi: 10.1136/jech.2006.053967.
13. Wolf MS, Gazmararian JA, Baker DW. Health literacy and functional health status among older adults. Arch Intern Med. 2005;165(17):1946-52. doi: 10.1001/archinte.165.17.1946.
14. Baker DW, Gazmararian JA, Williams MV, Scott T, Parker RM, Green D, et al. Functional health literacy and the risk of hospital admission among Medicare managed care enrollees. Am J Public Health. 2002;92(8):1278-83. doi: 10.2105/ajph.92.8.1278.
15. Weiss BD, Palmer R. Relationship between health care costs and very low literacy skills in a medically needy and indigent Medicaid population. J Am Board Fam Pract. 2004;17(1):44-7. doi: 10.3122/jabfm.17.1.44.
16. Adams K, Corrigan JM. Priority Areas for National Action: Transforming Health Care Quality. National Academies Press; 2003.
17. Coleman C. Teaching health care professionals about health literacy: a review of the literature. Nurs Outlook. 2011;59(2):70-8. doi: 10.1016/j.outlook.2010.12.004.
18. Deuster L, Christopher S, Donovan J, Farrell M. A method to quantify residents' jargon use during counseling of standardized patients about cancer screening. J Gen Intern Med. 2008;23(12):1947-52. doi: 10.1007/s11606-008-0729-3.
19. Coleman C, Kurtz-Rossi S, McKinney J, Pleasant A, Rootman I, Shohet L. The Calgary Charter on Health Literacy: Rationale and Core Principles for the Development of Health Literacy Curricula. The Center for Literacy of Quebec; 2008.
20. Nutbeam D. The evolving concept of health literacy. Soc Sci Med. 2008;67(12):2072-8. doi: 10.1016/j.socscimed.2008.09.050.
21. Logan RA. Clinical, classroom, or personal education: attitudes about health literacy. J Med Libr Assoc. 2007;95(2):127-37. doi: 10.3163/1536-5050.95.2.127.
22. Brown DR, Ludwig R, Buck GA, Durham D, Shumard T, Graham SS. Health literacy: universal precautions needed. J Allied Health. 2004;33(2):150-5.
23. US Department of Health and Human Services. National Action Plan to Improve Health Literacy. Washington, DC: Office of Disease Prevention and Health Promotion, US Department of Health and Human Services; 2010.
24. Javadzade SH, Hajivandi A, Ghaedi S, Reisi M. Investigating the knowledge and practice of health care providers on health literacy and applying related strategies in relation to referrals to comprehensive health care centers in Bushehr city, Iran. J Health Syst Res. 2020;16(3):180-6. doi: 10.22122/jhsr.v16i3.3628. [Persian].
25. Javadzade SH, Mostafavi F, Reisi M, Mahaki B, Nasr Esfahani M, Sharifirad G. Relationship between knowledge and implementing health literacy strategies in patient education. Military Caring Sciences Journal. 2015;2(1):33-40. doi: 10.18869/acadpub.mcs.2.1.33. [Persian].
26. Jukkala A, Deupree JP, Graham S. Knowledge of limited health literacy at an academic health center. J Contin Educ Nurs. 2009;40(7):298-302. doi: 10.3928/00220124-20090623-01.
27. Cormier CM, Kotrlik JW. Health literacy knowledge and experiences of senior baccalaureate nursing students. J Nurs Educ. 2009;48(5):237-48. doi: 10.3928/01484834-20090416-02.
28. Schwartzberg JG, Cowett A, VanGeest J, Wolf MS. Communication techniques for patients with low health literacy: a survey of physicians, nurses, and pharmacists. Am J Health Behav. 2007;31 Suppl 1:S96-104. doi: 10.5555/ajhb.2007.31.supp.S96.
29. Bahramian M, Najimi A, Omid A. Association between health literacy with knowledge, attitude, and performance of health-care providers in applying health literacy education strategies for health education delivery. J Educ Health Promot. 2020;9:10. doi: 10.4103/jehp.jehp_199_19.
30. Toçi E, Burazeri G, Myftiu S, Sørensen K, Brand H. Health literacy in a population-based sample of adult men and women in a South Eastern European country. J Public Health (Oxf). 2016;38(1):6-13. doi: 10.1093/pubmed/fdv006.
31. Scheckel M, Emery N, Nosek C. Addressing health literacy: the experiences of undergraduate nursing students. J Clin Nurs. 2010;19(5-6):794-802. doi: 10.1111/j.1365-2702.2009.02991.x.
32. Roter D, Makoul G. Communicating Health: Priorities and Strategies for Progress–Action Plans to Achieve the Health Communication Objectives in Healthy People 2010. Objective 11-6: Health Care Providers' Communication Skills. US Department of Health and Human Services, Office of Disease Prevention and Health Promotion; 2011.

Cite this article as: Reisi M, Tavassoli E, Javadzade H, Fathollahi-Dehkordi F. Healthcare providers' knowledge, attitude, and practice respecting health literacy. Journal of Multidisciplinary Care. 2022;11(1):8-11. doi: 10.34172/jmdc.2022.02.