

The Relationship between Health Literacy and Quality of Life of Employees in Campus of Kurdistan University of Medical Sciences

Yadolah Zarezadeh

Social Determinants of Health Research Center, Research Institute for Health Development, Kurdistan University of Medical Sciences, Sanandaj, Iran.

Navid Eskandari

kurdistan university of medical sciences. sanandaj. Iran

Masoud Moradi

MSc of biostatistics, vice chancellor for research and technology, Kurdistan university of medical sciences, sanandaj. Iran.

Nasrin Abdi

* Social Determinants of Health Research Center, Research Institute for Health Development, Kurdistan University of Medical Sciences, Sanandaj, Iran. (Corresponding Author) Email: abdi_nasrin@yahoo.com

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ABSTRACT

Background and Objective: Health literacy is considered by policymakers as one of the important issues for improving the Health of the community. On the other hand, quality of life and efforts to promote it play a significant role in individual and social health. the aim of this study was to investigate the relationship between Health literacy and quality of life in staff members of Kurdistan University of Medical Sciences.

Materials and Methods: this cross-sectional study was carried out on all of 205 staff members of Kurdistan University of Medical Sciences in 2018. Using a census method, data were collected using HELIA and Life Quality Questionnaire (SF-12) and Health LITERACY Tool (HELIA). Then, using descriptive statistics and Pearson correlation test, they were analyzed using spss version 21 software.

Results: The results of this study showed that the average health literacy rate of the subjects was 130.16± 17.16 and the quality of life mean score was 87.21±15.2 the most frequent source of information was healthcare professionals, doctors and Internet. The analytical results of the study showed that there is no statistically significant relationship between gender, age, work experience and marital status with health literacy and quality of life ($p>0.05$). But there was a significant relationship between education Level and health literacy and quality of life ($p=0.001$). There is also a significant relationship between the level of health and the quality of life. ($p<0.0001$)

Conclusion: Regarding the relationship between health literacy and quality of life dimensions, it is necessary to pay more attention to improving the health literacy of individuals (especially adults with inadequate literacy) in quality improvement programmers.

Paper Type: Research Article

Keywords: Health literacy, Quality of life, Employees.

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Introduction

World health organization (WHO) views health literacy as a set of social and cognitive skills that motivate and enable individuals to understand and use knowledge in a variety of ways in order to maintain and enhance their health status (1).

Health literacy actually means one's capacity to acquire, interpret, and understand basic health information and services that are appropriate for health-related decision-making. In general, health literacy is identified as one's knowledge for performing health-related activities effectively (2).

On the other hand, quality of life (QoL) is an issue that is related to different physical and psychological dimensions, which are strongly influenced by economic, social, psychological and physical factors. It can be said that one of the most important factors in health assessment process is QoL. Today, health systems are seeking to increase QoL rather than merely increasing quantitative factors, and if the goal is to increase quantity of some factors, it is undoubtedly accomplished in line with efforts aimed at increasing the QoL (3). In other words, if the main challenge facing health systems in the 20th century was to increase life expectancy, the aim of these systems in 21st century is undoubtedly to increase QoL (4). Various studies have investigated various factors to quantitatively assess QoL, including economic status, self-efficacy, happiness, exercise, income level, family relationship, cultural, economic, and social status (5-8). It has also been proven that increasing QoL can significantly reduce health care costs (4).

On the other hand, the importance of health literacy level and its impact on different health criteria have been assessed in various studies during the last decade (9).

Makaboso et al. (10) as well as Hosseini et al. (11), and Hamzeh et al. (12) have demonstrated in their studies the association between poor

health literacy and low QoL.

Health-related QoL and people's mental assessment of their perception of wellbeing and ability to perform physical, psychological, and social functions are increasingly being used as a comprehensive health indicator in medical interventions or health related researchers. Poor health literacy (HL) is associated with poor QoL, which may be due to reduced access to and use of medical care, increases stress due to increased daily life challenges, poor self-management, and reduced self-efficacy, i.e. the ability to exercise control over life, and the environment." (13).

To our best knowledge, there has been no relevant study on employees working at Kurdistan University of medical sciences. It is important to ensure QoL of these employees as a subgroup of society that is indirectly responsible for providing services to the different strata of the societies. Therefore, it is due and necessary to pay attention to QoL in this time period, despite the changes made in the concept of health, and in order to prevent the undermining of the physical or mental abilities of people serving and providing more optimal services to the majority of the population.

On the one hand, considering the importance of HL as one of the goals of public health and link between HL with the level of health and imposition of greater costs on people and the health system and the important role of HL in achieving health equity as one of pillars of sustainable development, and since the personnel of the University of medical sciences are closely related to the health related issues, on the other hand, the aim of the present study was to investigate the relationship between HL and QoL level among employees working at Kurdistan University of medical sciences as a first step in examining this concept for accurate

planning of subsequent interventions by health system policymakers.

Method

This was a cross-sectional (descriptive-analytical) study and the research population included employees working at Kurdistan University of medical sciences-Pardis Complex. Inclusion criteria included employees working at Kurdistan University of medical sciences-Pardis Complex and exclusion criteria also included unwillingness to participate in the study and to be a faculty member. Since the study population was limited and according to information obtained from Human Resources Department of Pardis Complex, the total number of employees working employees in all departments and faculties of Pardis Complex was 297 individuals, therefore, complete enumeration method was used. To this end, the researchers referred to workplaces of all employees working at Pardis Complex and the questionnaires were completed thereafter. Since some people may not participate in the study or some questionnaires are incomplete, complete enumeration method was used and sampling was then performed. The data collection tool consisted of three parts: the first part includes demographic information, the second part includes 26-item version of WHOQoL. This questionnaire is comprised of four domains, physical health, mental health, social relations, and environmental health, with 24 questions. After performing the necessary calculations, a score range of 4-20 was obtained for each domain, with scores 4 and 20 indicating the poorest and the best QoL status, respectively. The intra-cluster correlation coefficient (ICC) of the questionnaire was obtained at the range of 75 to 84% using test-retest method with two-week interval. Regarding the construct validity, relevant indices indicated acceptable validity of

the above tool in the Iranian population. Health literacy for Iranian adults (HELIA) questionnaire was used to determine the HL level. Development and evaluation of psychometric analysis of the above tool was carried out by Tavousi et al. (14) to assess HL of Iranian population aged 18-65 years. This questionnaire has acceptable validity and reliability. This questionnaire also consists of 33 questions and five dimensions, namely reading, access, understanding, appraisal, and decision-making. The scoring procedure was the one that raw scores obtained from the above five HL domains were calculated and then converted to standard score range of 0-100, with the scores 0-50, 50.1-66, 66.1-84, and 84.1-100 indicating inadequate, less adequate, adequate, and excellent health literacy levels, respectively. The questionnaires were completed by the researcher. In the descriptive phrase, descriptive statistics, including the relative frequency and frequency were used for qualitative variables and mean and standard deviations were also used in the case of quantitative variables. Concerning analytical results section, the normality of the variables was first evaluated using Kolmogorov-Smirnov test, and if the data distribution was normal, t-test, ANOVA, and Pearson correlation coefficient were used. Data analysis was finally carried out using SPSS ver. 20.

Results

The results of the present study showed that the mean HL and QoL scores was 130.16 ± 17.69 and 87.21 ± 15.2 , respectively. Health staff, physicians, and Internet have been regarded as the main sources of information. The analytical results of the present study showed no significant relationship between sex and age, work experience, and marital status with HL and QoL. However, there was a significant relationship between level of education with

HL and QoL ($P < 0.05$). There was also significant relationship between HL and QoL ($P < 0.0001$).

Demographic characteristics of participants are listed in Table 1.

Table 1: Demographic characteristics of the study staff (n=205)

Variable		N(Percentage)	Variable	Number	Percentage
Gender	Male	85(42)	Marital status	Married	148(73)
	Female	117(58)		Single	54(27)
Type of Employment	Corporate	14(7)	Level of Education	Diploma	5(2.5)
	Treaty	12(6)		Associate Degree	15(7.5)
	Official	126(62.3)		Bachelor	112(55.5)
	Contractual	39(19.3)		Master	62(30.6)
	Design	11(5.4)		Ph.D.	8(3.9)

The findings of Table 2 indicate a significant relationship between only between HL and QoL

with level of education.

Table 2. Determining the relationship between health literacy, quality-of-life, demographic variables in the subjects

Demographic variables		Health literacy Mean \pm SD	Quality of Life Mean \pm SD
Gender	Male	128.39 \pm 17.22	87.84 \pm 12.57
	Female	132.78 \pm 15.08	89.22 \pm 13.49
Significance level		P=0.60	P=0.47
Level of Education	Diploma	116.70 \pm 17.12	81.20 \pm 15.84
	Associate Degree	129.27 \pm 15.62	85.00 \pm 13.18
	Bachelor	130.39 \pm 15.53	86.57 \pm 15.45
	Master	135.95 \pm 14.56	95.16 \pm 11.14
	Ph.D.	142.50 \pm 17.69	96.75 \pm 9.48
Significance level		P<0.05	P<0.05
Marital status	Married	131.32 \pm 16.16	88.86 \pm 13.70
	Single	130.54 \pm 16.61	88.67 \pm 10.51
Significance level		P=0.77	P=0.93

The findings of the present study also revealed that mean HL and QoL score was 130.16 \pm 17.69 and 87.21 \pm 15.2, respectively and there was a

direct and significant relationship between QoL and HL i.e. increasing health literacy leads to an increase in QoL score (Table 3).

Table 3: Mean score of health literacy and quality of life in the study staff

variables	Mean \pm SD	confidence interval 95%
Health Literacy	17.69 \pm 130.16	(132.75-127.75)
Quality of Life	15.20 \pm 87.21	(89.43-84.99)

The findings also showed no significant relationship between HL with age and HL with work experience (Table 4).

Table 4: Relationship between quality of life, health literacy with age and work experience

variables	Health Literacy		Quality of Life	
	R	P	R	P
age	-0.045	0.54	-0.124	0.09
work experience	0.098	0.19	-0.069	0.36

Discussion

The aim of the present study was to investigate the relationship between HL and QoL among employees at Kurdistan University of medical sciences as a fundamental step in planning health promotion interventions by health system policymakers.

The results of the present study showed that the mean HL score of employees was 130.16 ± 17.69 , which indicates a high HL score. In a study on the health literacy in medical and dental students, Sharif Moghadam indicated a higher mean HL score among medical students' higher dental students (15). Since health literacy is an emerging topic and most studies have been conducted on the patient population at least in Iran, we can't judge whether the results of the present study are consistent with previous studies. A total of 38.8% of individuals living in the West of Iran had inadequate HL (Ansari et al.). Also, a total of 54.6% of individuals in Ghanbar et al.'s study and 46.6% of participants in Tavousi et al.'s study had limited HL, which is lower than the values obtained in the present study. These differences are probably due to differences in the populations studied (14, 16, 17). Besides, the results of most studies have reported a low HL level, which can be attributed to differences in the target groups, so that most of these studies are conducted on ordinary people, not just on people with education in the fields of medical

sciences. In the present study, the mean QoL score of the employees was 87.15 ± 21.20 . In a study on retired elderly population, Hosseini et al. showed that QoL score was 58.9% (11). Previous domestic studies revealed that mean \pm SD of 50 ± 10 as a standard and acceptable QoL index in the elderly population (11). Therefore, comparison of these two scores indicates that QoL score is higher in the retired elderly people in Hosseini's study. The different QoL scores can be attributed to the existence of various support system and different lifestyles among the elderly people. The analytical results of the present study also showed no relationship between HL and sex and so that HL level was almost the same in both genders. Although the mean HL score was higher in women than men, this difference was not statistically significant. Panahi et al. showed a significant relationship between sex and HL (18). They showed that percentage of inadequate and less adequate HL was more common in men than women, and the percentage of adequate and excellent HL was higher in women as compared to men, which is inconsistent with the results of the present study. Possible reasons for higher HL levels among female students include greater compliance with the health principles, greater compliance with the medical recommendations such as periodic examinations, and greater interest in learning and acquiring health information. In some other studies, the mean score of different HL dimensions was higher in men than women, which may be due to differences in the target populations of various studies. Consistent with the results of the present study, Lee et al. and Tehrani et al. demonstrated no relationship between sex and health literacy (19, 20).

The results of the present study also showed no relationship between HL and marriage so that HL score was almost the same in married

and single people. Although mean HL score of married people was higher than single ones, this difference was not statistically significant. Sharifi Moghaddam et al. indicated higher mean scores in all dimensions of HL in married students than single ones, which may be attributed to having married life and assuming responsibility towards health status of family members, and low number of married participants (15). Tol et al. achieved low HL score in married people, which is inconsistent with the results of the present study (21). The results of Mohammadi Farah's study showed that mean scores of all HL dimensions in married people was higher than single ones, which is consistent with the results of the relevant studies (22). One of the notable results of the present study is the significant relationship between level of education and HL so that HL scores differ in people with different educational levels. The results showed a significantly different HL levels in people holding diploma with those holding MA and PhD. However, there was no significant difference between people with diploma with those holding associate degree and a bachelor degree in terms of their HL levels. There was also no significant difference between people with a college degree in terms of HL scores. Naghibi et al. demonstrated that people with college education had the highest mean HL score in all dimensions and illiterate people and those with elementary education obtained the lowest score (23). The analytical results of the current study showed no significant relationship between HL with age and HL with work experience. Naghibi et al. showed a statistically significant relationship between age with all HL dimensions of (23). Other studies have also suggested the relationship between age and different HL levels; therefore, it can be argued that as age increases, people acquire more information regarding health issues and

individuals gain more appropriate and better experiences due to more frequent exposures. The results of the present study showed a direct and significant relationship between the QoL and HL score so that an increase in HL score leads to an improvement in QoL and its dimensions (18).

The results of a study by Kooshyar et al. (2004) also showed that people with adequate HL had a higher QoL, there was a significant relationship between HL and the physical and mental dimensions of QoL (24). Wang et al. (2013) also stated that poor HL was associated with poor QoL (25). Song et al. (2012) also showed that people with lower HL levels were more vulnerable in terms of QoL and mental health status (26), which is consistent with the results of a study by Wallace et al. (2008) (27).

Limitations

Limitations of the present study are as follows: disregarding other health literacy skills such as self-efficacy, communication, and calculation, as well as cultural backgrounds and skills such as speaking, listening and having contextual and cultural knowledge, relatively small sample size, and using convenience sampling method. It is important to note that the data collection was carried out in a self-reported manner, which was the most important limitation of the present study.

Conclusion

Since health promotion behaviors have a potential effect in enhancing health and QoL status and equally reducing health care costs at the same time, therefore, health literacy should be given a special consideration as a factor that promotes health behaviors and creates healthy lifestyles, and ultimately improve the quality of life.

It is recommended to conduct a more comprehensive study with a larger sample

size to estimate the level of health literacy of different groups of society, use the results of these studies to improve personnel's level of health literacy and improving their quality of life, use the results of these studies while holding relevant workshops.

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