THE DETERMINANTS OF NURSING, ALLIED HEALTH AND NON MEDICAL STAFFS’ HEALTH LITERACY IN HOSPITALS OF A DEVELOPING COUNTRY

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ABSTRACT

Introduction: Given the role of personnel working in hospitals in promoting health, there is a clear need for a study to clarify the level of health literacy and affecting factors on it among the non medical and medical staffs working in hospitals. Methods: A cross-sectional survey was performed on 389 employees who were working in hospitals affiliated to Semnan University of Medical Sciences of Iran in 2013. Results: There were significant relationships among the use of TV (P=0.044, CI=95%, Odd’s Ratio= 1.825), the use of books and journals (P<0.0001, CI=95%, Odd’s Ratio= 5.551), the use of internet (P<0.039, CI=95%, Odd’s Ratio= 0.641), the use of physicians (P<0.0001, CI=95%, Odd’s Ratio=0.070) and the nonmedical and medical staffs’ health literacy level. Conclusions: The findings indicate media and print information resources more than physicians and electronic information sources affect on the increase of nonmedical and medical staffs’ health literacy of hospitals of Iran. It also is better to train Iranian physicians more about the skills required for transferring health concepts. Given the important role of medical staffs in the increase of health literacy level in other members of the community, it is better to use other suitable information sources to transfer health information to all individuals in the community.

Key words: Health literacy, Medical staff, Hospital, Information resources.

1. INTRODUCTION

In the twenty-first century, every individual who wants to have a desired level of performance must have a wide range of capabilities, competencies, and basically many types of literacy (1, 2). In fact, literacy is the main prerequisite for the development of thought and for the capability to do research. (3).

By definition, health literacy is the capacity of each individual to obtain, interpret, and understand basic information and services related to health, which is necessary for proper decision-making (4, 5). In addition, the individual’s health literacy is also defied as social and psychological skills that determine a person’s ability to access, understand, and use information that can maintain and improve his/her health (5, 6).

Studies have found that factors such as education, age, prior knowledge, skills and other socioeconomic factors have direct effects on health literacy (7, 8). Several studies have been conducted on seeking behavior of health information among medical and nursing staffs and students in Iran (9, 10). Most studies also performed in the field of health literacy in Iran have been conducted on patients (11, 12). However no study has been performed to evaluated non medical and medical staffs’ health literacy of hospitals and determinants of it in developing countries.

In view of the above mentioned facts and taking into consideration the role of personnel working in hospitals in promoting health, there is a clear need for a study to clarify the level and condition of health literacy and affecting factors on it among the staff working in hospitals in Iran.

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2. AIMS OF THE CURRENT RESEARCH

This study tried to evaluate determinants of employees’ health literacy in health care organizations. The specific research hypotheses were:

Hypothesis 1: Job has a significant effect on the increase of non medical and medical staffs’ health literacy.

Hypothesis 2: Education has a significant effect on the increase of non medical and medical staffs’ health literacy.

Hypothesis 3: Physicians more than TV have a significant effect on the increase of non medical and medical staffs’ health literacy.

Hypothesis 4: Internet more than books has a significant effect on the increase of non medical and medical staffs’ health literacy.

Hypothesis 5: Reason to see a doctor for check up more than disease has a significant effect on the increase of non medical and medical staffs’ health literacy.

3. METHODS

Subjects and settings

A cross-sectional survey was performed on employees who were working in hospitals affiliated to Semnan University of Medical Sciences, Iran. The research was performed from April to November 2013. All clinical and non-clinical staff except physicians (n=553) was included in this study.

Data gathering

The questionnaire of “Iranian health literacy measurement” that has been developed by research center for modeling in health of Kerman university of medical sciences was used in this study. It was divided into five areas: 1) demographics, such as gender, age, job, education, job experience and reasons to see a physician; 2) the use of information sources to obtain health information; 3) Hardness and easiness of health materials; 4) Deep understanding and interpretation of health information and 5) Self-assessment of ability to do health procedures. The study subjects’ answers were graded as very low=1, low= 2, somewhat =3, high=4 and very high=5 respectively. Then the questionnaire was piloted on forty medical and non-medical staffs randomly selected from the hospitals. Participants in the pilot study were excluded from the study. Internal consistencies were expressed as Cronbach’s alpha 0.798 for the second area, 0.783 for the third area, 0.715 for the fourth area, 0.726 for the fifth area and 0.801 for the entire questionnaire. Next, further revisions were made and some statements were rephrased. Lastly, the final version of the anonymous questionnaire was distributed among the study subjects who were working in the hospitals by the researcher and they were asked to complete the questionnaire. The questionnaire was delivered to the researcher at most 72 hours later.

Data analysis

To determine the distributions of responses, SPSS was used to perform descriptive statistics. Health literacy status was categorized to two groups: People who had adequate health literacy (4= < mean) and people who had inadequate health literacy (mean>4). Logistic regression was used to investigate effective factors on the study subjects’ health literacy. The significance level was set at P<0.05.

Ethical consideration

First, we obtained ethical approval from the Semnan University of Medical Ethics Committee. Then, we prepared a cover letter describing the purposes of the study. The letter explained that responding to the survey indicated the participants’ consent to take part in the research. It also assured the participants that all responses would be kept confidential.

4. RESULTS

The total response rate for the questionnaire was 70.34%. In total, 389 out of 533 questionnaires were returned. The results indicated that 256 of the participants had adequate health literacy (Table 1). There were significant relationships among the use of internet (P<0.039, CI=95%, Odd’s Ratio= 1.5469), the use of physicians (P<0.001, CI=95%, Odd’s Ratio= 1.5469), and the use of books and journals (P<0.001, CI=95%, Odd’s Ratio= 1.5469).

Table 1. Demographic characteristics *Mean±SD

| Characteristics   |adequate (n=256) | inadequate (n=133) |
|-------------------|-----------------|-------------------|
| N(%)              | N(%)            |
| 117(46)           | 30(22)          |
| 139(54)           | 103(78)         |
| 26.3±4.65         | 27.8±5.86       |
| 4.6±1.216         | 6±2             |
| 156(61)           | 43(32)          |
| 100(39)           | 90(68)          |
| 48(18)            | 38(28)          |
| 170(66)           | 36(27)          |
| 38(16)            | 59(45)          |
| 98(38)            | 42(31)          |
| 158(62)           | 91(69)          |
| 119(46)           | 38(28)          |
| 137(54)           | 95(72)          |
| 65(25)            | 37(28)          |
| 191(75)           | 96(72)          |
| 138(54)           | 76(57)          |
| 118(46)           | 57(43)          |
| 199(78)           | 90(67)          |
| 57(22)            | 43(33)          |
| 156(61)           | 36(27)          |
| 100(39)           | 97(73)          |
| 116(45)           | 86(65)          |
| 140(55)           | 47(35)          |

Table 2. Univariate effects analysis

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Zamir et al’s study showed that media is a determinant of self-reported health status. They found health literacy ap significant to attract the attention of audiences (17). Levin-...more prone to refer to health centers for checkups and more than disease affects (OR 2.980, 95% CI 1.119 to 4.578) on patients in health literacy area (19). This result also suggests a gap between physicians and other employees. It seems that Iranian physicians might not have enough skills and time to transfer adequate health information during clinical visits. This finding draws even more attention to the need for addressing Iranian physicians’ role in health literacy.

5. DISCUSSION
In this study, which was carried out to evaluate factors influencing practitioners’ health literacy of health care organizations, the findings indicate that health literacy is affected (OR 1.966, 95% CI 0.112 to 2.731) by job. This result confirms the hypothesis 1. The studies have shown that clinical staffs had adequate health literacy due to their skills and competencies and they know and understand patients’ health literacy (13, 14). Therefore it is expected that clinical staffs’ attendance in the clinical setting increases the awareness of health-related issues.

In addition, the results of this study show that education significantly affects (OR 3.160, 95% CI 2.254 to 5.218) on practitioners’ health literacy. Morris et al. study have demonstrated an association among health literacy level, education and knowledge (15). Van der Heide et al found that there is a relationship between low education and low self-reported health status. They found health literacy appears to play a role in explaining the underlying mechanism driving the association between low level of education and poor health (16). The hypothesis 2 of this study is accepted by these findings. Therefore It is expected that with the increase in the level of education, the staffs will have higher levels of health literacy.

The results of this study show that the use of TV as an information resource can significantly (OR 1.825, 95% CI 0.635 to 2.899) affects health literacy. It seems, because of the important role of radio and television and non-print sources in informing the population and given the availability of the media and its expansion to various aspects of life, most of the populations have a tendency to use these sources of information. It seem that the ease of access to television channels and due to its efficiency and popularity among the people, television was the greatest source of health information for the study subjects; moreover, documentaries and video reports about health related issues were more successful to attract the attention of audiences (17). Levin-Zamir et al’s study showed that media is a determinant of health behavior and media health literacy promotes health among youth (18). This study finding draws attention to the important role of radio and television for informing people. It seems that, in order to promote healthy behaviors in the community and increase the level of health literacy in all classes of population, it is necessary for the Health Ministry of Iran to increase its cooperation with the national media to prepare programs promoting health and health behavior changes.

The findings show that health literacy is not affected by physicians (OR 0.070, 95% CI 0.042 to 0.116). This result rejects the hypothesis 3. Studies have been shown challenges between health care providers and patients in health literacy area (19). This result also suggests a gap between physicians and other employees. It seems that Iranian physicians might not have enough skills and time to transfer adequate health information during clinical visits. This finding draws even more attention to the need for addressing Iranian physicians’ role in health literacy.

The results of this study show that health literacy is not obviously affected (OR 0.641, 95% CI 0.420 to 0.978) by the use of internet. Although the accessibility to Internet information in the clinical setting reduces the barriers of pursuing answers to questions presented in clinical practice (20); and the access to Internet both at work and at home leads to find it more professionally valuable (21). Internet may not be regarded as an ideal source of clinical information gathering for some people. Because there is this belief that internet sources might not contain reliable clinical information. Also the bad quality of information on the World Wide Web can be another reason for rejecting Internet sources (22). On the other hand, formal limitations are effective so that the access to the Internet and patient data from the same computer is not allowed according to the legal regulations in some of health care organizations (23).

The findings indicate that the use of books and journals significantly affect (OR 5.551, 95% CI 2.125 to 11.352) on health literacy. These results reject the hypothesis 4 of this study. The findings indicated that the study subjects had inclination to use text books and journals. Hider et al’s have indicated that in spite of increasing access to electronic resources, people prefer text resources to electronic resources (24). It seems the information technology infrastructures cannot alone prevent staff’s inclinations to text books and journals. These results suggest that the clinical librarians’ role in hospitals should not be neglected. Hospital librarians’ ability about how to offer mediated database searching, and to prepare and present research-based information to the employees to assist them is very significant (25).

The results show that reason to see a doctor for check up more than disease affects (OR 2.980, 95% CI 1.119 to 4.578) on employees’ health literacy. This result accepts the hypothesis 5. Pearson et al. in their study found that people who had more knowledge about health and their physical condition were more prone to refer to health centers for checkups and visits prior to the onset of diseases (26).

Limitations of the study
It should be noted that the results of this study should be interpreted with caution, because, this study was per-
formed in one city and it cannot be not generalized to all of employees of other hospitals. However, some of the results of this study are consistent with the results of other studies. It seems that further studies are needed to be conducted on this topic to become able to generalize the results to the entire community.

6. CONCLUSION
The results of this study show that, in general, non-medical and medical staffs’ health literacy of hospitals is affected by many factors. The findings indicate media and print information resources more than physicians and electronic information sources affect on the increase of health literacy in health care organizations (Figure 1). Therefore, given the importance of health literacy in promoting health and its impact on health of the community, and also due to the important role of health care workers in the increase of health literacy level in other members of the community, it is better to use other suitable information sources to transfer health information to all individuals in the community. In addition, it is necessary to provide appropriate training materials for the health staff. It should be noted that so far limited training and planning programs have been implemented for the promotion of health literacy among Iranian physicians; hence, because of the important role of physicians in the promotion of health literacy in communities, it is better to train physicians more about the skills required for transferring health concepts.

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CONFLICT OF INTEREST: NONE DECLARED.

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