

# Evaluating Knowledge, Attitude and Practice of Health-Care Workers Regarding Patient Education in Iran

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Received: 11 Aug. 2014; Accepted: 26 Dec. 2014

**Abstract-** The objective of the study was to evaluate the position of patient education measuring knowledge, attitude, and practice (KAP) among health care workers (HCWs). It is also aimed to emphasize the need for a real position for patient education. This survey was performed among a group of HCWs in Iran. The scores had an acceptable level. However, nurses, females and younger people received higher scores. The staff was already aware of patient education necessity and considered it as the duty of all medical team. Often HCWs cannot include patient education in their routine due to time shortage, lack of staff's financial motivation, fatigue, and loads of work, etc. There is still need for a real training in the educational curriculum. Additionally, the various HCWs-related obstacles should be taken into account.

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*Acta Med Iran* 2016;54(1):58-66.

**Keywords:** Patient education; Health-care workers (HCWs); Knowledge; Attitude and practice (KAP); Cross-sectional study

## Introduction

Successful patient education has a remarkable impact on health promotion of patients and the actions advancing it (1). Investment in patient education would be economical (2,3). Good patient education enhances coping, lowers distress, and improves satisfaction with care (4). Information can assist patients in understanding the importance of preventive health actions, considering treatment options, and deciding what interventions might be best and why. Furthermore, information may enhance knowledge about procedures and attenuate procedure-related distress, such as fear and anxiety (5,6).

In an era of increasingly personalized medicine and escalating clinical complexity, the importance of effective communication between the patient and HCWs is greater than ever. Patients should expect an active role and often share responsibility and making care decisions. HCWs, in turn, should respect and support patients, valuing their role and prioritizing their preferences in providing care choices (7).

Based on previous literature, the view of HCWs concerning the quality of patient education is related to

resources and implementation. Adequate resources, like the possibilities for patient education in addition to knowledge, skills, attitudes and command of patient education methods of HCWs (8-11) are vital for the implementation of a good-quality patient education. The possibilities for patient education; sufficient time, facilities, access to material and equipment have an impact on HCW's attitudes towards patient education (12). Knowledge, skills, and attitudes are considered the essential competence areas of HCW's competency requirements and part of their basic professional awareness.

HCWs are required to manage patient education according to a nursing plan. Systematic action demands knowledge of patients' needs, motivation; subjects involved in patient education and patient education methods (13). Attitudes towards the patient education should also be evaluated by health professionals themselves because they do not always reluctant to educate patients (11).

Patient-centricity is the basis for the implementation of good-quality patient education, which consists taking into account the patient's needs for patient education concerning information and support (14) and the

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patient's social factors (2). The prerequisites for patient-centered patient education are that HCWs act in an active (10), goal-oriented and consistent manner in patient education situations (15,16). The interaction between the patient and the HCWs has a major role in patient education (17). Here, interaction refers to situations where the HCWs encourage the patient to participate in the discussion (18), offer the patients a chance to ask questions and give feedback (19).

Patients' needs are variable and specific, suggesting that the best approach is to provide supporting education materials that are complete and well organized, allowing access to what patients want to know when they need to know it (4,20,21). To make decisions confidently, the supplemental information that patients receive must be created with cultural sensitivity and appropriate literacy so that the patient can understand the content.

Findings showed that there are a gap in Iran Ministry of Health and Medical Education (MOHME) hospital standards comparing to the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) for patient and family education (22). Currently, patient education is highly neglected to be included in medical sciences' curriculum in Iran and appears to be only a hidden course in our education health system, though few subjects related to it such as communication skills, included in some curriculums. Nurses, midwives, and nutritionist's bachelor curriculum are the only ones that

received patient education as a brief course or part of a specific course.

In fact, this concept does not have any specific and structured institute or trustees in our health system and the existing activities do not meet the real requirements. As a result, the purpose of the current study was to describe the quality, knowledge and attitude of HCWs around patient education in Iran. Further to emphasize the need of a proper and real position for patient education in our health system.

## Materials and Methods

### Demographic information

The study population was consisted of 79 HCWs participated in The First National Congress on Patient Education held in Imam Hall, Imam Khomeini Hospital Complex, Tehran University of Medical Sciences, Tehran, Iran in November 2013. In this cross-sectional study, the questionnaires were distributed randomly in the break time. The voluntary participants were given enough time to fill in the questionnaires, and the examiner attended all over the process and collected the questionnaires after completion. The demographic characterizations such as age, sex, field and years of experience are given in (Table 1).

**Table 1. Demographic characteristics of the participants**

Subjects	Characteristics	
Age range (year)	25-80	41.8 ± 11 <sup>a</sup>
Working experience range (years)	1-36	14 ± 7.4 <sup>a</sup>
Sex	Male	22 (27.8%)
	Female	57 (72.2%)
	Nurse	50 (63.3%)
	Midwifery	3 (3.8%)
	Pharmacy	2 (2.5%)
	Neurosurgeon	4 (5.1%)
Field	Occupational therapy	1 (1.3%)
	Physiotherapist	2 (2.5%)
	General doctor	5 (6.3%)
	The general surgeon	10 (12.7%)
	Management Training	1 (1.3%)
	Orthopedic	1 (1.3%)

a. Mean ± SD

### Structure and content of knowledge tests

A validated and reliable knowledge, attitude and practice researcher-made questionnaire served as the main research tool. The first part of this self-report quantitative questionnaire inquired the characteristics of

demographic information (Table 1). The second part of the questionnaire contained 16 knowledge, 6 attitude and 2 practice questions. Knowledge questions (KQs) consisted of two four-choice questions and fourteen fixed-choice (Yes-No) questions (Table 2).

**Table 2. Knowledge of the HCWs about patient education**

Questions	Items	Frequency (%)	Correct answer
<b>Which of the followings is not correct?</b>	Recognition of educational needs is part of the patient education processes	3 (3.8)	
	Active participation and repetition lead to better learning skills	2 (2.5)	
	Role playing and group discussions are among teaching methods in changing attitude of the patients and their families	1 (1.3)	
	Threatening words can be used for illiterate or less educated patients and those who do not participate in learning	74 (92.5)	×
	With evaluating the training process, patient education will be finished at the end of the treatment process	1 (1.3)	
<b>Which one is true toward the evaluation?</b>	The evaluation key is the educational objectives	13 (17.1)	
	Evaluation leads to reinforcement of correct behavior and adequacy of training quality of the learners	32 (42.1)	
	All the instance	30 (39.5)	×
<b>Need assessment is to determine educational needs of patient</b>	Yes	54 (65.1)	
<b>Need assessment stage is the result of the obtained information from every individual in the target group</b>	Yes	30 (36.1)	
<b>Individual assessment involves gathering information about the patients, their family and sanitary and social conditions of the disease</b>	Yes	55 (66.3)	
<b>Setting educational objectives based on the final evaluation of the patient</b>	Yes	21 (25.3)	
<b>Evaluation demonstrates the impact of training</b>	Yes	63 (5.9)	×
<b>The distance medical consultation is one of the methods in patient education</b>	Yes	53 (63.9)	×
<b>The main purpose in patient education is to involve people in their own self-care in order to improve the services quality and health level</b>	Yes	62 (74.7)	×
<b>At present, there is no standard for patient education</b>	Yes	33 (39.8)	
<b>Patient's culture has a great impact on learning</b>	Yes	72 (86.7)	×
<b>If training is impossible to the patient or in emergency cases, the patient's attendant should be educated instead</b>	Yes	61 (73.5)	×
<b>Patient education goals should be set based on the identified needs</b>	Yes	53 (63.9)	×
<b>Further exhibition is one of the excellent methods for investigating psychosomatic domain</b>	Yes	25 (30.1)	×
<b>Direct questions can be used to evaluate the emotional domain</b>	Yes	14 (16.9)	
<b>Patient education is one of the important indicators in taking caring quality</b>	Yes	67 (80.7)	×

**Table 3. Attitude of the HCWs about patient education**

Questions	Items	Frequency of answer (%)
<b>In your opinion, what the patient education barriers are? (You can select more than one instance)</b>	Staff's time shortage	66 (80.5)
	Lack of staff's financial motivation for teaching	55 (67.1)
	Lack of patient and his attendant literacy	26 (31.7)
	The high patient load	52 (63.4)
	Staff fatigue	55 (66.3)
<b>In your opinion, whose duty patient education is?</b>	Nurses staff	2 (2.7)
	General practitioner	2 (2.7)
	Any member of the medical team	62 (82.7)
	A trained person in the field of patient education	9 (12)
<b>Training to patient is not my duty Specific individuals should be trained to deliver the education If I do not train some cases to my patients, many complications will emerge for them. I know that my duty even if my service is not recorded anywhere</b>		7 (8.4)
		14 (16.9)
		35 (42.2)
		61 (73.5)

Attitude questions (AQs) also consisted of two four-choice questions and four fixed-choice (Yes-No) questions (Table 3). At the end of AQs, the participants also were asked to suggest other factors as well as the ones mentioned in the choices, optionally.

Practice questions (PQs) included two questions, one fixed-choice (Yes-No) question, one four-choice question as follows:

1. Do you train to your own patients? (Yes/No)
2. If your answer is yes, when do you train to your patients?

Always

If I am not tired

If patient or his attendant ask me to do so

When I realize, if I did not train, it would be dangerous for patients

### Response rate

From the total of 100 distributed questionnaires. A total of 83 questionnaires were returned (response rate of 83%). However, we had to analyze the valid 79 questionnaires.

### Scoring of the questionnaire

The validity of this researcher-made questionnaire was evaluated by Expert Panel. The reliability (internal consistency) was assessed by Cronbach's alpha. The Cronbach's alpha of KQs was 0.71, and the total reliability (knowledge, attitude and practice questions) was 0.62.

The response rates differed by item; hence, the frequency distributions was calculated using the denominator for the individual item. The sum of all correct answers (each scored 1) to the 16 KQs resulted in a continuous variable with a value ranged from 0 to

16 that we calculated them as 0-100.

### Statistical Analysis

The analysis was performed using SPSS version 18.0 (SPSS Inc., Chicago, IL, USA). The comparison of a continuous variable in two categorical groups was done by t-test, and the correlation of two continuous variables was evaluated by Pearson Correlation. The continuous variables were presented as mean±SD (standard deviation). *P*-value less than 0.05 considered statistically significant.

### Results

The total mean knowledge score of the participants was  $57.02 \pm 15.44$ . However, the mean knowledge score in women was significantly higher than men ( $60.9 \pm 12.8$  vs.  $50 \pm 18.2$ ,  $P=0.02$ ). Moreover, the mean knowledge score in nurses was significantly higher than other HCWs ( $60.9 \pm 12.6$  vs.  $51.2 \pm 17.5$ ,  $P=0.02$ ). In addition, there was a significant negative correlation between knowledge score and age ( $r = -0.4$ ,  $P < 0.0001$ ). There was also a non-significant negative correlation between knowledge score and years of work experience ( $r = -0.2$ ,  $P = 0.08$ ).

In our KQs (Table 2), the HCWs were aware not to use threatening words for illiterate or less educated patients and those who do not participate in learning (92.5%) and stated that patient's culture has a great impact on learning (86.7%). They knew that setting educational objectives is not based on the final evaluation of the patient (74.7%). Moreover, they realized that the main purpose in patient education is to involve patients in their own self-care to improve the services quality and health level (74.7%). In addition,

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they were aware that patient's culture has a great impact on learning (86.7%). They understood that if training is impossible to the patient or in emergency cases, the patient's attendant should be educated instead (73.5%). They also knew that direct questions cannot be used to evaluate the emotional domain (83.1%) and patient education is one of the important indicators in taking caring quality (80.7%). However, they wrongly believed that setting educational objectives is based on the final evaluation of the patient (74.7%). Moreover, only 5.9% knew that evaluation demonstrates the impact of training. In addition, the staff thought there is no standard for patient education at present (60.2%). Further, they presumed that direct questions can be used to evaluate the emotional domain (83.1%).

In our AQs (Table 3), HCWs mentioned staff's time shortage (80.5%), lack of staff's financial motivation for teaching (67.1%), staff fatigue (66.3%), and a large number of patients (63.4) as some patient education barriers. Moreover, when the HCWs were asked to mention other factors as patient education barriers rather than those considered in the question, they stated lack of motivation, lack of required skills and training, lack of perception about patient education sensitivity, lack of adequate supervision, lack of patient education standards, lack of patient-care team cooperation, lack of morality, lack of patient education culture or importance of patient education, insufficiency of the staff etc as some other barriers. Also, they believed that training to the patient is the duty of any member in the medical team (82.7%). In fact, only 2.7% considered it as the duty of nurses. In fact, they know the training as a duty even if their service is not recorded anywhere (73.5%). Interestingly, only 8.4% of the HCWs proposed that training to the patient is not their duty. When the HCWs were asked to mention whose duty patient education is rather than those considered in the question, they stated that with entering a patient to the hospital, the patient education initiates and all the staff including hospital security guard, information desk, radiology, laboratory, etc. should participate cooperatively to deliver patient education in different levels. Also, they considered a critical role for the government and the media. They believed that patient attendants and family should participate in this regard as well. They also declared some extra motivations rather than the two mentioned items in delivering patient education. They believed that this was the patient right to know enough about its disease and problem. They know it their occupational, social and faith responsibility. They stated that patient education reduces probable risks and enhances

reciprocal information transfer between patients and personnel. It prevented early referral of the patient and unwanted complications. It will grant quick recovery and decrease medication usage. They knew that the consequence of patient education absence reflects the whole society. However, patient education can lower the economic costs. Therewith, when they educate their patient, they have a sense of personal satisfaction. Likewise, they explained that good patient education means good treatment and good treatment leads both patient and HCWs satisfaction.

In our practice questions (PQs), all the staff claimed that they teach to their own patient (100%) and among them, the majority always do this (84.9%). 9.6% of the staff stated that they educated to their patient only if they realize, if they did not train, it would be dangerous for patients. 4.1% also trained to the patient if there are not tired. Finally, 1.4% of the staff said if the patient or his attendants ask them, they deliver the education.

## Discussion

Today, patient education has not been performed structured and coherently in Iran. The mainspring may be a lack of a specific and obvious correspondence for this critical issue in our health system. In the current study, we aimed to somehow evaluate and reinforce the position of patient education and also study the knowledge of HCWs in our health system.

On the whole, we found that the HCWs acquired acceptable knowledge scores, and they had already perceived the necessity of patient education. We realized that HCWs' attitudes towards patient education were positive, although practically they do not always offer this education when required.

We indicated marked differences comparing our groups. In our survey, gender made a marked difference, and female's scores were significantly higher, and women had a better understanding toward patient education. Moreover, younger HCWs had significantly better scores. Nurses also got higher scores compared to other HCWs. This may be due to the fact that nurses spend more time with the patient, and there is always expected that they offer patient education. Another reason might be the patient education courses they received in their educational curriculum. Nevertheless, the work history demonstrated no marked correlation.

HCWs' beliefs, attitudes, and behaviors can have a major effect on patient participation (22). Consistent with our study, researchers found that nurses put a high priority on patient education and perceived it as an

important part of their professional practice (23,24). Contrary to our study, nurses interviewed by Henderson in 1998 showed an unwillingness to share their decision-making power (25). Many nurses practice almost absolute power and control over patients and consider them unable to make decisions. This traditional perception is a major burden to patient participation (26,27). Another example is that a significant proportion of nursing students do not consider lying to patients as unprofessional behavior (28). Comparably, physicians are reluctant to encourage patient participation because either they refuse to delegate power or control, or they are afraid to lose their identity (29,30,31), even though they may not be openly negative about the issue (29). Moret *et al.*, (32) understood that nurses and physicians did not agree with regard to patient information matters, as nurses considered their role to be more vital than the physicians gave them credit for. However, the finding contrasts with that of Park's (33) study, in which nurses stated that information about medicine and treatment was not their responsibility.

HCWs in the current study admitted the necessity of the education though in practice they do not always perform it. They mentioned time shortage, lack of financial motivation for teaching, the large number of patients and staff fatigue as their patient education barriers.

Similar to present finding HCWs mentioned the lack of time as a factor limiting patient input in health care (34, 30). Although some studies found a medical consultation during which the patient participated in decision making was significantly longer (35), others failed to show this relationship (36,37,38). According to the type of situation, HCWs might allow patient participation to varying degrees. Physicians are more probable to allow participation when dealing with psychosocial rather than somatic complaints. Conversely, patients are less involved when a treatment or diagnostic procedure is carried out (38). Personal beliefs can affect the importance physicians will donate to patient opinion.

Primary care physicians have been stated to allowing more patient participation than specialists (35,39). However, not all (36) studies and cardiologists allow less patient participation than other specialists. Moreover, non-white physicians were less likely to encourage participation, independent of their specialty or the capacity of their practice (35). Contrary to this study, physician sex (40,38,35) and age (40, 41) do not appear to influence patient participation.

We agreed with previous studies that HCWs can be

educated to improve relationships with patients (42,43). Medical students, specialized educators (44), and physicians who have completed their training in general medicine (45), gynecology (37), oncology (46), and pediatrics (47) were all able to improve their attitudes with respect to patient participation through structured training sessions.

However, some obstacles to patient participation are not within the control of either the patient or the HCWs. Patients' desires reflect societal norms and the permissiveness of the health care environment in which they receive treatment (48). If the culture dictates a passive role, a significant proportion of patients is likely not to "want" to participate. Similarly, patient participation is unlikely if it is clear that HCWs are not interested in receiving patient input. As a result, patient participation reflects societal norms and depends on whether the culture of the organization openly supports it (49,50). Given that support from HCWs is vital for success, the first and most important step is to enlist their full and enthusiastic support. A major educational campaign, using articulate patients when possible, may be required to induce physicians and nurses of the value of patient participation.

Numerous patient-related factors showed to influence patient participation must be addressed and overcome. Although they are not modifiable, socio-demographic factors (e.g., age, disease severity, and ethnicity) must also be taken into account. When both HCWs and patient support are secured, positive feedback will emerge from the patients and contribute to the safety of health care. Studies of HCWs' views on patient participation in this area are lacking. There is a need to determine the possibility of redrawing the border between HCW and patient responsibilities without the former considering patient involvement intrusive and to identify the model of patient-physician relationship best suited to achieve this aim (51).

In the current study, we found that patient participation can improve the decision-making and accelerate healing process shortened hospital stays and the care of illnesses. However, many patient and health care worker-related factors can influence its efficacy and implementation. Its use to decrease medical errors and to increase staff adherence with optimal practices is promising and deserves further study. Nevertheless the potential obstacles can be predicted at the patient, HCW, and health care center levels. These findings indicate that patient education is largely well implemented, although the resources need to be developed further.

To conclude, the objective is to help HCWs

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recognize the contribution of patients and their families to the healing process and to be receptive to patient input. Though most HCWs are highly competent in diagnosis and treatment, too few actually educate their patients to manage their condition. Initial training of most health care, especially medical care, providers is based principally on diagnosis and selection of a therapeutic regimen. There may be several reasons for failing to educate patients, such as too little time or lack of awareness of the need to do so and lack of structured patient education training sessions. With including patient education the cost of patient care is reduced and patient satisfaction and life quality improved. The unwanted complication is prevented and patient independence achieved.

The issue of patient education should be incorporated in our formal educational curriculums as a prominent priority. There is a need to further explore different conditions facilitating patient education. A potent expert committee consisting of qualified professionals in medical, clinical and sanitary education in the Ministry of Health and Medical Education should approve operating community-based programs. Supervision also should observe and monitor their correct implementation. Legal support and designated funds for successful implementation of patient education should put aside in our country without affecting the amount of pay cost of patients. Numerous health care worker-related obstacles to patient participation should also be taken into account. Supporting the staff educational function, and providing fundamental resources based on the survey results is suggested. However, continuity of patient education will not achieve unless motivational mechanisms and appropriate supervision are carried out as well. By doing so, we hope to be able to gradually change this passive patient role to an active and collaborative relationship and grant this incontrovertible right to a patient in the right time. As a consequence, we would like to be able to improve quantity and quality of patient education in our health system and transform it from a hidden plane to a serious and apparent subject.

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