

Patient Education in Nursing: Investigation the Role of Individual and Organizational Barriers

¹Mehdi Mirzaei-Alavijeh, ¹Farzad Jalilian, ¹Behzad Karami-Matin, ²Seyyed Nasrollah Hosseini, ³Touraj Ahmadi Jouybari, ⁴Mohammad Mahboubi, ⁵Abbas Firoozabadi

¹Research Center for Environmental Determinants of Health, Kermanshah University of Medical Sciences, Kermanshah, Iran

²Ministry of Health and Medical Education, Tehran, Iran

³Clinical Research Development Center, Imam Khomeini Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran

⁴Abadan School of Medical Sciences, Abadan, Iran

⁵Department of Work and Social Psychology, Maastricht University, Maastricht, Netherlands

Abstract: Patient education can made result in multiple positive outcomes for the patient such as increase of satisfaction, improved life quality, anxiety reduction, reduction of the emergence of disease complications and increase of participation in health care programs. The present study was conducted with the objective of determining the role of personal, organizational and instrumental barriers of patient education in nurses. This cross-sectional study was conducted on 300 nurses in medical-educational hospitals in the city of Kermanshah in the west of Iran, during 2014. The participants were selected using simple random sampling and with probability proportional to size and the information was collected using self-report questionnaire. The participants obtained 78.1, 56.5, 68.1 and 65.5% of the maximum obtainable score in the domains of management, individual and care, patient and their relatives and the overall score of patient education barriers, respectively. Barriers had a statistically significant inverse relationship with age in a way the barriers were reduced with the increase of age ($r = -0.129$, $p = 0.042$). Also, the barriers had a significant statistical relationship with place of service and the means score of the barriers was higher in the nurses in the internal medicine ward ($p < 0.05$). The findings indicated the barriers related to the domain of management obtained higher scores. Therefore, it is recommended that, for improving patient education by the nurses, in addition to emphasis on individual domain, the correction of factors related to the domain of management as the second priority should be done by emphasis on related educational and instrumental strategies.

Key words: Education, nurse, barriers, health, strategies

INTRODUCTION

Patient education is a purposeful, systematic and designed process that, by creating change in the knowledge, attitude and skills of the patient, increases the patient's self-care ability, prevents the emergence of potential complications and ultimately results in the improvement of the health, welfare and life quality in the patient (Marcum *et al.*, 2002; Chiovetti, 2006). Patient education includes all education activities related to the patient who is consisted of medical and health educations and clinical health promotion and it is used for helping the patient make informed decisions regarding the disease and gain self-care skills (Marcum *et al.*, 2002). This process is consisted of different interrelated stages

that should be performed regularly and continuously in order to lead to a favorable learning result in the patient (Wallace and Lennon, 2004). In this regard, it has been suggested that patient education domains are based on training health and preparing the patient to cooperate in the nursing, development and rehabilitation processes (Slusarska *et al.*, 2004) that can result in the strengthening of healthy behavior, change the unhealthy behaviors and lead to health in the individuals in a society (Hoving *et al.*, 2010). Different factors including the principle of prevention over treatment, the importance of shorter hospitalization, quicker discharge from hospital and on the other hand, the increase of disabilities, elderly population and chronic diseases reveal the importance of patient education (Jones *et al.*, 2011). Regarding the

costs of lack of patient education, the results of a study indicated that around 69-100 million US dollars are spent each year in the United States for problems resulted from the lack of patient education and this reveals the significance and necessity of educating patients (Wallace and Lennon, 2004). Also, studies have shown that patient education, by impacting the increase of observance of treatment regimen and acceptance of the recommendations and instructions of medical and health personnel highly helps the creation of an appropriate communication between the nurse and the patient and, on the other hand, results in the increase of patient's satisfaction, proper use of services, increase of care quality and finally, health improvement and more favorable life quality in the patient (Jones *et al.*, 2011). However, despite significant advantages of patient education, there are many barriers in implementing this process. For example, anxiety, inappropriate physical condition, lack of knowledge of the advantages of patient education, inadequate skills of the nurses and other medical personnel, lack of motivation in nurse and environmental and managerial factors have been pointed out to be among the barriers of patient education (Strachan *et al.*, 2012).

Therefore, identification of these factors on one hand (Morowatishaifabad *et al.*, 2015) and develop programs for improving patient education innursing by using effective theory and evidence-based planning frameworks such as intervention mapping approach on other hand, can be highly useful and effective (Kok, 2014; Eldredge *et al.*, 2016). Considering the importance of the issue, the present study was conducted with the objective of determining the patient education barriers from the viewpoints of the nurses working in medical and educational hospitals in the city of Kermanshah.

MATERIALS AND METHODS

This cross-sectional study was conducted among 300 nurses working in medical training hospitals in Kermanshah County, the west of Iran, during 2015. The sample size was calculated at 95% significant level according to the results of a pilot study and a sample of 300 was estimated. Participants were selected through simple random sampling and were asked to complete designed questionnaires; data was gathered accordingly. All samples were justified on goals and information security of study. Removing incomplete questionnaires, then 250 questionnaires were analyzed (respond rate was 83.3%). This study has been approved by the institutional review board at the Kermanshah University of medical sciences (KUMS.REC.1394.260). Only the nurses in

medical-educational hospitals in the city of Kermanshah in the west of Iran were eligible to participate in this study. Furthermore, uncompleted questionnaires as well as unwillingness to participate in study were considered as exclusion criteria. Measurement included two parts and information was gathered as self-reports by participants. Section one was consisted of demographic items including; age (year), gender (male, female), marital status (single, married), education level (BSc, MSc) and job experience (year).

The second section was consisted of items related to patient education barriers. This section was a standard questionnaire that was consisted of 33 items in three sections (management domain was consisted of ten items, for example, "the lack of supervisory and feedback system regarding patient education"; individual and care domain was consisted of sixteen items, for example, "the lack of patient cooperation and his/her inattention to education). The questionnaire items were in Likert-style and with five-point scoring (highly disagree to highly agree). The questionnaire's content validity was confirmed by a group of experts and its reliability was reported to be 0.91 in the study by Dehghani *et al.* (2014). Also, the reliability of the aforementioned questionnaire was obtained as equal to 0.90 in the present study which indicates that the questionnaire has an appropriate reliability.

The data were analyzed by the SPSS Software for windows (ver. 21.0) using correlation as well as t-test and ANOVA at 95% significant level.

RESULTS AND DISCUSSION

Mean age of the subjects was 32.56 (SD: 7.19) years (range, 21-50 years). Also, mean age of the job history among participants was 9.64 (SD: 6.78) years (range, 1-29 years). Almost, 15.2% (38/250) of participants were male and 84.8% (212/250) were female. In addition, 34.8% (87/250) participants were single and 65.2% (163/250) were married. About educational level, 92.8% (232/250) were BSc and 7.2% (18/250) were MSc.

The results related to relative and absolute frequencies of answers to the items of barriers questionnaire are presented for different domains in Table 1. As seen from the findings in Table 1, in the domain of management the items "the lack of proportion between the number of patients and the number of nurses", "the lack of time due to heavy workload" and "the lack of obtaining score by the nurse for patient education" had the highest mean scores. Also, in the individual and care domain the items "the lack of (moral and material) valuing education", "the lack of communication and coordination between nurses in different shifts and as a result, the lack of continuation of

Table 1: Assessment the items of patient education barrier scale among participants

Parameters	Mean	SD
Management domain		
Lack of time due to heavy workload	4.23	0.94
Lack of appropriate educational resources and tools	3.89	0.95
Inappropriate environment for patient education	3.75	1.03
Lack of cooperation of other members of the medical team with the teacher in designing and implementing patient education (manager of nursing services or the physician)	3.62	1.06
Lack of supervisory and feedback systems regarding patient education	3.40	1.10
Lack of proportion between number of patients and the number of nurses	4.28	0.94
Lack of enough attention and support by the managers regarding meeting the patient's educational needs	3.87	1.05
Lack of spending enough for patient education	3.82	1.01
Lack of advantage for the nurse for educating the patient	4.10	1.05
The existence of a doctor racy atmosphere and the reduction of motivation and willingness in the nurse for educating the patient	4.09	1.01
Individual and care domain		
Lack of knowledge on specialized subjects and the diseases in the ward	2.86	1.08
not making education a priority in explaining the duties of the nurses	3.08	1.04
Nurse's lack of interest in patient education	2.88	1.09
Nurse's lack of responsibility in educating the patient	2.62	1.08
Lack of knowledge of one's multiple roles	2.70	1.08
Lack of sameness of sex of the nurse and the patient	2.77	1.15
Nurse's inability to create appropriate communication with the patient and his/her family	2.43	1.09
Nurse's inability to design and implement an educational program that is in proportion to the patient's age, education level and cultural background	2.58	1.05
Lack of planning patient education as a duty in the nurse's agenda	3.06	1.18
Nurse's lack of self-confidence in educating the patient	2.41	1.07
Nurse's lack of knowledge of the patient's educational need	2.53	1.14
the lack of communication and coordination between nurses in different shifts and as a result, the lack of continuation of education	3.19	1.20
Having shame in providing some educations to the patient	2.88	1.18
Inability to communicate with Iranian ethnic groups (Turks, Kurds, Lurs, etc.)	2.99	1.12
the lack of (moral and material) valuing education	3.26	1.19
Lack of knowledge of patient's rights in patient education	2.89	1.15
Patient and Relatives Domain		
Lack of recognition of the role of nurses as teachers by the patients and the society	3.56	1.04
Patient's short hospitalization period in the ward	3.10	1.09
Patient's general condition (unconscious patients, patients in critical conditions and, etc.)	3.46	0.99
Patient's lack of cooperation and his/her inattention to education	3.54	1.06
Patient's lack of physical and mental preparedness during education	3.47	1.04
Patient and his/her family's lack of trust in the nurse as a knowledgeable and skilled person in education	3.24	1.22
Patient's lack of motivation for learning	3.46	1.11

education” and “not making education a priority in explaining the duties of the nurses” obtained the highest mean scores. Then, in the domain of patient and relatives the items “lack of recognition of the role of nurses as teachers by the patients and the society”, “patient’s lack of cooperation and his/her inattention to education” and “patient’s lack of physical and mental preparedness during education” obtained the highest mean scores. Overall mean and standard deviation of the barriers score was 108.14 (17.80) and maximum obtainable barriers score was 65.53% (Table 1).

Table 2 has explored the correlation between different domains of the patient education questionnaire. As seen in the table, there is a significant correlation between all the domains of barriers. The domain of patient and relatives showed a significant correlation with the domain of management ($r = 0.439$) and with individual and care domain ($r = 0.338$). Also, the domain of management was significantly correlated with the individual and care domain ($r = 0.238$). On the other hand, the findings in this table indicated that the domain of management obtained

Table 2: Bivariate correlation analysis between domains of management, individual and care, patient and their relatives

Variables	Mean (SD)	Score		
		range	X ¹	X ²
X ¹ : Management	39.09 (6.69)	10-50	1	
X ² : Individual and care	45.20 (11.30)	16-80	0.238*	1
X ³ : Patient and their relatives	23.85 (5.36)	7-35	0.439*	0.338*

*Correlation is significant at the 0.01 level (2-tailed)

a higher percentage of the maximum obtainable score and the barriers of the domain of management were more from the viewpoints of the nurses (Table 2).

The relationships of sex, marital status, education level and place of service with barriers have been explored in Table 3 and as seen from the findings, the barriers had a statistically significant relationship with the place of service and the barriers mean score was higher in the nurses in the internal medicine ward.

Also, the results indicated that the barriers had a significant inverse relationship with age in a way that the barriers were reduced with the increase of age ($p = 0.042$ and $r = -0.129$). However, there was no significant relationship between years of work experience and

Table 3: Association between background variable with barrier of patient education

Variables	Mean (SD)	p-value
Sex		
Men	107.92 (18.58)	0.932
Women	108.18 (17.70)	
Marital status		
Single	107.81 (15.08)	0.776
Married	108.49 (19.05)	
Education level		
BSc	108.19 (17.86)	0.895
MSc	107.61 (17.55)	
The department of nurses		
Medical	115.05 (16.59)	0.001
Surgery	109.65 (16.85)	
Emergency	106.00 (17.40)	
Critical	104.40 (15.36)	
Other departments	95.60 (27.17)	

barriers; though the barriers are reduced with the increase of work experience, the reduction is not statistically significant ($p = 0.702$ and $t = -0.026$).

Patient education is one of the duties of nurses and is considered as one of the moral responsibility of this job that should be paid attention to. The present study was conducted with the objective of determining patient education barriers among the nurses. The statistical results in the present study indicated that managerial barriers obtained a higher score and individual and care barriers obtained a lower score. In the domain of management the barriers can be due to the lack of proportion between the number of patients and the number of nurses, lack of time due to heavy workload and the lack of considering advantages of the nurses for educating the patients. In this regard, Azimi and Hedayat (2012) in their study showed that the main patient education barrier is the lack of nurses determined for patient education. Also, in some studies factors such as nurses' lack of time, lack of human resource and lack of patient guidance by the medical and health personnel have been pointed out as the main barriers for the implementation of patient education (Dehghani *et al.*, 2014). In this regard, Azizi pointed out the lack of coordination of other members of the medical team, their lack of support, the lack of attention and support by the authorities regarding education and lack of time and cooperation of the patient as the main barriers of patient education process (Azizi, 2005). In a study conducted by Haddad (2011) among the nurses in the Iran it was revealed that, among the four explored domains of patient education barriers, working condition domain obtained the highest mean and the next domains in the ranking were the domains of management, educational skills and nurses' attitudes, respectively.

In the study by Farahani *et al.* (2009) one of the findings of individual and care domain regarding the

patient education barriers was valuing education which is consistent with the findings of the present study. According to the study by Farahani *et al.* (2009) authorities' valuing of education results in the role of education seem valuable. If the authorities and managers of the health system do not value physically and morally, patient education it will decline and will be forgotten. According to Green *et al.* (2003) patient's lack of physical preparedness for education is one of the main barriers for patient education and this is consistent with the findings of the present study. Therefore, based on the findings it is important to first accept the role of nurses as teachers that act for the improvement of health so that they can act in the best possible way for providing services in their specialized fields.

Another finding of the present study is the existence of statistical relationship between age and patient education barriers that indicated that the patient education barriers were reduced with the increase of age. Also, though the barriers were reduced with the increase of work experience, the reduction was not statistically significant. In this regard, it seems that with the increase of age and experience of the individual the attitudes of the explored units regarding patient education are improved. Considering this result, it seems that providing retraining workshops regarding the importance of patient education, especially for nurses at the beginning of their employment, can result in more useful findings.

Finally, based on our findings, no significant statistical difference was seen between sex and barriers; therefore, providing education for both sexes is necessary.

CONCLUSION

Among the explored barriers, the management barriers obtained higher scores and individual barriers and care domain obtained lower scores. Therefore, it is recommended that, for improving patient education by the nurses, in addition to emphasis on individual domain, the correction of factors related to the domain of management as the second priority should be done by emphasis on related educational and instrumental strategies.

ACKNOWLEDGEMENTS

This research is a part of research project supported by research center for environmental determinants of health, Kermanshah University of medical sciences, Kermanshah, Iran. We would like to thank deputy of research of Kermanshah University of medical sciences for financial support of this study.

REFERENCES

- Azimi, A.V. and K. Hedayat, 2012. Barriers and facilitators of patients education: Nurses perspectives. Iran. J. Med. Educ., 11: 620-634.
- Chiovetti, A., 2006. Bridging the gap between health literacy and patient education for people with multiple sclerosis. J. Neurosci. Nurs., 38: 374-374.
- Dehghani, A., M. Orang, F.S. Abdollahi, N.A. Parvianian and M. Vejdani, 2014. Barriers to patient education in clinical care viewpoints of nurses. Iran. J. Med. Educ., 14: 332-341.
- Eldredge, L.K.B., C.M. Markham, G. Kok, R.A. Ruiter and G.S. Parcel, 2016. Planning Health Promotion Programs: An Intervention Mapping Approach. John Wiley and Sons, Hoboken, New Jersey, ISBN: 978-1-119-03549-7, Pages: 622.
- Farahani, M.A., E. Mohammadi, F. Ahmadi, M. Maleki and E. Hajizadeh, 2009. Obstacles of patient education in CCU and post CCU: A grounded theory study. Iran J. Nurs., 22: 55-73.
- Green, M.L., C.P. Gross, W.N. Kernan, J.G. Wong and E.S. Holmboe, 2003. Integrating teaching skills and clinical content in a faculty development workshop. J. Gen. Internal Med., 18: 468-474.
- Haddad, M., 2011. Viewpoints of employed nurses in hospitals of Birjand City regarding existing barriers in patient education. Mod. Care J., 8: 152-158.
- Hoving, C., A. Visser, P.D. Mullen and B. van den Borne, 2010. A history of patient education by health professionals in Europe and North America: From authority to shared decision making education. Patient Educ. Counseling, 78: 275-281.
- Jones, J., K. Schilling and D. Pesut, 2011. Barriers and benefits associated with nurses information seeking related to patient education needs on clinical nursing units. Open Nurs. J., 5: 24-30.
- Kok, G., 2014. A practical guide to effective behavior change: How to apply theory-and evidence-based behavior change methods in an intervention. Eur. Health Psychol., 16: 156-170.
- Marcum, J., M. Ridenour, G. Shaff, M. Hammons and M. Taylor, 2002. A study of professional nurses perceptions of patient education. J. Continuing Educ. Nurs., 33: 112-118.
- Morowatishafabad, M.A., M.J.Z. Sakhvidi, M. Gholianavval, D.M. Boroujeni and M.M. Alavijeh, 2015. Predictors of hepatitis B preventive behavioral intentions in healthcare workers. Safety Health Work, 6: 139-142.
- Shusarska, B., D. Zarzycka, M. Wysokinski and A. Sadurska, 2004. Patient education in nursing: Polish literature condition. Patient Educ. Counseling, 53: 31-40.
- Strachan, P.H., S.D. Laat, S.L. Carroll, L. Schwartz and K. Vaandering *et al.*, 2012. Readability and content of patient education material related to implantable cardioverter defibrillators. J. Cardiovasc. Nurs., 27: 495-504.
- Wallace, L.S. and E.S. Lennon, 2004. American academy of family physicians patient education materials: Can patients read them?. Family Med., 36: 571-574.