

■ Original article

Effect of nursing staff training on respecting the privacy of patients in the emergency department

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Abstract

Background and Purpose: Privacy is one of the most important humanitarian principles, respecting of which is regarded obligatory in the health care and nursing organizations. This study aimed to investigate the effect of nursing staff training on respecting the patient privacy in the emergency department.

Methods: This interventional study was conducted on 400 patients referring to the emergency departments of the Imam Khomeini and Shariati hospitals using a pretest-posttest design with inequivalent control group. For the purpose of the study, the patients of the Imam Khomeini and Shariati hospitals were assigned into the intervention (n=200) and control (n=200) groups, respectively. The data were collected using the privacy baseline questionnaire, which was filled out by the patients in both intervention and control groups. After the implementation of a virtual learning course about respecting patient privacy for 90 clinical staff working in the emergency department of the Imam Khomeini Hospital, the privacy questionnaire was again completed by the patients in both groups. The data were analyzed using descriptive statistics and independent t-test in the SPSS software version 19.

Results: According to the results, there was no statistically significant difference between the two groups in terms of the age, gender, education level, and other demographic information. Furthermore, the two groups were similar regarding the mean scores of patient privacy prior to the intervention. However, after online education, the intervention group showed a significant increase in the mean score of patient privacy as compared to the control group ($P<0.001$).

Conclusion: The findings of the present study revealed that nursing staff virtual training could improve the patient privacy. Therefore, this measure can be applied in the emergency departments as an important step to holistic nursing care.

Keywords: Clinical staff, Education, Emergency department, Privacy

Introduction

Privacy is one of the most important humanitarian principles, respecting of which is regarded obligatory in the health care and nursing organizations (1). The privacy of each individual is a feeling that every adult human being has towards his/her identity, independence, and personal space (2). Nowadays, the patients are well aware of their role in the treatment centers (3). According to Kilpi et al., the patient privacy entails physical, informational, as

well as spiritual and intellectual dimensions (4). The physical privacy of a patient signifies the level of his/her physical availability and accessibility to others (5).

Personal space includes refusing unwanted activities by others like intruding one's physical space through physical presence, touching different parts of the body, observing and monitoring people's performance, and making noise (6).

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The respect for patient informational privacy refers to keeping the individuals' personal data confidential by the practitioner and health care staff during the hospitalization. Patient privacy emphasizes the avoidance of violating the patient's informational privacy (7). The preservation of the patients' personal information is a serious problem in the crowded places, especially emergency departments, due to the physical limitations and large number of patients in this unit (8).

The spiritual and intellectual privacy is another aspect of patient privacy. This kind of privacy points to the patients' perceptions of their involvement degree in clinical decision makings and preservation of cultural values, including their inner feelings, beliefs, as well as cultural and religious activities (5). The maintenance of privacy in some areas is faced with some limitations. In this regard, the emergency departments demands attention in terms of respecting the patient privacy due to thier nature and work processes (9).

According to a large number of studies, patient privacy is not protected properly. Some of the factors associated with privacy violation and turbulence include caring for the appearance of the patients, different departments, use of inappropriate expressions to call the patients, inattentiveness to cover the patients' body, unawareness of the patient diagnosis and type of illness, and avoidance of responding to the patients' inquiries by the treatment team (10).

In Iran, several studies have investigated the issue of respecting the patient rights using quantitative approaches. For instance, in a study conducted by Nayeri and Aghajani, 50.6% of the patients settled in the emergency department reported that their privacy respect was at the weak and average levels, which was indicative of the weakness of the respective system and emergency services in this regard (11). In the field of nursing, sufficient awareness of ethical issues is an indispensable part of making right decision (12). In this regard, the implementation of training course has an effective role in the enhancement of attention and awareness towards ethical issues (13).

In a review performed by Borhani et al., it was demonstrated that training the nurses led to the promotion of their knowledge and ethical sensitivity in the decision making process (14). Furthermore, in a study carried out by Miry, there was no significant relationship between technical knowledge and behavioral sensitivity. In the mentioned study, the researcher underscored the importance of embedding ethics training into the educational planning for the generation and enhancement of sensitivity to ethical issues (15).

Despite the fact that patient privacy is not considered in the emergency departments, no effort has been practiced upon resolving this issue. Regarding this and given the difference in the concept of patient privacy from the patients' and practitioners' perspectives, it is essential to consider the issue of respecting patient privacy. It is crystal clear that supporting patient privacy is accomplished only when the health care providers are equipped with sufficient awareness in this regard. With this background in mind, the present study was conducted to determine the effect of the nursing stuff training on the degree of respect paid to the privacy of the patients admitted to the emergency departments.

Materials and Methods

This interventional study was conducted on 400 patients referring to the emergency departments of the Imam Khomeini and Shariati hospitals using a pretest-posttest design with inequivalent control group. The study population was selected through the convenience sampling method. For the purpose of the study, the patients of the Imam Khomeini and Shariati hospitals were assigned into the intervention (n=200) and control (n=200) groups, respectively.

The inclusion criteria were: 1) age of > 18 years, 2) consciousness, 3) no history of mental illness, and 4) ability to cooperate in responding to the questions. Based on the variance of 31.55 obtained in the study of Nayeri and Aghajani (11), the sample size was estimated as 400 cases with the alpha of 0.5, testing power of 90%, attrition of 20%, and 8

point difference.

The data were collected using the demographic form and physical privacy questionnaire. Additionally, the psychic and emotional information of the patients was recorded. All of these data were completed by the researcher through interviewing and questioning the patients or their family members. The patient privacy questionnaire consists of 41 items covering different aspects of privacy, including physical (13 items), informational (7 items), as well as spiritual and intellectual (21 items) dimensions. This questionnaire is rated on a four-point Likert scale (i.e., yes=1, I do not know=1.5, sometimes=2, and good=3).

However, the sentences related to the concept of respect or the right of privacy were scored in a reverse order. The maximum and minimum scores of this questionnaire are 41 and 123, respectively. According to the obtained results, the privacy of the patients was considered at four levels, including low (less than 79), medium (91-79), relatively good (103-91), and good (more than 103). This questionnaire has been used in several studies, reporting high validity and reliability. Accordingly, Nayeri and Aghajani approved the validity of this instrument for the Iranian population (11).

In the present study, the face and content validities of this tool were confirmed by 10 faculty members. Furthermore, the reliability of this questionnaire was measured by internal reliability, rendering a Cronbach's alpha coefficient of 0.84. The researchers and colleagues were simultaneously present every day from 8 am to 4 pm in the emergency departments of the Imam Khomeini and Shariati hospitals, respectively. After obtaining the informed consent from all the participants and explaining the study objective and procedure, the questionnaires were filled out by the researchers through interviewing. Then, the intervention group received a virtual training course on patient privacy, which was presented through <http://academy.tums.ac.ir>. The patient privacy courses were held for 90 clinical staff working at the emergency department of Imam Khomeini Hospital as an in-

service training over two months. These courses were implemented when it was possible for the staff in terms of having sufficient time. Out of the 90 treatment staff, eight cases were excluded from the study for such reasons as the relocation of the hospital, completion of the staffing plan, or unwillingness.

A month after training, in the experimental and control groups, the questionnaire was simultaneously completed by the patients visiting the emergency departments who were competent enough to enter into the study, and the degree of respecting patient privacy from the patients' point of view was measured.

The data were analyzed using the descriptive (mean, standard deviation, and regulation of relative and absolute frequency) and inferential statistics (Chi-square test, independent t-test, and paired sample t-test) through the SPSS version 19. *P-value* less than 0.05 was considered statistically significant.

Results

According to the results of the present study, the patients in the intervention and control groups were homogeneous in terms of the demographic and hospitalization data (e.g., hospital stay duration and type of room) at the pre- and post-intervention stages (Table 1). The results showed that the majority of the participants received a low level of physical, mental, and psychological privacy.

The results of the independent t-test demonstrated that the two groups had no significant difference in terms of the physical and psychological dimensions of patient privacy at the pre-intervention stage ($P>0.05$; tables 2, 3, 4). However, the intervention group had a higher physical, informational, psychological, and spiritual privacy score, compared to the control group.

Furthermore, there was a significant difference between the mean patient privacy of the intervention and control groups in terms of physical, informational, and psychological dimensions after training ($P<0.05$). The paired sample t-test also

Table 1. Distribution of demographic variables of the study samples

Variables	Pre-intervention		Post-intervention		
	Experimental	Control	Experimental	Control	
Gender	Male	54 (54%)	58 (58%)	53 (53%)	63 (63%)
	Female	46 (46%)	42 (42%)	47 (47%)	37 (37%)
Statistical test	$\chi^2=0.324, P=0.569, df=1$		$\chi^2=2.053, P=0.152, df=1$		
Age	< 30	25 (25%)	24 (24%)	30 (30%)	23 (23%)
	30-45	36 (36%)	31 (31%)	26 (26%)	30 (30%)
	45-60	21 (21%)	24 (24%)	27 (27%)	28 (28%)
	> 60	18 (18%)	21 (21%)	17 (17%)	19 (19%)
Statistical test	$P=0.682, t=-0.411$		$P=0.717, t=-0.364$		
History of hospitalization	Yes	71 (71%)	59 (59%)	70 (70%)	57 (57%)
	No	29 (29%)	41 (41%)	35 (35%)	43 (43%)
Statistical test	$\chi^2=3.165, P=0.075, df=1$		$\chi^2=1.345, P=0.246, df=1$		
Marital status	Single	41 (41%)	46 (46%)	40 (40%)	40 (40%)
	Married	59 (59%)	54 (54%)	60 (60%)	60 (60%)
Statistical test	$\chi^2=1.636, P=0.654, df=3$		$\chi^2=1.389, P=0.708, df=3$		
Education	Elementary	21 (21%)	25 (25%)	20 (20%)	27 (27%)
	Junior high school	18 (18%)	18 (18%)	11 (11%)	19 (19%)
	High school diploma	36 (36%)	31 (31%)	33 (33%)	31 (31%)
	Academic degree	25 (25%)	26 (26%)	36 (36%)	23 (23%)
Statistical test	$\chi^2=2.618, P=0.918, df=7$		$\chi^2=10.111, P=0.182, df=7$		
Religion	Muslim	95 (95%)	94 (94%)	97 (97%)	96 (96%)
	Others	5 (5%)	6 (6%)	3 (3%)	4 (4%)
Statistical test	$\chi^2=0.096, P=0.756, df=1$		$\chi^2=0.521, P=0.47, df=1$		
Length of hospitalization	6-1 h	56 (56%)	50 (50%)	61 (61%)	45 (45%)
	10-24 h	28 (28%)	39 (39%)	30 (30%)	34 (34%)
	> 24 h	16 (16%)	11 (11%)	9 (9%)	21 (21%)
Statistical test	$\chi^2=3.855, P=0.247, df=3$		$\chi^2=4.045, P=0.257, df=3$		
Types of room	Walled room	20 (20%)	15 (15%)	16 (16%)	16 (16%)
	Curtained room	69 (69%)	71 (71%)	76 (76%)	70 (70%)
	Room without curtain	11 (11%)	14 (14%)	8 (8%)	14 (14%)

Table 2. Mean and standard division of physical privacy of the experiment and control groups at the pre- and post-intervention stages

Group	Physical domain		
	Mean and standard division		The result of coupled t
	before	after	
Experiment	27.21±4.23	28.02±4.51	$P=0.03, t=-2.12$
control	27.25±4.19	27.45±4.45	$P=0.11, t=-1.59$
The result of t test	$P=0.74, t=-0.07$	$P=0.04, t=0.35$	

revealed a significant difference in the physical, informational, and psychological dimensions of

patient privacy before and after the intervention ($P<0.05$).

Table 3. Mean and standard division of informational privacy of the experiment and control groups at the pre- and post-intervention stages

Group	Information domain		The result of coupled t
	Mean and standard division		
	before	after	
Experiment	14.60±2.18	15.16±2.18	$P=0.02$, $t=-2.32$
control	14.43±3.20	14.77±3.01	$P=0.66$, $t=-0.43$
The result of t test	$P=0.32$, $t=-0.98$	$P=0.01$, $t=-2.64$	

Table 4. Mean and standard deviation of emotional-psychic privacy of the experiment and control groups at the pre- and post-intervention stages

Privacy Group	Psychic- emotional		The result of coupled t
	Mean and standard division		
	before	after	
Experiment	7.28±41.80	6.41±47.38	$P<0.001$, $t=-8.80$
Control	6.88±39.81	6.88±42.15	$P=0.33$, $t=-0.97$
The result of t test	$P=0.32$, $t=-0.74$	$P<0.001$, $t=-5.83$	

Discussion

The findings of the present study demonstrated that respecting the physical, informational, as well as spiritual and intellectual privacy was at a low level in the majority of the patients. In the study of Nayeri and Aghajani, most of the patients reported an average level of privacy respect. Inconsistent with this study, in the mentioned study, they found that the physical dimension of patient privacy was violated in most of the cases. These physical privacy violence cases included the unnecessary touching of the patients' body by the medical team and sitting on the patients' beds without their permission (16).

In addition, in a study conducted by Woodard et al., it was shown that exposing some parts of the body, sitting without permission on the patients' bed, and entering the room without permission were among the cases that were regarded as the violation of rules, which is in line with the present study (2). Our results were also consistent with the findings of Matiti et al. on the dissatisfaction of a large number of the patients with privacy respect (6). Ghasemi et al. showed that 67.1% of the patients believed that the treatment team often or always respected their physical privacy (17). Sitting on the bed without

the patient's permission can be the result of the inappropriate control of personal feelings (18).

The findings of this study showed that the highest rate of respecting physical privacy before and after the intervention in both groups was related to item 11 of the questionnaire (i.e., my privacy is properly respected during the administration of treatment procedure (pulling a curtain around my bed). In the study of Nayeri and Aghajani, the majority of the patients in areas without movable beds were reported to have a weak level of privacy respect. Additionally, the privacy of the walled rooms was found to be higher than the rooms equipped with movable beds (11).

Likewise, the results of the studies carried out by Karro et al. and Barals et al. showed that the violation of privacy was lower in the rooms equipped with movable beds (19, 20). In addition, in a study performed by Henderson et al. in Australia, the nurses tried to draw the curtain around the patients in order to maintain their physical privacy (21). However, these actions were not performed or only partially carried out under certain circumstances, such as the time of emergency. This issue justifies

the agreement between our findings and those of the mentioned study.

In a qualitative study, the nurses remarked that the patients might not reveal anything. They asserted that it was their responsibility to try to preserve the patient privacy (22). It is clear that pulling the curtain is the simplest job for protecting the personal territory of the patients, which can reduce the patient's anxiety and shame. The respect for personal privacy has been emphasized in the patients' rights (18); nevertheless, little attention has been devoted to this issue (1).

The present study found a significant relationship between the gender and physical privacy. The findings of this study, was consistent with those obtained by Li et al. (11). However, according to Parrott et al., the violation of female privacy was more prevalent than that of the males (23). The discrepancy between the findings of our study and those of the mentioned study was that in the mentioned study, the general patient privacy (i.e., physical, mental, and spiritual intelligence) was measured and compared by gender.

The present study demonstrated that the respect for informational privacy of the patients was at a low level. Likewise, in a study conducted by Rahmani et al., more than half of the patients stated that their privacy of information was always violated (19). In another study conducted on 203 patients in Netherlands, only 30% of the respondents believed that their information was kept confidential in the computer systems of the hospital (4).

In a study performed by Karro et al., overhearing of doctor-patient conversations by other patients was the most prevalent case of privacy violation, revealing the significance of preserving privacy in the emergency department. In the mentioned study, the violation of the informational dimension of patient privacy was more frequent than the other aspects, which is in line with the present study (20). According to the findings of the present study, there was a significant correlation between the respect for informational privacy and the duration of hospitalization.

Therefore, privacy respect for the majority of the patients who were hospitalized for 6-10 h was

at a moderate level. This supports the findings of Aghajani and Davis (16) as well as Karro, who noted that the information disclosure increased with the elevation of hospital stay duration (20). The results of the present study revealed no statistically significant difference between the intervention and control groups in terms of the mean score of the psychological dimension of patient privacy prior to the intervention. Nonetheless, this variable was significantly different between the two groups at the post-intervention stage.

In the study of Nayeri and Aghajani (2010), the most frequent case of the violation of the spiritual and intellectual dimension of privacy was related to the unfamiliarization of the patient at the time of admission with the environment, which is inconsistent with our results. This discrepancy might be due to the changes in the physical structure and processes of the emergency department in 2009 (11). In 2009, Erbil and Korkmaz studied the ethical problems of the nursing students in Turkey, which showed that the clinical staff did not respond appropriately to the patients, which is in line with the results of our study (24).

To the extent of the researchers' knowledge, there is no study investigating the impact of training on respecting patient privacy in Iran. Nonetheless, Nayeri and Aghajani regarded training the clinical staff as a key factor affecting the preservation of the patient privacy (11). In another study, Bazmi et al. emphasized the impact of training on the increase of privacy respect (25).

Lin et al. (2013) conducted a study entitled "building an ethical environment improves patient privacy and satisfaction in the crowded emergency department: a quasi-experimental study". In line with our findings, they reported that training and encouraging the staff to focus on ethical issues regarding the privacy were effective (25). Low et al. in 2007 investigated the respect for privacy aspects of pain in the patient by the clinical staff and concluded that raising awareness in terms of patient privacy increased this trend (1).

The previous studies investigating this issue in Iran were descriptive and used no intervention to eliminate or reduce this dilemma. The use of

virtual training in the present study facilitated the acceleration of training due to the lack of time limits and improvement of the clinical staff motivation. One of the limitations of this study was the use of different study groups at the pre- and post-intervention stages, which was inevitable in the emergency department. However, this issue was partly resolved by the determination of inclusion and exclusion criteria for the selection of groups before and after the intervention.

Furthermore, the accuracy and validity of the patients' responses might have been compromised due to the stress and emotional disturbances induced in the emergency departments. However, it was tried to establish an appropriate communication with the patients by considering their conditions. The findings of this study revealed that training the nursing staff on the physical, informational, and mental privacy of the patients through virtual methods could affect respecting patient privacy, which is in line with the holistic view towards nursing care.

Respecting privacy is a fundamental principle of humanity. Regarding the findings of the present study, the managers and programmers are suggested to facilitate the implementation of educational programs as in-service trainings for all the clinical and nonclinical workers who are in close contact with the patients to promote the privacy of the patients and reduce the side effects of privacy violation.

Conclusion

As the findings of the present study indicated, the majority of the patients reported to receive low level of respect for physical, informational, as well as spiritual and intellectual privacy, which was indicative of the weaknesses of the health care system in this regard. The head of the nurses and educational supervisors are constantly looking for ways to improve the quality of hospital care, while taking into account the conditions of the system.

The results of this study revealed that virtual training of the nursing staff was an effective and inexpensive method for the preservation of patient privacy. Regarding this, the findings of this study

can be helpful in the management system of the hospitals in holding training courses on patient privacy by revealing the significance of the quality of care to the nurses and other clinical staff, increasing their awareness, and promoting the quality of clinical services.

Conflicts of interest

The authors have declared no conflicts of interest.

Authors' contributions

E. Eyni and SA. Hasani contributed to writing the first draft of the manuscript, designing the study, and performing data collection and analysis. P. Fereidouni and SJ. Seyed Andi aided with study conception and design.

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References

1. Low LPL, Lee DTF, Chan AWY. An exploratory study of Chinese older people's perceptions of privacy in residential care homes. *Journal of advanced nursing*. 2007;57(6):605-13.
2. Woogara J. Patients' privacy of the person and human rights. *Nursing ethics*. 273-87;(3)12;2005 .
3. Swan M. Emerging patient-driven health care models: an examination of health social networks, consumer personalized medicine and quantified self-tracking. *International journal of environmental research and public health*. 2009;6(2):492-525.
4. Leino-Kilpi H, Välimäki M, Dassen T, Gasull M,

- Lemonidou C, Scott PA, et al. Perceptions of autonomy, privacy and informed consent in the care of elderly people in five European countries: comparison and implications for the future. *Nursing Ethics*. 2003;10(1):58-66.
5. Serenko N, Fan L. Patients' perceptions of privacy and their outcomes in healthcare. *International Journal of Behavioural and Healthcare Research*. 2013;4(2):101-22.
 6. Matiti MR, Trorey GM. Patients' expectations of the maintenance of their dignity. *Journal of clinical nursing*. 2008;17(20):2709-17.
 7. Charatan F. Bush to drop medical records privacy clause. *BMJ: British Medical Journal*. 2002;324(7341):806.
 8. Bourke J, Wessely S. Confidentiality. *BMJ*. 2008 Apr 19;336(7649):888-91 .PubMed PMID: 18420695. Pubmed Central PMCID: PMC2323098. Epub 2008/04/19. eng.
 9. Moskop JC, Marco CA, Larkin GL, Geiderman JM, Derse AR. From Hippocrates to HIPAA: privacy and confidentiality in emergency medicine-part I: conceptual, moral, and legal foundations. *Annals of emergency medicine*. 2005;45(1):53-9.
 10. Birrell J, Thomas D, Jones CA. Promoting privacy and dignity for older patients in hospital. *Nursing standard*. 2006;20(18):41-6.
 11. Nayeri ND, Aghajani M. Patients' privacy and satisfaction in the emergency department: a descriptive analytical study. *Nursing ethics*. 2010;17(2):167-77.
 12. Lützn K, Blom T, Ewalds-Kvist B, Winch S. Moral stress, moral climate and moral sensitivity among psychiatric professionals. *Nursing Ethics*. 2010;17(2):213-24.
 13. Grady C, Danis M, Soeken KL, O'Donnell P, Taylor C, Farrar A, et al. Does ethics education influence the moral action of practicing nurses and social workers? *The American Journal of Bioethics*. 2008;8(4):4-11.
 14. Borhani F, Alhani F, Mohammadi I, Abbaszadeh A. Development of nursing competencies of professional ethics, needs and challenges in ethics education. *Iranian Journal of Medical Ethics and History*. 2010;2(3).
 15. Myyry L. Component of morality: A professional ethics perspective on moral motivation, moral sensitivity, moral reasoning and related constructs among university students. 2003.
 16. Aghajani M, Dehghannayeri N. The rate of observe" various dimensions of Patients Privacy" by treatment team. *Iranian Journal of Medical Ethics and History of Medicine*. 2009;2(1):59-70.
 17. Ghasemi H, Behnam VH. Evaluation of respect for the territory and the rights of patients in hospitals in Sabzevar. *Journal of Sabzevar University of Medical Sciences*. 1999;5(3):20-9.
 18. Woogara J. Human rights and patients' privacy in UK hospitals. *Nursing Ethics*. 2001;8(3):234-46.
 19. Barlas D, Sama AE, Ward MF, Lesser ML. Comparison of the auditory and visual privacy of emergency department treatment areas with curtains versus those with solid walls. *Annals of emergency medicine*. 2001;38(2):135-9.
 20. Karro J, Dent AW, Farish S. Patient perceptions of privacy infringements in an emergency department. *Emergency Medicine Australasia*. 2005;17(2):117-23.
 21. Henderson A, Van Eps M, Pearson K, James C, Henderson P ,Osborne Y. Maintainance of patients' dignity during hospitalization: Comparison of staff-patient observations and patient feedback through interviews. *International journal of nursing practice*. 2009;15(4):227-30.
 22. Lin YP, Tsai YF. Maintaining patients 'dignity during clinical care: a qualitative interview study. *Journal of advanced nursing*. 2011;67(2):340-8.
 23. Parrott R, Burgoon JK, Burgoon M, LePoire BA. Privacy between physicians and patients: more than a matter of confidentiality. *Social science & medicine*. 2005;29(12):1381-5.
 24. Erdil F, Korkmaz F. Ethical problems observed by student nurses. *Nursing ethics*. 2009;16(5):589-98.
 25. Lin Y-K, Lee W-C, Kuo L-C, Cheng Y-C, Lin C-J, Lin H-L, et al. Building an ethical environment improves patient privacy and satisfaction in the crowded emergency department: a quasi-experimental study. *BMC medical ethics*. 2013;14(1):1.