


A STATISTICAL STUDY ON STRUCTURES OF PATIENT PRIVACY IN IRAN AND THEIR VIOLATIONS

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ABSTRACT. The aim of all the studies that have been conducted on the concept of patient privacy is to improve the standards of care. Personal privacy is a basic human principle and as a fundamental right of every human being, it is an important and necessary requirement that must be observed in health care and nursing organizations. Due to the fear of emerging and contagious diseases and the patients' fear of rejection from their families and in a wider sense of society, they hesitate to express the symptoms of contagious diseases as a social stigma, and this issue itself leads to disruption in It becomes the treatment process of the patients and doubles the importance of preserving the privacy of the patients. Considering the many and abnormal consequences of violating the patient's privacy, such as increasing anxiety, stress, inciting aggressive and violent behaviors, and more importantly, hiding parts of the patient's history or medical history due to the concern of violating their privacy. This research will be conducted with the aim of investigating the level of privacy compliance and its related factors in corona patients of Razi Hospital in Rasht city in 2022.

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Key Words: patient privacy, personal privacy, treatment process, medical history, patient, privacy violation.

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1. INTRODUCTION

In a study conducted in 2022 by Rasti and Jahanpour [14], the views of patients and nurses regarding the privacy of hospitalized patients during nursing care were investigated. The present study was conducted with the aim of investigating the views of patients and nurses regarding the preservation of privacy during nursing care. **Materials and methods:** This research is a cross-sectional descriptive study, for which 127 nurses and 384 patients who met the necessary characteristics to be included in the study were selected using random sampling. The data collection tool was a questionnaire. Data analysis was done with the help of SPSS 24 statistical software, using descriptive statistics and inferential statistics (t-test and Anova). **Findings:** The results of the study showed that the mean score of nurses' and patients' views on the human realm. There was a significant difference ($p < 0.05$). From the point of view of nurses and patients, the level of respect for human territory and personal space was average. Also, there was a significant statistical relationship between the nurses' point of view and the variables of gender, educational qualification, and the patients' point of view, and the variables of education level and place of residence. **Conclusion:** Since the level of respect for patients' privacy was average from the point of view of nurses and patients, therefore it should be. In order to increase the trust of patients and improve the services provided, more attention should be paid to respecting the privacy of patients [14]. In 2020, DePuccio et al. conducted a study in the United States entitled "Patients' views on privacy and security of medical records: the consequences of hiding information during the COVID-19 pandemic [9].

In a study conducted in 2020 by Tehrani et al., the design and psychometrics of the Iranian version of the instrument for measuring the privacy of hospitalized patients were discussed. In this study, which was a sequential exploratory combined study of the instrument-making type, the concept of inpatient privacy was first defined using the hybrid model of conceptual analysis [22, 26].

In a study conducted by Harorani et al. to investigate the level of respect for the privacy of patients admitted to the emergency department

of Arak University of Medical Sciences teaching hospitals, in a cross-sectional study of 300 patients admitted to the emergency department by a valid and reliable questionnaire, physical dimensions were maintained, psycho-social and information privacy of patients were examined. Based on the findings of the current research, it seems that the level of respect for patients' privacy from their point of view by the medical personnel of the studied centers is weak [11].

In a study conducted in 2007 in Iran. In three emergency departments of Tehran hospitals, 360 patients admitted to the emergency department were asked about their privacy through a patient satisfaction questionnaire. In this study, it was stated that due to the fact that the privacy and satisfaction of most of the patients hospitalized in the emergency departments was not at the desired level, therefore, the special attention of the nursing and medical officials and the ward staff to plan and implement the necessary measures to properly respect the privacy and ensuring the satisfaction of patients attracts [22].

In Iran, the concept of privacy is recognized as one of the patient's rights, and attention has been paid to it in the formulation of the patient's rights [10, 20].

2. STATEMENT OF THE PROBLEM

One of the psychological and social consequences of contracting some diseases, especially infectious diseases, in all societies and in these difficult days of the spread of the coronavirus, is the patient's fear of social reactions, the stigma of the disease and being a transmission agent, which is due to the heavy attack of this disease. This importance has not been paid attention to in different aspects of society. The current outbreak of the Covid-19 disease has caused stigma and discriminatory social behaviors against carriers and infected people. Also, social stigma can cause behavioral and psychological disorders and have a negative impact on patients, doctors, nurses and the patient's family. People's misconceptions, the use of words with negative connotations, the dissemination of false information and misinterpretation according to experts are among the causes and factors. It creates social stigma [12]. Social stigma in the field of health is the negative association of people with a person or a group of people who share certain characteristics of a certain disease or have this disease [23, 28].

This issue may lead to loss of social status due to the association of perceptions with a specific disease [23, 29]. Isolation-oriented treatment

can have a negative effect on people suffering from this disease as well as their caregivers, family, friends and social connections, and even people who are not suffering from this disease but have common characteristics and symptoms with this disease such as cough or fever, may suffer from this stigma.

In this situation, the fear and worry of contracting this disease causes mental disorders in neuropsychiatric patients, which should be taken into consideration. Finally, the collection of statements is in favor of the problem that people suffering from or suspected of suffering from various causes such as social stigma, rejection by relatives and in the broader sense of society, as well as revealing the history of illness and current illness and lack of privacy. Privately, they refrain from expressing the symptoms and suffering from the disease, and as a result, they lead to a delay in the treatment, the progress of the disease, and an increase in its prevalence.

Personal privacy is a basic human principle and one of the fundamental rights of every human being, it is an important and necessary requirement that must be observed in health care and nursing organizations [23, 28]. Respecting patients' privacy is an essential factor in creating patient-centered, individualistic and ethical care. This process includes protecting the moral integrity of patients and the treatment team. Regardless of the situation and health status, patients have expectations for their privacy. In the discussion of patients' rights and nursing care of patients, personal privacy has been emphasized a lot by thinkers, and the establishment of ethical laws in this field confirms this. The privacy of a patient has various physical, psychological and information dimensions [28]. Physical privacy includes a certain area that separates a person from others, which generally includes the patient's body and the physical environment around him. Psychosocial privacy includes efforts to control the input and output of values, social connections, and the ability to make decisions and choices without interference from others. Information privacy determines the time and limits of other people's access to a person's personal information and information related to his current illness or his medical records [5]. Everyone's privacy is a feeling that every adult has towards his identity, independence and personal space. In particular, patients need to protect their privacy, which compliance, especially by health care workers, makes them feel safe and satisfied [17, 18]. For example, knocking on the door when entering the patient's room is a sign of support and maintaining the privacy of the patient and

not using unnecessary physical touch is a factor to protect the privacy of the patient. Respecting culture, respecting values and norms, being cared for by people of the same sex, are among the rights that seek peace and mental and spiritual comfort of patients and are among the primary responsibilities of clinical nurses (29). The consequences of violating patient privacy are many and unpleasant. Some patients hide parts of their history or medical history for fear of violating their privacy (14,37). Failure to respect privacy increases anxiety, stress, and provokes aggressive and violent behavior in people. In addition to irreparable damage to the patient, violating the patient's privacy affects the entire health system. Since a person who is admitted to the hospital is not able to control his privacy, it becomes more important to respect his privacy on the part of occupational therapy [20, 16]. Respecting patients' privacy is especially important in emerging diseases. The term emerging diseases refers to diseases that are caused by new unknown infectious agents or by known infectious agents that have spread geographically or have undergone drug resistance and are increasing in prevalence [27]. Corona virus disease (corona virus disease) or COVID-19 is an acute respiratory disease that is closely related to SARS coronavirus [13] and its initial symptoms include pneumonia, fever, muscle pains and fatigue [7]. According to the statistics of the World Health Organization, the death rate and disease table of COVID-19 was equal to 15.9% [1]. The outbreak of COVID-19 in Wuhan, China and its spread in all countries of the world in the past few months, has drawn the attention of the world community and has resulted in numerous social, economic, psychological and political consequences for the general public (39-43). When people are infected with emerging diseases like covid-19, they are limited by relatives and relatives, near or far, and in the wider sense of society. These pervasive effects of people may be associated with the marginalization of affected people, which leads to discrimination and limited access to health services, education and social programs, and is considered one of the risk factors for respecting the rights of patients. Therefore, the medical staff, especially doctors and nurses, are required to protect the rights of the client and prevent his harm, both material and non-material. As health professionals, they have a moral duty to defend the rights of their patients [22].

3. RESEARCH QUESTIONS AND HYPOTHESES

1. What is the score of respecting privacy in the human domain of corona patients?
2. What is the privacy score in the area of personal space?
3. What is the overall privacy score?
4. What is the distribution of the frequency of privacy compliance in the area of human territory?
5. What is the distribution of the frequency of privacy in the area of personal space?
6. What is the frequency distribution of privacy compliance in general?

4. POPULATION OF STUDY

Corona patients hospitalized in Building No. 4 (department reserved for COVID-19 patients) of Razi Hospital in 2022.

5. SAMPLING METHOD AND SAMPLE SIZE

The required sample size to investigate the privacy of patients with Covid 19 hospitalized in Razi hospital with 95% confidence and considering the error limit of estimating a score based on the mean and standard deviation of the personal space area score was determined at least 145 people (6).

$$n \geq \frac{z^2 \frac{\alpha}{1-\frac{\alpha}{2}} \times (sd)^2}{d^2} = \frac{1.96^2 + 6.15^2}{1} \approx 145$$

The sampling method of this study was consecutive sampling. In this way, based on the gradual referrals of the patients admitted to the Covid department of Razi Hospital, the privacy of the patients was examined based on the study questionnaire.

6. DATA ANALYSIS

According to the information in Table 1, the mean and standard deviation of the age of the patients is 54 ± 14 years, the youngest sample was 26 years old and the largest was 84 years old. The majority of the samples were in the age group above 50 years (62%). In terms of gender, the majority were male (66.2%), and in terms of marriage, the majority were married (81.4%), and in terms of education level, the majority of

patients (71.7%) had a diploma or a diploma. The occupation of most of the patients was not related to medicine. The average and standard deviation of the patients' hospitalization period was 3 ± 5 , the minimum hospitalization period was 1 and the maximum was 14 days. The majority were hospitalized for 3 to 4 days (49.7%). About 66.2% of the patients had a history of hospitalization and most of them lived in the city (79.3%).

TABLE 1. Personal and social characteristics of the studied patients.

		Number	Percent	Mean	Standard Deviation	Min	Max
Ages categories	Under 50	55	37.9%				
	50 – 59	38	26.2%				
	60 – 69	30	20.7%				
	Above 70	22	15.2%				
Age				54	14	26	84
Gender	Man	96	66.2%				
	Woman	49	33.8%				
Marital status	Single	27	18.6%				
	Married	118	81.4%				
Education	Diploma and under it	104	71.7%				
	Bachelor and Master	41	28.3%				
	PhD and above it	0	0.0%				
Employment status	unemployed	38	38%				
	housewife	26	26%				
	non-medical job	70	48.3%				
	Medical related job	11	7.6%				
Hospitalization period							
Length of hospitalization	1-2 day(s)	27	18.6%	5	3	1	14
	3-5 days	72	49.7%				
	More than 5 days	46	31.7%				
Hospitalization history	No	49	33.8%				
	Yes	96	66.2%				
Place of life	Village	115	79.3%				
	City	30	20.7%				
	Total	145	100%				

Based on the information in Tables 2 and 3, which deals with how patients answered each and every question regarding privacy in the human domain, the lowest mean and median ranking of privacy in the human domain is respectively related to question 3 "to the explanation to the patients before from performing care procedures" and question 2 "introducing yourself to patients before performing care procedures"

and question 7 "creating a private environment during examination, injection and...".

TABLE 2. How the studied patients answered the questions regarding privacy in the human realm

		Never	Sometimes	Most cases	All cases	Total
Guiding the patient in the department and familiarizing him/her with different parts	Number	11	15	88	15	145
	Percent	7.6%	10.3%	60.7%	21.4%	100%
Introducing yourself to patients before performing care procedures	Number	71	38	36	0	145
	Percent	49.0%	26.2%	24.8%	0.0%	100%
Explanation to patients before performing care procedures	Number	63	76	6	0	145
	Percent	43.4%	52.4%	4.1%	0.0%	100%
Correct and appropriate answers to patients' questions	Number	1	36	93	15	145
	Percent	0.7%	24.8%	64.1%	10.3%	100%
Complete freedom for patients to answer questions	Number	1	125	19	0	145
	Percent	0.7%	86.2%	13.1%	0.0%	100%
Entering the patient's room without knocking	Number	0	70	75	0	145
	Percent	0.0%	48.3%	51.7%	0.0%	100%
Creating a private environment during examination, injection and...	Number	6	139	0	0	145
	Percent	4.1%	95.9%	0.0%	0.0%	100%
Caring by a nurse of the same sex in the operating room	Number	13	130	2	0	145
	Percent	9.0%	89.7%	1.4%	0.0%	100%
Keeping the lights on at night and preventing the patients from sleeping normally	Number	99	26	20	0	145
	Percent	68.3%	17.9%	13.8%	0.0%	100%
The presence of noise in the ward and preventing the normal sleep of patients	Number	90	40	7	8	145
	Percent	62.1%	27.6%	4.8%	5.5%	100%
Moving chairs or other items from the patient's room without permission	Number	119	20	6	0	145
	Percent	82.1%	13.8%	4.1%	0.0%	100%
Moving the bed while the client is lying on the bed	Number	123	22	0	0	145
	Percent	84.8%	15.2%	0.0%	0.0%	100%

TABLE 3. Statistical indicators of the score of privacy compliance questions in the field of human domain.

	Mean	Standard Deviation	Median
Guiding the patient in the department and familiarizing him/her with different parts s	1.96	0.79	2.00
Introducing yourself to patients before performing care procedures	0.76	0.83	1.00
Explanation to patients before performing care procedures	0.61	0.57	1.00
Correct and appropriate answers to patients' questions	1.84	0.60	2.00
Complete freedom for patients to answer questions	1.12	0.35	1.00
Entering the patient's room without knocking	1.48	0.50	1.00
Creating a private environment during examination, injection and...	0.96	0.20	1.00
Caring by a nurse of the same sex in the operating room	0.92	0.31	1.00
Keeping the lights on at night and preventing the patients from sleeping normally	2.54	0.73	3.00
The presence of noise in the ward and preventing the normal sleep of patients	2.46	0.83	3.00
Moving chairs or other items from the patient's room without permission	2.78	0.51	3.00
Moving the bed while the client is lying on the bed.	2.85	0.36	3.00

Based on the information in Tables 4 and 5, which deals with how patients answered each and every question regarding privacy in the human domain, the lowest mean and median ranking of privacy in the human domain is respectively related to question 11, "calling patients by bed number" and question 15 "psychological support for patients when they are afraid" and question 14 "attention to religious and belief principles".

TABLE 4. How the studied patients answered the questions regarding privacy in the area of personal space

		Never	Sometimes	Most cases	All cases	Total
Asking very private questions	Number	116	24	5	0	145
	Percent	80.0%	16.6%	3.4%	0.0%	100%
Disrespect for patients' equipment	Number	125	20	0	0	145
	Percent	86.2%	13.8%	0.0%	0.0%	100%
Staff sitting on patients' beds	Number	123	22	0	0	145
	Percent	84.8%	15.2%	0.0%	0.0%	100%
Sudden awakening of patients	Number	117	22	6	0	145
	Percent	80.7%	15.2%	4.1%	0.0%	100%
Ignoring the peace and quiet of patients	Number	90	38	14	3	145
	Percent	62.1%	26.2%	9.7%	2.1%	100%
Hasty and careless treatment	Number	90	39	16	0	145
	Percent	62.1%	26.9%	11.0%	0.0%	100%
Treatment in a harsh and impolite manner	Number	115	27	3	0	145
	Percent	79.3%	18.6%	2.1%	0.0%	100%
Getting too close to the patient	Number	1	94	49	1	145
	Percent	0.7%	64.8%	33.8%	0.7%	100%
Maintain patient coverage as much as possible	Number	1	6	14	124	145
	Percent	0.7%	4.1%	9.7%	85.5%	100%
Looking directly into the eyes of patients	Number	97	27	21	0	145
	Percent	66.9%	18.6%	14.5%	0.0%	100%
Calling patients by bed number	Number	21	124	0	0	145
	Percent	14.5%	85.5%	0.0%	0.0%	100%
Disclosing private and confidential information	Number	119	21	5	0	145
	Percent	82.1%	14.5%	3.4%	0.0%	100%
Disclosure of client information in front of others	Number	123	17	5	0	145
	Percent	84.8%	11.7%	3.4%	0.0%	100%
Attention to religious and belief principles	Number	15	130	0	0	145
	Percent	10.3%	89.7%	0.0%	0.0%	100%
Psychological support for patients when they are afraid	Number	21	124	0	0	145
	Percent	14.5%	89.7%	0.0%	0.0%	100%
Keeping secrets and patient information in the context of paying attention to patients' privacy	Number	10	15	69	51	145
	Percent	6.9%	10.3%	47.6%	35.2%	100%
Respecting the privacy of patients during discharge	Number	13	18	44	70	145
	Percent	9.0%	12.4%	30.3%	48.3%	100%
Access to the phone or cell phone if necessary	Number	21	74	39	11	145
	Percent	14.5%	51.0%	26.9%	7.6%	100%

Based on the information in Table 6, in general, the privacy situation has been good (57.2%), especially the privacy situation in the area of personal space has been good in 95.2%, with a 95% confidence interval for generalization to society equal to 97.8%-90.8%. However, privacy in the human domain was good only in 10.3% of cases (95% CI: 6.2% - 16.1%).

Based on the information in Table 7, the average privacy score from the range of 0-90, the average score that can be obtained is equal to 60.05 (higher than the average), and this average in the area of personal space from the range of 0-54 is higher than the average (average equal to 39.76) However, the average score in the area of human territory was 0-36 in the average range (mean equal to 20.29) see figure 1 .

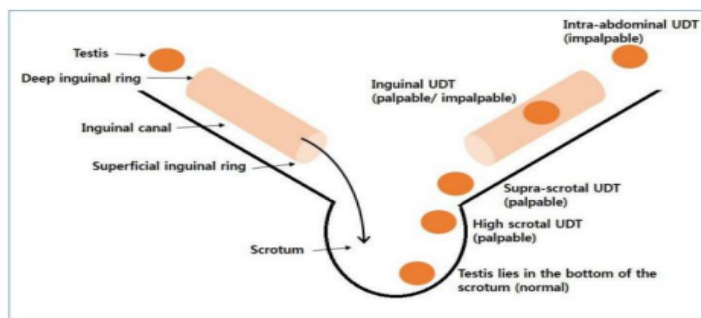


Figure 1: Testicular condition due to testicular descent

FIGURE 1. The graph of the distribution of the frequency of privacy in the area of human territory, personal space and the whole

7. RESULTS AND DISCUSSION

The results of this study showed that getting too close to the patient by the treatment staff happened sometimes in 64.8% cases and often in 33.8% cases. Also, staff sitting on patients' beds has never happened in 86.8% of patients. Aghajani [3] and colleagues reported in their study that unnecessary touching of patients' bodies and sitting on the patient's bed without the permission of the clinical staff happened in approximately 10% of patients.

According to the results of the present study, the preservation of patient coverage as much as possible was observed in 85.5% of cases. Meanwhile, in the study of Esfahani et al., the lowest level of compliance in the dimensions of personal territory from the patients' point of view was related to keeping the patients covered as much as possible. This finding was consistent with the results of the Azadi [2] and Sabzvari et al. [25] studies.

In the present study, although no significant difference was observed between the respect for privacy in the area of human territory, personal space and the whole in terms of the residence of the patients, a larger statistical population is needed to determine how the residence of the patients is related to the respect for privacy.

According to 75% of patients, "introducing personnel to patients before performing care procedures" was not a favorable situation (never and sometimes). The reason that can be mentioned for not introducing a number of employees before providing care to patients is having labels with the last name of the nurse on it. These labels may cause some employees to not need to introduce themselves, but in any case, this is not a convincing reason because among the patients there are people who are illiterate, and on the other hand, the introduction of the employees is more comfortable and friendly. creates and increases patients' trust in nurses. Regarding getting permission before entering the patient's room, it can be said that due to reasons such as the large number of beds in a room during the Covid era and taking care of each patient, it limits the possibility of knocking on the door and asking for permission for nurses. Among the other cases that have been assigned a lower level of compliance, we can mention explaining to patients before performing care methods, while the need to provide adequate explanations to the patient before performing any action has been emphasized, and It is the right of every individual to know why information is being collected and how this information is being used. Failure to create a private environment while providing care is another case that is less respected from the point of view of employees and patients. While respecting the human realm is one of the care and treatment practices that have been neglected. According to the results of the present study, 89.7% of patients reported that care was provided by same-sex nurses in the operating room. Perhaps the reason for this can be considered the lack of same-sex staff needed to provide care in the operating room, which inevitably uses non-same-sex staff. Joolae et al. have listed

the category of staff shortage as one of the important obstacles in not implementing and respecting the patient's rights [15]. At the time of providing care, patients tend to have nurses of their own gender, and it is very problematic for female patients if this care is provided by male medical personnel, especially young men. According to religious and Islamic beliefs, medical staff should pay special attention to this point. The provision of care by people of the same sex will bring peace and mental comfort to the patients. Failure to pay attention to this issue, in addition to serious injuries to the patient, will have destructive effects on the health and treatment system. Another case of non-compliance was "calling patients by bed number instead of name". Based on his results regarding the privacy of patients, the plaintiff believes that one of the important factors that are effective in creating patients' satisfaction is the amount of attention and respect that the treatment department staff should have towards the territory of the patients [4], so It is necessary for the staff to respect the patients and call them by their family name. In the field of "revealing private and confidential information" and "revealing client information in front of others", our study showed favorable results. Similar to our study, the findings regarding confidentiality and privacy of patients' information in Parsapoor et al.'s study indicated the level of good adherence to this axis from the patients' point of view [24]. However, the findings of many researchers, including Baillie, indicate that most patients mention many problems in the field of confidentiality and maintaining their information and often witness the disclosure of their secrets by nurses [4] and this is while in the study Manoukian et al. One of the important aspects of maintaining the patient's dignity, which has been emphasized in the statements of the participants, is confidentiality and keeping the patient's secrets [19]; Because the subject of patient privacy and information privacy is one of the accepted principles among patients and health and medical service providers, and for this reason, patients tell doctors about issues and topics that they hide even from their closest people. Also, today, due to the progress in the field of technology, the need to pay attention to the private territory of people and confidentiality is felt more, and not paying attention to this issue, in addition to causing harm to the patient, will also have adverse effects on the care system.

The findings of the study in the field of patient characteristics showed an inverse and significant relationship between the level of respect for privacy and the age of the studied patients; So that the age group of

60-69 and 70 years and above have the lowest average privacy in the human realm. That is, as the patients got older, they understood less privacy.

According to the results of the present study, a significant relationship was found between the level of privacy compliance and marital status; So that the level of privacy was reported higher in single patients. This can be due to the greater sensitivity of married people to respecting their privacy.

According to the results of the present study, there was no significant difference in the average score of privacy compliance in the area of human domain, personal space, and overall, according to gender. Contrary to our results, in the descriptive and analytical study in 2015, there was a significant relationship between the gender of patients and the degree of respect for privacy in such a way that a higher percentage of women mentioned not respecting physical privacy. Also, Azadi [2] and colleagues showed that most women were in a bad situation in terms of preserving their privacy. They demanded the full implementation of the medical affairs compliance plan with the standards of the Holy Sharia by the medical staff.

The results of this study showed that from the patients' point of view, the level of respect for human territory and personal space was acceptable. Nevertheless, it is necessary to use measures such as holding educational workshops in order to preserve and respect the personal and private privacy of patients for medical staff in medical and paramedical schools. This research, with a quantitative approach, identified the current status of patient privacy in teaching hospitals and provided valuable information to the policy makers and managers of the country's health system, so it is suggested that other researchers use a qualitative approach to investigate the factors affecting the increase The extent to which patients' privacy is respected in the country's hospitals.

REFERENCES

- [1] FB. Ahmad, JA. Cisewski, A. Minio and RN. Anderson, Provisional mortality dataunited states, *Morb Mortal Wkly Rep*, 70(14)(2021), 519.
- [2] F. Azadi, Assessment of woman attitude towards own personal privacy in selected hospitals of Tehran medical university. In: Abstract of the tenth meeting of the Asian Bioethics and the fourth meeting of the AsianPacific UNESCO in the field of ethics, (2008).

- [3] M. Aghajani, Protecting Patients Privacy by Medical Team and Its Relation to Patients Satisfaction, *Hayat*, 16(1)(2010).
- [4] L. Baillie, Patient dignity in an acute hospital setting: a case study, *Int. J. Nurs. Stud.*, 46(1)(2009), 2337.
- [5] J. Chalmers and R. Muir, Patient privacy and confidentiality: The debate goes on; the issues are complex, but a consensus is emerging, *British Medical Journal Publishing Group*, 326(2003), 7257266.
- [6] B. Dadkhah, MA. Mohammadi and N. Taghavi, The respect to territory and rights of patients in hospitals in Ardabil, *J. Nurs. Midwifery*, 9(2)(2004), 37.
- [7] SJ. Daniel, Education and the COVID-19 pandemic, *Prospects*, 49(1)(2020), 9196.
- [8] F. Dehghani, M. Abbasinia, A. Heidari, N. Mohammad Salehi, F. Firoozi and M. Shakeri, Patients View About The Protection Of Privacy By Healthcare Practitioners In Shahid Beheshti Hospital, *Iran J. Nursing*, **28**(98) (2016), 5866.
- [9] MJ. DePuccio, G. Di Tosto, DM. Walker and AS. McAlearney, Patients perceptions about medical record privacy and security: Implications for withholding of information during the COVID-19 pandemic, *J. Gen. Intern. Med.*, 35(31)(2020), 2225.
- [10] R. Esmalipour and P. Salari, Confidentiality in Pharmacy Practice, *Iran J. Med. Ethics Hist. Med.*, **9**(4) (2016), 6880.
- [11] M. Harorani, A. Pakniat, A. Jadid , H. Sadeghi, P. Varvanifarahani and M. Golitaleb, The Extent of Maintaining the Privacy of Patients Hospitalized in Emergency Departments of Hospitals Affiliated with Arak University of Medical Sciences; a Cross-sectional Study, *Iran J. Emerg. Med.*, 4(4) (2017), 15863.
- [12] M. Heidari, M. Anoosheh, TA. Armaki and E. Mahmodi, The Process of Patients Privacy: A Grounded Theory, *J. Shahid Sadougi Univ. Med. Sci. and Healthcare Services*, 19(580)(2012), 644-654.
- [13] M. Ghafourifard, The promotion of virtual education in Iran: The potential which turned into reality by Coronavirus, *Iran J. Med. Educ.*, 20(2020), 3334.
- [14] F. Jahanpour and R. Rasti, Viewpoints of nurses and patients on paying respect to the privacy of patients in care, *J. Maz. Univ. Med. Sci.*, **24** (111) (2014), 3442.
- [15] S. Joolaei, V. Tschudin, A. NikbakhtNasrabadi and Z. ParsaYekta, Factors affecting patients rights practice: the lived experiences of Iranian nurses and physicians, *Int. Nurs. Rev.*, 55(1)(2008), 5561.
- [16] H. Leino-Kilpi, M. Vlimki, M. Arndt, T. Dassen, M. Gasull, C. Lemonidou, P.A. Scott, G. Bansemir, E. Cabrera, H. Papaevangelou and J. McParland, *Patient's autonomy, privacy and informed consent*, IOS Press, (2000).
- [17] H. Leino-Kilpi, M. Vlimki, T. Dassen, M. Gasull, C. Lemonidou, A. Scott et al, *Privacy: a review of the literature*, *Int. J. Nurs. Stud.*, 38(6) (2001), 663671.
- [18] HA. Malcolm, Does privacy matter? Former patients discuss their perceptions of privacy in shared hospital rooms, *Nurs Ethics*, 12(2)(2005), 15666.
- [19] A. Manookian, MA. Cheraghi, AN. Nasrabadi, H. Peiravi and M. Shali, Nurses lived experiences of preservation of patients dignity, *J. Med. Ethics Hist. Med.*, 7(1)(2014), 22-33.

- [20] M. Mashoufi, F. Amani, K. Rostami and A. Mardi, Evaluating information record in the Ardabil medical sciences university, *J. Ardabil Univ. Med. Sci.*, **4**(1) (2004), 4349.
- [21] ND. Nayeri and M. Aghajani, Patients privacy and satisfaction in the emergency department: a descriptive analytical study, *Nurs Ethics*, **17**(2)(2010), 16777.
- [22] ND. Nayeri, T. Taghavi and M. Shali, Ethical challenges in the care of emerging diseases: A systematic literature review, *Bioeth J.*, **7**(2017), 8596.
- [23] L. Ohno-Machado, PSP. Silveira and S. Vinterbo, Protecting patient privacy by quantifiable control of disclosures in disseminated databases, *Int. J. Med. Inform.*, **73**(78)(2004), 599606.
- [24] A. Parsapoor, A. Bagheri and B. Larijani, Patients rights charter in Iran, *Acta Med. Iran*, (2014), 2428.
- [25] S. Sabzvari, N. Kohan, N. Nakai and M. Koha, The patients, attitude regarding to ones privacy in medical surgical wards in Kerman medical university, *J. Qual Res. Heal. Sci*, **9**(1)(2010), 416.
- [26] H. Tehrani, A. Ebadi, SB. Maddah, F. Mohammadi Shahboulaghi, R. Ghanei Gheshlagh and M. Fallahi-Khoshknab, Development and Validation of Iranian version of privacy inventory in hospitalized patients, *Sci. J. Nursing, Midwifery Paramed Fac*, **6**(3)(2021), 3647.
- [27] F-J. Tsai, E. Tseng, C-C. Chan, H. Tamashiro, S. Motamed and AC. Rouge-mont, Is the reporting timeliness gap for avian flu and H1N1 outbreaks in global health surveillance systems associated with country transparency?, *Global Health*, **9**(1)(2013), 17.
- [28] J. Woogara, Human rights and patients privacy in UK hospitals, *Nurs Ethics*, **8**(3)(2001), 23446.
- [29] J. Woogara, Patients privacy of the person and human rights, *Nurs Ethics*, **12**(3)(2005), 27387.

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TABLE 5. Statistical indicators of the score of privacy compliance questions in the area of personal space

	Mean	Standard Deviation	Median
Asking very private questions	2.77	0.50	3.00
Disrespect for patients' equipment	2.86	0.35	3.00
Staff sitting on patients' beds	2.85	0.36	3.00
Sudden awakening of patients	2.77	0.51	3.00
Ignoring the peace and quiet of patients	2.48	0.76	3.00
Hasty and careless treatment	2.51	0.69	3.00
Treatment in a harsh and impolite manner	2.77	0.49	3.00
Getting too close to the patient	1.66	0.51	2.00
Maintain patient coverage as much as possible	2.80	0.53	3.00
Looking directly into the eyes of patients	2.52	0.74	3.00
Calling patients by bed number	0.86	0.35	1.00
Disclosing private and confidential information	2.79	0.49	3.00
Disclosure of client information in front of others	2.81	0.47	3.00
Attention to religious and belief principles	0.90	0.31	1.00
Psychological support for patients when they are afraid	0.86	0.35	1.00
Keeping secrets and patient information in the context of paying attention to patients' privacy	2.11	0.85	2.00
Respecting the privacy of patients during discharge	2.18	0.97	2.00
Access to the phone or cell phone if necessary	1.28	0.80	1.00

TABLE 6. Distribution of the frequency of privacy in the area of human territory, personal space and the whole

		Number	Percent	95.0% Lower CL for Column N%	95.0% Upper CL for Column N%
The state of privacy in the human realm	Average	130	89.7%	83.9%	93.8%
	Good	15	10.3%	6.2%	16.1%
	Total	145	100%		
Privacy status in personal space	Average	7	4.8%	2.2%	9.2%
	Good	138	95.2%	90.8%	97.8%
	Total	145	100%		
Privacy status	Average	62	42.8%	34.9%	50.9%
	Good	83	57.2%	49.1%	65.1%
	Total	145	100%		

TABLE 7. Statistical indicators of the privacy compliance score in the area of human territory, personal space and the whole.

	Average	Standard Deviation	Minimum	Maximum	95.0% Lower CL for Mean	95.0% Upper CL for Mean
The score of privacy in the area of human territory(0 - 36)	20.29	2.30	13.00	25.00	19.91	20.67
Privacy score in personal space (0-54)	39.76	2.89	20.00	45.00	39.28	40.23
Privacy score (0-90)	60.05	4.07	33.00	70.00	59.38	60.72