

Original Article

Comparing perceived dignity and privacy in patients hospitalized in internal and surgical wards of Ardabil educational medical centers

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ABSTRACT

The present study aimed to compare perceived dignity and privacy of patients admitted to internal and surgical wards of medical educational centers in Ardabil, Iran. This is a cross-sectional descriptive study. Stratified random sampling was performed in the internal and surgical wards of hospitals affiliated to Ardabil medical educational centers (Imam Khomeini, Alavi and Fatemi). The study population included 279 patients admitted to the internal and surgical wards of the hospitals. The statistical sample was computed using the Cochran formula (n = 384). Patients' information was collected using three questionnaires including Patient Dignity Inventory (PDI), Patient Privacy Questionnaire and demographic questionnaire. The reliability of Patient Privacy Questionnaire (0.81) and Patient Dignity Inventory (0.87) was confirmed using Cronbach's alpha. The results showed that the patient's perception of dignity is higher than the determined criterion and perceived dignity of patients in the surgical ward is at the level of the determined criterion. In addition, perceived privacy of patients is higher than the determined criterion and perceived privacy of patients in internal wards is higher than the surgical wards. Further, Fatemi hospital, with a mean score of 60.67, was classified in one category, which has a significant difference (0.05) with two Alawi and Imam Khomeini hospitals in terms of patient's perceived dignity. Furthermore, Fatemi Hospital, with an average privacy of 95.21%, was classified alone in one category, which has a significant difference at the level of 0.05 with both Alawi and Imam Khomeini hospitals in terms of patient's perceived privacy. The results indicated that the improved dignity of the patients has led to increased level of their privacy.

Keywords: Perceived dignity, privacy, patients in internal and surgical wards.

Introduction

Respecting people's dignity has been described as a fundamental part of nursing care. Safeguarding patients' right to life and human dignity are an indispensable and very important part of the nursing profession that is not affected by nationality, race, religion, color, age, gender, or political status [1]. Despite the increased employment of dignity in studies, this term is still a

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vague, complex and interpretable concept. Furthermore, the dignity consists of many overlapping aspects, involving respect, privacy and autonomy. Dignity is related to the value or worth of each individual as a human being and must receive significantly more attention in the health care system. Honoring the patient's privacy is a fundamental principle, which underpins human dignity [2]. Privacy is a basic human right, acknowledging respect for the dignity and [3]. rights of each individual Today, protection privacy and confidentiality of patient's information as well as respecting their dignity have become the key elements of health care in different communities. Privacy has long been recognized as one of the principles and codes of ethics in the medical and paramedical profession [2]. Although respecting the privacy and dignity of humans is one of the basic goals of the healthcare provider system and fundamental principles of medical ethics, the evidence reveal that patient's dignity and privacy are not well preserved in health care settings. Meanwhile, the medical

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and nursing staff has poor knowledge on the importance of patients' rights and privacy and have a different understandings of the perceived concept of dignity and privacy [2]. Therefore, it is essential for health care providers to offer strategies for promoting and protecting patients' dignity in clinical settings by identifying the dimensions and factors affecting the patient's privacy. In some cases, the patient trusts in his/her physician and explains some aspects of her/his disease, which may conceal from the family member. As a result, the physician and the nursing staff have the responsibility to safeguard their patient's privacy and confidentiality and prevents from disclosing information.

Literature Review

Dignity

Human dignity is a kind of worldly or sensible perfection, which, in essence, belongs to the soul. The body, which acts like a servant to the soul, benefits from this dignity [4]. Dignity is defined in relation to the interplay between capabilities and circumstances, pointing out that we tend to lack dignity when we find ourselves in inappropriate circumstances, when we are in situations where we feel foolish, incompetent, inadequate or unusually vulnerable [5]. All human beings have sublime dignity and need to be respected; however, a sick person or a healthy person needing a special kind of attention, merits special consideration and respect from others [6].

Privacy

Although privacy is a notoriously vague concept and difficult to define precisely, it can be said that the privacy is a realm of life where people by no means permit others to enter it without their consent or knowledge. In accordance with article 2, paragraph 1 of Privacy Protection Act, the privacy is a realm of life where other people have no right to enter and supervise it or access to its information or breach its territory without the notice or previous statement. Furthermore, information privacy or data privacy refers to the affairs or issues, which a person tries not to disclose them, and being able to maintain and protect it, because it is linked to his/her behavior and personality traits. Information privacy is also defined as the right or tendency to hide certain facts of personal life from others. Put simply, privacy is as a matter of human right which others are not able to gain possession or control it. Others defined it as the right of the individual to be protected against intrusion into his personal life or affairs [7]. Grassi et al. (2016) investigated the dignity and its dimension in a sample of 133 patients at two hospitals in Italy [8]. They used the Patient Dignity Inventory-Italian Version. The validity of the questionnaire was confirmed by the experts and the reliability was analyzed using Cronbach's coefficient alpha (0.93). The data were analyzed using SPSS software via T-test and ANOVA. The level of statistical significance was set at P < 0.05. The results showed that there is a small correlation between dignity with demographic characteristics and only age

was effective on patient's perceived dignity. In addition, there was a direct correlation between perceived dignity and the patient's psychometric characteristics. Overall, the patient's perception of dignity was maintained in more than 64% of cases [8]. Similarly, in another study by Yea-Pyng Lin at a teaching hospital in eastern Taiwan from May-August 2009 to assess the patient's perception of dignity using indepth interviews with a purposive sample (n - 40), it was found that many hospitalized patients were satisfied with the maintenance of their dignity. Six themes that contribute to the preservation of their dignity were identified: sense of control and autonomy, respect a person, avoidance of body exposure, caring from the nursing staff, confidentiality of disease information and prompt response to needs [9]. Likewise, Lundqvist and Niltun (2007) performed a study to analyze the status of dignity among the patients and nurses with a qualitative approach using nonparticipant observation [10]. The findings of this study showed that family-based care and the participation of family members and team therapy could help to maintain the patient's dignity. It was also shown that the patient's dignity is damaged when the health care providers violate it [10]. Matiti and Trorey (2008) also performed a study based on patients' experiences of maintaining their dignity during the hospitalization [11]. Their research plan was based on a phenomenological hermeneutical approach. Their project was conducted using an interview with 102 patients in three hospitals in the United Kingdom during 18 months. The aim of this study was to understand the meaning of dignity identified by patients and how the patient's dignity is threatened or diminished. The findings revealed that although many patients were satisfied with the maintenance of their dignity while in hospital, a significant number were not. Six key themes that contribute to the preservation of their dignity were identified -- privacy; confidentiality; communication and the need for information; choice, control and involvement in care; respect and decency and forms of address. Patients provided details of their expectations with respect to these factors [11]. Furthermore, in an investigation into discovering public's attitude and views towards privacy in health care, King et al. (2012) measured subject's attitudes toward privacy, medical research, and satisfaction [12]. The study was a two-stage process, which combined qualitative and quantitative research. Stage One of the study comprised arranging and facilitating focus groups while in Stage Two we conducted a social survey. The results of the study demonstrated there are some particularly sensitive issues and there is a concern about any possibility of linking these kinds of data to the patient's name in a situation that is not related to medical treatment. At the end of the study, 66% of subjects were concerned about the privacy of health information [12].

Method

This is a cross-sectional descriptive study. Stratified random sampling was performed in the internal and surgical wards of hospitals affiliated to Ardabil medical educational centers (Imam Khomeini, Alavi and Fatemi). The study population included 279 patients admitted in the internal and surgical wards of the hospitals. The statistical sample was computed using the Cochran formula (n = 384). Patients' information was collected using three questionnaires including Patient Dignity Inventory (PDI), Patient Privacy Questionnaire, and demographic questionnaire. The reliability of Patient Privacy Questionnaire (0.81) and Patient Dignity Inventory (0.87) was confirmed using Cronbach's alpha.

Research hypotheses

Question 1: What is the perceived dignity level of patients admitted to the internal wards of Ardabil medical and educational centers?

Question 2: What is the perceived dignity level of patients admitted to the surgical wards of Ardabil medical and educational centers?

Question 3: What is the perceived privacy level of patients admitted to the internal wards of Ardabil medical and educational centers?

Question 4: What is the perceived privacy level of patients admitted to the surgical wards of Ardabil medical and educational centers?

Question 5: Is the perceived dignity level of patients admitted to the internal and surgical wards of Ardabil medical and educational centers equal?

Question 6: Is the perceived privacy level of patients admitted to the internal and surgical wards of Ardabil medical and educational centers equal?

Question 7: Is the perceived dignity level of patients in the Ardabil hospitals equal?

Question 8: Is the perceived privacy level of patients in the Ardabil hospitals equal?

Question 9: Is there any correlation between the respecting level of privacy and dignity in patients?

Data analysis

Question 1: What is the perceived dignity level of patients admitted to the internal wards of Ardabil medical and educational centers?

Table 1: Frequency of perceived dignity in patients admitted to internal wards

Range	Perceived level of dignity	Frequency	Percentage	Cumulative percentage	
38-48	very low	1	0.8	0.8	
48.1-58	low	13	10	10.8	
58.1-68	moderate	33	25.4	36.2	
68.1-78	high	65	50	83.2	
78.1-88	very high	18	13.8	100	
		130	100		

According to Table (1), one patient (0.8%) had a very low perceived dignity level, 13 (10.10%) had low perceived dignity level, 33 (4. 25%) had moderate perceived dignity level, 65

(50.0%) were at high perceived dignity and 18 (13.8%) were at very high perceived levels of dignity.

Table 2: One sample t-test analysis of perceived dignity level of patients admitted to internal wards

Number	Mean	Standard deviation	Difference In means	Criterion	Т	Degree of freedom	significance level
130	70.30	8.20	7.30	63	10.15	129	0.001

The analysis shows that the average perceived dignity level is 70.30 and the standard deviation is 8.20 and the mean difference from the target criteria is 7.30, which is significant with a degree of freedom of 129 at a significant level of 0.01. In other words, the perceived dignity level of patients is higher than the target criterion.

Question 2: What is the perceived dignity level of patients admitted to the surgical wards of Ardabil medical and educational centers?

Table 3: Frequency of perceived dignity in patients admitted to the surgical wards

Range	Perceived level	Engguenav	Percentage	Cumulative
	of dignity	Frequency	1 er centage	percentage
38-48	very low	13	5.1	5.1
48.1-58	low	88	34.6	39.8
58.1-68	moderate	62	44.4	64.2
68.1-78	high	79	31.1	95.3
78.1-88	very high	12	4.7	100
		254	100	

It can be seen from the data in Table 3, 13 (5.1%) of patients had a very low perceived dignity level, 88 (34.6%) had low perceived dignity level, 62 (24. 4%) had moderate perceived dignity level, 79 (31.1%) were at high perceived dignity and 12 (4.7%) were at very high perceived level of dignity.

Table 4: One sample t-test analysis of perceived dignity level of patients admitted to surgical wards

•	Number	Mean	Standard deviation	Difference in means	Criterion	Т	Degree of freedom	significance level
	254	62.96	9.93	-0.035	63	-0.057	253	0.955

The analysis shows that the average perceived dignity level is 62.96 and the standard deviation is 9.93 and the mean difference from the target criteria is 0.035, which is significant with a degree of freedom of 253 at a significant level of 0.01. In other words, the perceived dignity level of patients in the surgical ward is higher than the target criterion.

Question 3: What is the perceived privacy level of patients admitted to the internal wards of Ardabil medical and educational centers?

Table 5: Frequency of perceived privacy in patients	
admitted to the surgical wards	
	•

Range	Perceived level	Frequency	Percentage	Cumulative
	of dignity	rrequency	1 crecintage	percentage

25-45	very low	3	2.3	2.3
1.45-65	low	6	4.6	6.9
1.65-85	moderate	10	7.7	14.6
1.85-105	high	32	24.6	39.2
1.105-125	very high	79	60.8	100
		130	100	

Based on the data in Table 5, 3 (2.3%) of patients had a very low perceived dignity level, 13 (4.6%) had low perceived dignity level, 33 (7.7%) had moderate perceived dignity level, 65 (24.6%) were at high perceived dignity and 18 (60.8%) were at very high perceived level of dignity.

Table 6: One sample t-test analysis of perceived dignity level of patients admitted to internal wards

Number	Mean	Standard deviation	Difference In means	Criterion	Т	Degree of freedom	significance level
130	105.28	20.59	30.28	75	16.76	129	0.001

The analysis shows that the average perceived dignity level is 105.28 and the standard deviation is 20.59 and the mean difference from the target criteria is 30.28, which is significant with a degree of freedom of 129 at a significant level of 0.01. In other words, the perceived privacy level of patients is higher than the target criterion.

Question 4: What is the perceived privacy level of patients admitted to the surgical wards of Ardabil medical and educational centers?

Table 7: Frequency of perceived privacy in patients admitted to the surgical wards

	Perceived level		-	Cumulative
Range	of dignity	Frequency	Percentage	percentage
25-45	very low	15	5.9	
1.45-65	low	27	10.6	
1.65-85	moderate	19	7.5	
1.85-105	.85-105 high		20.1	
1.105-125	very high	142	55.9	
		254	100	

According to the Table 7, 15 (5.9%) of patients had a very low perceived dignity level, 27 (10.6%) had low perceived dignity level, 19 (7.5%) had moderate perceived dignity level, 51 (20.1) were at high perceived dignity and 142 (55.9%) were at very high perceived level of dignity.

Table 8: One sample t-test analysis of perceived dignity level of patients admitted to internal wards

	Jumbar	Maan		Difference	Criterion	т	Degree	significance
1	Number 1	Mean	deviation	in means	Criterion	1	of freedom	level
_	254	99.633	25.75	24.633	75	15.24	253	0.001

The analysis shows that the average perceived dignity level is 105.28 and the standard deviation is 20.59 and the mean difference from the target criteria is 30.28, which is significant with a degree of freedom of 129 at a significant level of 0.01. In other words, the perceived privacy level of patients is higher than the target criterion.

Question 5: Is the perceived dignity level of patients admitted to the internal and surgical wards of Ardabil medical and educational centers equal?

Table 9: Independent t test analysis for comparison of perceived dignity between internal and surgical wards

Groups	Number	Mean	Standard deviations	Т	Degree of freedom	Significance level
Internal	130	70.30	8.20	7.715	3.715	0.001
Surgical	254	62.96	9.63	7.715	3.713	0.001

Levin's test (f =14.68 and sig=0.001)

According to the data in Table 9, the average level of perceived dignity in the internal wards is 70. 30 and the standard deviation is 8.20. In addition, the average level of perceived dignity in the surgical wards is 62.96 and the standard deviation is 9.63. The difference between two mean scores is significant with a degree of freedom of 315 at a significant level of 0.01. In other words, the perceived dignity level of patients in the internal wards is higher than those in the surgical wards.

Question 6: Is the perceived privacy level of patients admitted to the internal and surgical wards of Ardabil medical and educational centers equal?

Table 10: Independent t test analysis for comparison of perceived privacy between internal and surgical wards

Groups	Number	Mean	Standard deviations	T	Degree of freedom	Significance level
Internal	130	105.28	20.59	2.332	315.19	0.020
Surgical	254	99.633	25.75	2.332	313.19	0.020

Levin's test (f = 14.68 and sig=0.001)

As shown in Table 10, the average level of perceived privacy in the internal wards is 105.28 and the standard deviation is 20.59. In addition, the average level of perceived privacy in the surgical wards is 99.633 and the standard deviation is 25.75. The difference between two mean scores is significant with a degree of freedom of 315 at a significant level of 0.05. In other words, the perceived privacy level of patients in the internal wards is higher than those in the surgical wards.

Question 7: Is the perceived dignity level of patients in the Ardabil hospitals equal?

Table 11: Comparison of perceived dignity level among the patients by hospital

	F		- I		
Source	Sum of squares	Degrees of	Average	Е	Significance
source	Sum or squares	freedom	squares	r	level
Intergroup	5381.24	2	2690.62		
Intragroup	32901.81	381	86.356	31.157	0.001
Total	38283.6	383			

As can be seen from the data in Table 11, the F value is 31.457, which is significant at a significant level of 0.01. In other words, there is a significant difference between the three hospitals at least in terms of two criteria. The Tukey's HSD post-hoc test was used for analyzing the differences.

Table 12: Tukey comparisons after significance of variance analysis

	variance analysis				
Hospital	Number	Group 1	Group 2		
Fatemi	143	60.67			
Alawi	73		66.98		
Imam	168		66.85		

According to table (12), the three hospitals were divided into two groups and a significant difference was found between them. Among these, Fatemi Hospital, with a mean score of 60.67, has been classified alone in one category and has significant difference with the two Alavi and Imam Khomeini hospitals in terms of patient's perceived dignity level. In addition, no significant difference was observed between the two Alavi and Imam Khomeini hospitals.

Question 8: Is the perceived privacy level of patients in the Ardabil hospitals equal?

Table 13: Comparison of perceived privacy level among the patients by hospital

	1		1		
Source	Sum of squares	Degrees of	Average	E	Significance
Source	Sum of squares	freedom	squares	1	level
Intergroup	10308.46	2	5154.23		
Intragroup	214918.69	381	564.09	9.137	0.001
Total	225227.15	383			

As can be seen from the data in Table 13, the F value is 9.137, which is significant at a significant level of 0.01. In other words, there is a significant difference between the three hospitals at least in terms of privacy. The Tukey's HSD post-hoc test was used for analyzing the differences.

Table 14: Tukey comparisons after significance of

	V	ariance anaiy	SIS	i			
Hospit	al	Number	Group 1	Group 2			
Fatem	ni	143	95.21				
Alaw	i	73		103.84			
Iman	ı	168		108.65			

According to table (14), the three hospitals were divided into two groups and a significant difference was found between them. Among these, Fatemi Hospital, with moderate privacy level of 95.21, has been classified alone in one category and had significant difference with two Alavi and Imam Khomeini hospitals in terms of patient's perceived privacy level. In addition, no significant difference was observed between the two Alavi and Imam Khomeini hospitals.

Question 9: Is there any correlation between the respecting level of privacy and dignity in patients?

Table 15: Correlation coefficient between perceived privacy and dignity variables

privacy and dignity variables				
Variables	Perceived dignity	Perceived privacy		
Perceived dignity				
Perceived privacy	0.591			

Significant level of 0.01

Based on the Table (15), the correlation between perceived dignity and perceived privacy of patients is 0.591, which is

significant at a significant level of 0.01. In other words, improved dignity of the patients has led to increased level of their privacy.

Conclusion

Question 1:

The analysis shows that the average perceived dignity level is 70.30 and the standard deviation is 8.20 and the mean difference from the target criteria is 7.30, which is significant with a degree of freedom of 129 at a significant level of 0.01. In other words, the perceived dignity level of patients is higher than the target criterion.

Question 2:

The analysis shows that the average perceived dignity level is 62.96 and the standard deviation is 9.93 and the mean difference from the target criteria is 0.035, which is significant with a degree of freedom of 253 at a significant level of 0.01. In other words, the perceived dignity level of patients in the surgical ward is higher than the target criterion.

Question 3:

The analysis shows that the average perceived dignity level is 105.28 and the standard deviation is 20.59 and the mean difference from the target criteria is 30.28, which is significant with a degree of freedom of 129 at a significant level of 0.01. In other words, the perceived privacy level of patients is higher than the target criterion.

Question 4:

The analysis shows that the average perceived dignity level is 105.28 and the standard deviation is 20.59 and the mean difference from the target criteria is 30.28, which is significant with a degree of freedom of 129 at a significant level of 0.01. In other words, the perceived privacy level of patients is higher than the target criterion.

Question 5:

According to the data in Table 9, the average level of perceived dignity in the internal wards is 70. 30 and the standard deviation is 8.20. In addition, the average level of perceived dignity in the surgical wards is 62.96 and the standard deviation is 9.63. The *difference* between two *mean* scores is significant with a degree of freedom of 315 at a significant level of 0.01. In other words, the perceived dignity level of patients in the internal wards is higher than those in the surgical wards.

Question 6:

As shown in Table 10, the average level of perceived privacy in the internal wards is 105.28 and the standard deviation is 20.59. In addition, the average level of perceived privacy in the surgical wards is 99.633 and the standard deviation is 25.75. The *difference* between two *mean* scores is significant with a degree of freedom of 315 at a significant level of 0.05. In other words, the perceived privacy level of patients in the internal wards is higher than those in the surgical wards.

Question 7:

As can be seen in Table (12), the three hospitals were divided into two groups and a significant difference was found between them. Among these, Fatemi Hospital, with a mean score of

60.67, has been classified alone in one category and has significant difference with the two Alavi and Imam Khomeini hospitals in terms of patient's perceived dignity level. In addition, no significant difference was observed between the two hospitals and Alavi Hospital (mean score 66.98) and Imam Hospital (mean score 66.85) ranked next.

Question 8:

According to table (14), the three hospitals were divided into two groups and a significant difference was found between them. Among these, Fatemi Hospital, with moderate privacy level of 95.21, has been classified alone in one category and had significant difference with two Alavi and Imam Khomeini hospitals in terms of patient's perceived privacy level. In addition, no significant difference was shown between the two hospitals and Alavi Hospital (mean score 103.84) and Imam Hospital (mean score 108.65) ranked next.

Question 9:

Based on the Table (15), the correlation between perceived dignity and perceived privacy of patients is 0.591, which is significant at a significant level of 0.01. In other words, improved dignity of the patients has led to increased level of their privacy.

References

- Sadeghi, T. and N. Dehghan Nayyeri, Patients' dignity: patients' and nurses' perspectives. Journal of Medical Ethics and History of Medicine, 2009. 3(1): p. 9-20.
- Torabizadeh, C., H. Ebrahimi, and E. Mohamadi, The relationship between patients' privacy and dignity. Medical Ethics Journal, 2016. 6(19): p. 119-132.
- 3. Matiti, M.R. and G. Trorey, Perceptual adjustment levels: patients' perception of their dignity in the

- hospital setting. International journal of nursing studies, 2004. 41(7): p. 735-744.
- Afzali, M.A., Human dignity and euthanasia in Islamic ethics. Journal of Mazandaran University of Medical Sciences, 2010. 20(78): p. 83-95.
- 5. Sabeghi, H., et al., Respecting for human dignity in elders caring in perspective of nurses and elderly patients. Medical Ethics Journal, 2017. 9(32): p. 45-70.
- 6. Taghi, S., An overview of the factors affecting the human dignity perceived by patient. Education and Ethics in Nursing, 2016. 5(1): p. 9-17.
- Jafari, A. and M.R. Rahbarpour, Civil Liability of Violation of Data Privacy in Imamieh Jurisprudence and statutory law. Private Law Research, 2017. 5(18): p. 43-74.
- Grassi, L., et al., Dignity and Psychosocial-Related Variables in Advanced and Nonadvanced Cancer Patients by Using the Patient Dignity Inventory-Italian Version. Journal of pain and symptom management, 2017. 53(2): p. 279-287.
- 9. Lin, Y.P., Y.F. Tsai, and H.F. Chen, Dignity in care in the hospital setting from patients' perspectives in Taiwan: a descriptive qualitative study. Journal of clinical nursing, 2011. 20(5-6): p. 794-801.
- 10. Lundqvist, A. and T. Nilstun, Human dignity in paediatrics: the effects of health care. Nursing Ethics, 2007. 14(2): p. 215-228.
- 11. Matiti, M.R. and G.M. Trorey, Patients' expectations of the maintenance of their dignity. Journal of clinical nursing, 2008. 17(20): p. 2709-2717.
- King, T., L. Brankovic, and P. Gillard, Perspectives of Australian adults about protecting the privacy of their health information in statistical databases. International journal of medical informatics, 2012. 81(4): p. 279-289.