



INVESTIGATION OF PHYSICIAN-PATIENT RELATIONSHIP AMONG TEHRAN UNIVERSITY OF MEDICAL SCIENCES HOSPITALS

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ABSTRACT

Introduction: As a multi-faceted system, the physician-patient relationship is more complicated than a mutual relationship at the turn of the third millennium. This process positively affects the quality of healthcare services provided. This research intends to determine the relationship status of the physicians and the patients in public and private hospitals affiliated with Tehran University of Medical Sciences (TUMS) in year 2015-2016.

Materials & Methods: This was a descriptive-analytical, cross-sectional study conducted on 185 patients who had been selected purposively, being hospitalized in 2 public and 2 private hospitals affiliated with Tehran University of Medical Sciences (TUMS). Patient-Doctor Relationship Questionnaire was employed as the research instrument. In addition to face and content validity, the reliability of the instrument was confirmed via administration of Alpha Cronbach, Test-Retest and Interclass Correlation Coefficient. For data analysis, SPSS software was used, for absolute and relative frequency the descriptive results were employed while Kolmogorov-Smirnov, Pearson, and Anova test were administered for analytical results.

Results: Physician-patient relationships were revealed to be relatively desirable and desirable in studied hospitals, although this showed to be better in private hospitals compared to public hospitals (P=0.017). Also, there was observed a significant relation between physician-patient relationship status with patient's age (P=0.021), educational background (P=0.02), physician's gender (P=0.031), and educational level (P=0.017).

Conclusion: The difference between public and private hospitals respecting physician - patient relationship with due attention to less effective of this relationship in public hospitals would be a huge challenges to success of health care evolution plan in Iran. Therefore, providing communication skills training, observation of patients' rights and medical ethics by the physicians, especially by younger and less experienced physicians as well as medical assistants and medical students is recommended.

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INTRODUCTION

Observing patients' rights is the same as supporting human rights in healthcare provision system (1). Protecting patients' rights not only helps to resolve conflicts between patients and health care providers, but also helps to improve the relationships between physicians and patients (2). The relationship between patients and health care staff is considered as an important and vital aspect of patients' rights, and has increasingly attracted the attention of health care policy-makers to this subject (3). The challenging nature of starting relationships with physicians is a major complaint of patients (4,5).

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Effective physician-patient communication is a central clinical function and is the heart and art of medicine that is important in the delivery of high quality health care (6). For a healthy and effective physician-patient relationship, communication play a vital role and associated to better adherence to the treatment, better health outcomes and better perceived quality of health care services (7). In the first encounter of physicians with the patients, doctors use open-ended questions to get appropriate information needed for improved diagnosis and treatment in such a way that patients will recognize a doctor empathically (8).

Tongue "et al." mentioned that there are some barriers to good communication of patients and their physicians include patients' anxiety and fear of litigation, and physical or verbal abuse (9). Gordon and Beresin asserted that poor outcomes

flow from an impaired doctor-patient relationship (10). The doctor – patient relationship is a powerful part of a doctors’ visit and can alter health outcomes for patients. Physicians should be able to recognize the causes for the disruption in the relationship and implement solutions to improve health care (11).

Shafaati and Zahedi believe that the ways by which physicians and patients are related to each other significantly affect the medical treatment quality and improvement. They also report that there is a gap between ideal patterns and the current process of relationship among patients and physicians in Iran (12).

Therefore, this research is aimed to determine the patients’ satisfaction of patient-physician relationship in public and private hospitals affiliated with Tehran University of Medical Sciences (TUMS) in year 2017-2018.

MATERIALS AND METHODS

This was a descriptive-analytical, and cross-sectional study conducted on 185 patients who had been hospitalized in public (Shariati and Baharloo) and private hospitals (Madaen and Alborz) affiliated with Tehran University of Medical Sciences (TUMS). Hospitals were selected purposively based on a number of criteria such as the type of the ownership of hospitals, access to quality and experienced physicians, reputation of the attending physicians and the treatment costs from the views of the patients (13,14) as well as the extent of cooperation offered by the hospital administrators. Patient-Doctor Relationship Questionnaire-9 (PDRQ-9) was employed as the research tool. This questionnaire which was first used in a study in Netherlands’ Amsterdam was translated-retranslated for the first time in Iran and then handed out to the participants.

This questionnaire applies to measure the treatment process of psychological patients, but also has been validated for measuring the patient-physician relationship in general practice. PDRQ can also measure the treatment aspects of patient-physician relationship and thus is a valuable tool for monitoring this relationship (15).

The questionnaire was first translated from English to Persian by two PhD experttranslator and then back-translated by another expert translator to Persian language. The accuracy of the translations was verified after running a contrast analysis of them by a number of English teachers. PDRQ includes 12 items which were ranked by Likert scale in form of “completely disagree=1, disagree=2, No viewpoint=3, agree=4 and completely agree=5”. Also, demographic information of the patients including age, gender, education background, marital status as well as age, gender and the last education degree of the physicians was collected.

To validate the PDRQ, first the face validity of the questionnaire was used by 5 experts to check the intended characteristics. The experts confirmed the face validity of this questionnaire. Content Validity Ratio (CVR) was applied to examine the content validity of PDRQ by 8 experts of medical ethics, health policy-making and health care management who were asked to categorize the items in 4 parts as “very necessary”, “necessary”, “useful but not necessary” and “not necessary”. For these, the experts determined the clarity, simplicity and relevance of each item based on a four-part Lickert scale as 1 to 4 with the final score of 80%.

Table 1 The relative frequencydistribution of the physician-patientrelationshipstatus in both public and privatehospitals

Item	Type of Ownership	Completely Disagree	Disagree	No viewpoint	Agree	Completely Agree	Testing Result																																																																																																																																																																			
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My attending physician participates in my treatment process actively, and contributes to my cure	Public	2.6	52.8	44.6	0	0	0.007	4.092																																																																																																																																																																		
	Private	0	22.5	20.8	44.2	12.5			I have a good feeling about my physician and trust him	Public	4.3	13.9	69.8	12	0	0.008	2.6	Private	0	29.2	25.8	34.2	10.8	When I talk to my physician, he listens to me carefully, and understands me	Public	15.2	40.6	44.2	0	0	0.005	4.44	Private	0	18.4	28.7	35.4	17.5	I don’t feel I can easily communicate with my physician	Public	5.1	28.1	61	5.8	0	0.002	4.225	Private	0	30.4	20	39.2	10.4	If I need, I can talk to my physician	Public	16.6	39.2	44.2	0	0	0.001	4.219	Private	0	18	30.8	38.7	12.5	I am satisfied with the treatment method adopted by my attending physician	Public	9.5	41.6	42.2	6.7	0	0.006	2.747	Private	0	21.7	24.7	41.6	12	If I need, I can access my physician	Public	16.4	22.2	58.1	3.3	0	0.005	2.795	Private	0	15.4	27.5	30.8	26.3	When my attending physician visits me, he spends enough time to check my clinical signs	Public	2.6	24.7	55.8	16.9	0	0.005	2.795	Private	0	10	31.6	41.8	16.6	I feel well and healthy by following my prescribed treatment process	Public	13.9	35.4	43.8	6.9	0	0.007	4.009	Private	0	18.8	30.8	33.4	17	I could now identify my symptoms using training I have received from my attending physician and the other practitioners	Public	8.8	8	67.2	16	0	0.06	1.882	Private	0	15.4	27.1	40	17.5	I am grateful to my physician for their presentation of direction and new view and guidelines about medical and treatment process	Public	5.1	43.6	51.3	0	0	0.034	2.117	Private	1.2	13.4	36.6	34.6	14.2	Regarding with appropriate and effective communication of my physicians and the other practitioners with me, I feel much better about my treatment process	public	10	37.2	37.2	15.6	0	0.011	2.558	private	3.8	10.8
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Regarding the reliability of the questionnaire and calculation of the internal coordination and stability of the items, Alpha Cronbach technic was employed which was 78%. Also, test-retest and Intercalss Correlation Coefficient (ICC) methods were used to examine the repeatability of the questionnaire. To this end, the questionnaire was distributed among 15 non-participant patients who had visited the target hospitals and were collected once completed. These questionnaires were again handed out to the patients after a 15-day interval to avoid recalling error. If the patients had been discharged or had not been re-admitted, the questionnaires would be sent to their addresses. After examining and analyzing the results of these two stages, Intercalss Correlation Coefficient of the PDRQ was 85%.

The sample size of the patients' was determined using Cochran formula, a 0.07 margin of error and $p=q=0.5$ Which was 185 The PDRQ questionnaires were distributed to the patients in 2 weeks interval in proportion to the beds in each hospital. The patients received and completed the questionnaires after receiving necessary explanations. They also filled informed consent and were guaranteed the confidentiality of the information and ethical consideration. Then, the collected data was analyzed by SPSS software. Absolute frequency, relative frequency, mean and standard deviation were used for presentation of descriptive results, while T-test, Anova & Pearson correlation test was utilized to determine the correlation between demographic characteristics of the patients, the physicians, and patient – physician relationship.

RESULTS

The result was showed the patients had mean of 33 years, 51.09% of them were males, had acquired a diploma and were married. As regards the physicians, 56.8% were males, in the age range of 31-36 years, and most were specialized in a medical field.

Table 1 shows the relative frequency distribution of the patients' satisfaction with their physician-patient relationship in both public and private hospitals for each question. Physician-patient relationships were revealed to be relatively desirable and desirable in studied hospitals, although showed to be better in private hospitals compared to their public counterparts ($P=0.017$) using Z test. According to table 1 patients hospitalized in public and private hospitals expressed their viewpoint about the questions while the highest rate of satisfaction for "My attending physician participates in my treatment process actively, and contributes to my cure" ($P=0.007$), "If I need, I can talk to my physician" ($P=0.001$), "When my attending physician visits me, he spends enough time to check my clinical signs" ($P=0.005$). However, the lowest satisfaction expressed by the patients was for "I have a good feelings about their physician and trusted him" ($P=0.008$). Nevertheless, the satisfaction rates were higher in private hospitals compared to public ones regarding the above-mentioned questions.

Table 2 The relationship between demographic characteristics of the patients and physician-patient relationships in studied hospitals

Demographic Characteristics	Private	Public	P	
Gender	Male	37(52.8)	59 (51.3)	0.08
	Female	33 (47.2)	56 (48.7)	
Marital Status	Single	25 (35.7)	30 (26.8)	0.07
	Married	45 (64.3)	85 (73.2)	

Degree Level	illiterate	1 (1.4)	0	0.04
Age	Below Diploma	19 (27.2)	40 (34.7)	
	Diploma	26 (37.4)	55 (47.8)	
Age	BSc. and higher	24 (34)	20 (17.5)	0.021
	20-30	5 (2)	9 (4)	
	30-40	13 (7)	15 (9)	
	40-50	20 (11)	22 (12)	
	50-60	22 (12)	24 (13)	
	60-70	25 (13)	30 (17)	

Using T test and Anova test, there was a significant relationship between the educational degrees level and age of the patients and physician-patient relationships in both public and private hospitals. In other words, in private hospitals, higher education leads to increased satisfaction with physician-patient relationships in comparison to public hospitals ($p=0.04$) (Table 2).

Table 3 The relationship between demographic characteristics of attending physicians and physician-patient relationships in studied hospitals

Research Variable	%	P	
Gender	Male	62	0.031
	Female	38	
Education	General Physician	35	0.041
	Specialist	65	

Based on T-test and Anova test, there was a significant relationship between the gender and the educational levels of physicians with physician-patient relationships in both public and private hospitals (Table 3).

Table 4 The relationship between patients' satisfaction from patient – physician relationship in private and public hospitals affiliated with Tehran University of Medical Sciences

Correlation	Public Hospitals	Private Hospitals
Patient – Physician relationship	$r = 0.394$	$r = 0.366$
Level of Significance	0.017	0.017

Using Pearson correlation test, there was a significant correlation between patients' satisfaction and patient – physician relationship in public and private hospitals (Table 4).

DISCUSSION

Treatments of diseases are considerably dependent on the interaction among patients and physicians which is realized when the latter is able to hold effective communication with the former (16). Many researches reveal inability of physicians to communicate effectively with their patients leads to, patients' dissatisfaction with their treatment process (17). This research intended to determine the physician-patient relationship status using PDSQ in public and private hospitals affiliated with Tehran University of Medical Sciences (TUMS) in 2017-2018.

Physician-patient relationships were revealed to be relatively desirable and desirable in private hospitals, although this showed to be no desirable compared to public hospitals ($P=0.017$). In 2001, Falahatian "et al." reported low satisfaction of patients from relationship with their physicians in teaching hospitals of Tehran University of Medical Sciences (TUMS) which is consistent with the results of the current research in public hospitals (18). Also, Nooron Nessa "et al." reported patients only believe to express satisfaction with responses of physicians to their questions (19). Haydari and Seyyidi stated that patients only were satisfied with good behaviour of physicians toward them (20), which was consistent with current research in studied hospitals.

Art of effective communication with patients, by physicians will positively affect the treatment process of patients (21). Travaline "et al." (2005) suggested good physician-patient relationship will have positive impacts on the treatment process (22). Haskard and Dimatteo reported that appropriate physician-patient relationship significantly contributes to the adherence of patients to follow physicians' instructions and prescriptions (23). Ansani, demonstrated lack of effective communication among patients and physicians in India (24). Fallah and Akbari believe that hope and trust-building themes are effective relationship preferences among patients and physicians (25,26). All the results of the above studies indicate the value and importance of the factors forming the appropriate relationship between the physicians and patients, which has been emphasized by the researchers in current study and confirms the reasons for lower high satisfaction of patients with their relationship with their doctors.

Shabbir "et al." found out easier and increased access to physicians in private hospitals leads to paying more attention to patients and more effective physician-patient relationship were developed in Pakistan (27). Sadeghi showed that increased attendance of physicians in private hospitals with spending more time for visit of patients resulting in desirable status of physician-patient relationship (28). Obiydi Dizaji demonstrated that active attendance of physicians in private hospitals promoted physician-patient relationships which was in contrast to public ones (29). HedayatBakhsh "et al." (2013) stated appropriate physician-patient relationships was a major factor in private hospitals in comparison with public ones (30). It seems that in the studies conducted in the health care system of Iran and some other countries, there is a clear difference between patient satisfaction with relationship between a doctor and a patient in private and public hospitals which confirms the results of present study at the Tehran University of Medical Sciences.

Ward "et al." (2015) reported that since hospitalized patients are not entitled to select physicians in public hospitals, Australian physicians do their best practice to provide the best healthcare services, and consequently they may be able to start effective relationships with their physicians (31). Colmenares-Roa "et al." (2015) reported that the occurrence of patient-centered model characteristics in private hospitals of Mexico in comparison with more physician-centered public hospitals contributed to better physician-patient relationships (32). Yang and Pen indicated the effective patient-physician relationship was a more important competition between public and private hospitals (33). Although, the discrepancy between patient satisfaction with doctor-patient relationship in public hospitals is quite evident in comparison with private hospitals, this threat can be achieved by establishing a system of competition between private and public hospitals by increasing the quality of service delivery and the best performance and focusing on the patient centered model in public hospitals becomes an ideal opportunity.

The current research revealed a significant relationship between the age and educational degrees levels of the patients and their satisfaction with physician-patient relationships ($p=0.04$ and $p=0.021$). Moreover, no significant relationship was found between the gender and marital status of the patients and physician-patient relationships ($p>0.05$). Although, Nasiraei's findings showed a significant relationship between the gender of the patients and physician-patient

relationships. This could be largely attributed to the larger number of female physicians and their easier way of starting relationship with female patients (34). Also, Noorol Nessa "et al." (19) and Haydari and Seyyedi (20) found a significant relationship between age and gender of the patients and physician-patient relationships. The incompatibilities of these results and the results of current research about the correlation between gender of patient and physician-patient relationship could be due to ethnic and cultural differences and variations of patients from different cities and stronger interaction among female patients and physicians. Roger "et al." concluded that patients with higher education had higher expectations of respect-based relationships from physicians (35) which is consistent with the findings of the present research.

Current research revealed a significant relationship between the gender and education degrees levels of the physicians and physician – patient relationships ($p=0.041$ and $p=0.031$).

Salmanian "et al." reported that there was no significant relationship between physician-patient relationship with the gender of doctors (36). Weisman and Teitelbaum indicated that physician gender might impact on relationship through sex differences, sex attitudes and increased status congruence between physician and patient in the same sex (37). Roter and Hall found that female physicians showed a greater affinity for collaborative models of patient-physician than did their male colleagues because of spend more time with their patients, are more likely to engage their patients in discussions of their social and psychologic context, and deal more often with feelings and emotions (38). All of the above studies confirmed the results of the present study on the existence of a significant difference between doctors' gender and patient satisfaction with physician-patient relationship in hospitals of Tehran University of Medical Sciences. However, Banerjee and Sanyal reported specialization and super specialization of physicians were barriers to a good doctor-patient relationship (39). Moreover, Hardavella "et al." declared that medical speciality appeared less difficulties in dealing with patients' problems (40). It seems, the type of national culture of different countries regarding patients' beliefs about the level of education of physicians can influence their satisfaction with patient-physician relationship.

Limitations

The current research revealed a significant relationship between the age and educational degrees levels of the patients and their satisfaction with physician-patient relationships ($p=0.04$ and $p=0.021$). Moreover, no significant relationship was found between the gender and marital status of the patients and physician-patient relationships ($p>0.05$). Although, Nasiraei's findings showed a significant relationship between the gender of the patients and physician-patient relationships. This could be largely attributed to the larger number of female physicians and their easier way of starting relationship with female patients (34). Also, Noorol Nessa "et al." (19) and Haydari and Seyyedi (20) found a significant relationship between age and gender of the patients and physician-patient relationships. The incompatibilities of these results and the results of current research about the correlation between gender of patient and physician-patient relationship could be due to ethnic and cultural differences and variations of patients from different cities and stronger interaction among female patients and physicians. Roger "et al." concluded that

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Limitations

This research has several limitations. First, this was a cross-sectional study conducted in public and private hospitals affiliated with Tehran University of Medical Sciences (TUMS) in 2017-18, and thus the results may not repeatable in another time period. Second, the data was collected from patients to complete PDRQ questionnaires. Therefore, patients' satisfaction with physician-patient relationship may be different from other questionnaires compared to the current questionnaire. Also, interaction and formation of a physicians-patient relationship is a mutual communication, and takes place properly when both of them have similar social-cultural system, awareness, attitudes and skills. It was likely that the patients might have been influenced by these factors while answering the questionnaires. Forth, the results of current research can not generalize to other hospitals of universities of medical sciences in Iran.

CONCLUSION

This research revealed essential differences between public and private hospitals in terms of effective communications and development of relationship among patients and physicians. This relationship was clearly more significant in private hospitals. However, part of this difference could be related to increased rates of visits by patients to public hospitals after the establishment of Iranian Health System Evolution Plan. Effective physician-patient relationships, could considerable contribute to the full success and sustainability of this plan, and as a result improves the competitive power of public hospitals. Although, providing communication skills training, observation of patients' rights and medical ethics by the

physicians, especially by younger and less experienced physicians as well as medical assistants and medical students is highly recommended. As the age and education level of the patients affect the physician-patient relationship, development of different communicative models based on the age and education of patients is also suggested. In addition, as female physicians performed more successfully in physician-patient relationship in comparison with their male counterparts, paying more attention to the observation of compatibility of this process with Islamic relevant laws is suggested.

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Ethical Consideration

The authors stated that all respondents were informed to the questionnaire consciously and with verbal consent, and gave them an ethical consideration commitment that the respondents' information was anonymously introduced into the software and could not be restored.

Authors Contributions

Study conceptualization: Hossein Dargahi and AlirezaAbbassi Chaleshtari

Writing the original draft: Alireza Abbassi Chaleshtari, Supervision, Project administration, Funding acquisition, Validation, and resources: Hossein Dargahi; Methodology, formal analysis, investigation, data curation, and visualization: Hossein Dargahi and Alireza Abbassi Chaleshtari

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Conflict of Interest

The authors declared no conflict of interest.

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