Brief Report

Patients' Satisfaction with Medical Residents'Communication Skills at the Largest Teaching and Treatment Center in North West Iran in 2016

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Abstract

Background: Given that the capability to build an effective relationship with patients has been reported as a strong predictor of physicians' professional achievements, this study was intended to assess patients' satisfaction with medical residents' communication skills at the largest teaching and treatment center in North West Iran in 2016.

Methods: This cross-sectional study was conducted in 2016. Using the valid and reliable Persian version of the patient satisfaction questionnaire, 488 patients assessed communication skills of 198 medical residents, using a seven-point Likert scale, from "poor to fair" to "outstanding". Data were analyzed using STATA, V 13 for descriptive, co relational, one way ANOVA and regression analyses.

Results: The mean of patients'normalized overall satisfaction score with medical residents' communication skills was 48.8 ± 18 (out of 100). Patients' satisfaction with 6 of the 10 considered to assess skills was less than the median score of the statistical population. The relationship between patients' overall satisfaction score with their educational, income, and socio-economic level unlike with their gender and residential area was statistically significant.

Conclusions: In this study, patients' overall satisfaction with medical residents' patient-physician communication skills was moderate. It is recommended that training as well as evaluation of communication skills should be a pivotal part of residents' formal curriculum.

Keywords: Patient Satisfaction, Communication Skills, Residents

1. Background

The capability to build an effective relationship with patients has been reported as a strong predictor of physicians' performance, achievement of optimal health outcomes, increase in patients' satisfaction, and solves their problems (1). Moreover, building an effective relationship with patients is considered as one of the main competencies in performing clinical tasks and application of physicians'clinical knowledge into their daily practice (2).

Research shows that in most countries, physicians' knowledge regarding constructing effective relationship with patients is insufficient enough to achieve those for mentioned outcomes. Studies have shown that 54% of patients' problems and 45% of their concerns are not determined when they are visited by physicians (3).

Analyzing patients' complaints from physicians have revealed that the majority of complaints are not related to physicians' professional clinical competencies but the way they establish relationship with patients (4, 5). For in-

stance, most physicians believe that they do not need to allow patients to explain their stories completely due to the fact that by doing so their time will be wasted (6). Only 23% of patients are provided with the opportunity to completely share their story with their physician. Commonly, interrupting patients, while they are being interviewed, occurs 18 - 30 seconds after a conversation starts between them and their physician (7).

Considering the above mentioned, many significant effects of establishing an effective relationship on patient outcomes, the concept of patient satisfaction has universally been of particular importance in healthcare and delivery. similarly, Iran's ministry of health (MOH) has communicated to all universities to increase patient satisfaction as their priority. Patient satisfaction is perceived by patients and measured by their expectations (8); it is assessed as an outcome measure of the training programs.However, based on the in-deep interviews with experts of medical education in Iran and some recent research studies, medical students in Iran, similar to many other countries, do

not believe in their capabilities in building effective relationships with patients ([9], [10]). It means that training programs so far were not efficient enough to increase physicians' self-efficacy about building effective relationships with patients and there is still a need to teach communication skills and to evaluate the effect of the training programs. In this regard, designing and applying valid and reliable checklists and questionnaires would be of great help not only for teaching but also evaluation and assessment of communication skills. The data from such checklists and questionnaires may be reflecting patients, their relatives, care providers, medical staff, and physicians' satisfaction with the built relationships.

Up to the time of conducting this research as a part of a larger study, searching the available different databases and exploring many published and even grey literature, no valid and reliable Persian patient satisfaction questionnaire was found. Patient satisfaction questionnaire (PSQ) of royal college of general practitioners (RCGP) ([11]) was translated, back translated, and validated in the first part of this research (its article is under press).

In this research, as the second part of a larger study, applying the valid and reliable Persian version of PSQ, it was aimed at evaluating patients' satisfaction with medical residents' patient-physician communication skills at clinics of Imam Reza teaching and treatment center, Tabriz, in 2016. By identifying the communication skills, that patients were less satisfied with them, top priorities for communication skills training programs will be determined and categorized. So using the results of this research, communication skills that patients are least satisfied with them can be continuously included in educational, instructional, and training programs.

2. Methods

This cross-sectional study, as part of a larger study, was carried out in the clinics of Imam Reza teaching and treatment center, Tabriz, in late September, 2016. Research population included 198 residents in the fields of general medicine, gastroenterology, nephrology, pulmonary, endocrinology, and rheumatology (n = 46 residents), infectious diseases (n = 30) neurology (n = 22), surgery (n = 30), neurosurgery (n = 16), urology (n = 12), orthopedics (n = 23), and ENT (n = 19). Considering the total number of residents in each clinical ward, stratified random sampling method was used to calculate the number of residents in each ward. To avoid sampling bias, patients' satisfaction with residents' communication skills in each discipline was measured in a decentralized manner, on different days.

To reduce the impact of confounding variables, the principal researcher of the project (MN) introduced himself and explained research objectives to the patients.

According to the rule of thumb regarding considering 40 samples for any potential parameter, a sample size of 420 was considered sufficient for a multivariate analysis. The sample size was re-estimated after conducting a pilot study and there was no need to adjust the sample size. By taking issues of random sampling method into consideration, a final sample size of 510 was estimated.

Research questionnaire was submitted to 510 patients and 488 questionnaires were filled out. (Response Rate: 96%).

Research questionnaire was the Persian version of the patient satisfaction questionnaire (PSQ) of Royal College of General Practitioners RCGP ([11]), which was validated in the previous part of our larger study.

After obtaining written consents from head of clinical departments and residents, patients' satisfaction with the residents' communication skills was assessed after patients were visited. Although residents agreed with the assessment of their patients' satisfaction, they were not aware of the exact date and time their patients would be surveyed. Patients were encouraged to participate voluntarily; the principle of the confidentiality of the information was described to them.

The patients rated their satisfaction with all the 10 physician-patient communication skills, based on a 7-point Likert scale. 20 patients of each resident were surveyed.

Patients' demographic characteristics, including their age, gender, marital status, educational level, residential area, job, income, the name of the clinic they visited, insurance coverage type, and the socio-economic level of their family, were asked and recorded as well.

The overall score from the 10 items of the PSQ were normalized based on the standard value between 0 and 100, as the maximum and the minimum achievable scores were considered 100 and 0, respectively.

The data were analyzed using STATA V13. Descriptive analysis was used for describing the research variables and depending on the normality of distribution of research data, the Pearson or Spearman correlation coefficients were used. The relationship between patients' demographic variables and their overall satisfaction score, obtained from ANOVA, was used in the bivariate analysis. Normality of data and homogeneity of variance were evaluated by quantile normal curve and Bartlett's test, respectively. Linear regression analysis was used for multivariate analysis.

3. Results

In all, 488 patients rated 10 communication skills of 198 residents. Frequency of patients' demographic characteristics, mean of their satisfaction score divided by different levels of demographic variables, and some statistics regarding between the patients' overall satisfaction score with residents' communication skills and their demographic variables are shown in Table 1. Explanations about further statistical tests are provided in Table 1, as well.

Bonferroni post-hoc test showed no statistically significant differences between patients' overall normalized satisfaction score and their residential area, their discipline, or department. No significant linear correlation was observed between the age and the score of satisfaction (P = 0.4 and r = 0.04).

The mean of patients' normalized satisfaction score with residents' communication skills was 48.8 ± 18 and its data distribution was close to normal.

Linear regression/multivariate analyses were used for predicting the causal relationship between patients' overall satisfaction score and their demographic variables. In the final model, only the relationship between patients' income, educational level and their overall satisfaction score was significant. The overall model of multivariate analysis was significant as far as income level was concerned (P < 0.001, F = 4); however, the prediction value of the model formed by the 2 variables was not high (R^2 = 4%).

Descriptive statistics of patients' (n = 488) satisfaction score* with residents'£ (n = 198) patient-physician communication skills for each PSQ items are revealed in Table 2.

4. Discussion

In this study, patients' satisfaction with residents' patient physician communication skills at clinics of Imam Reza teaching and treatment center Tabriz was 48.8 ± 18 out of 100. This score is higher than the satisfaction in the Jamei and colleagues' study, which was 44 ± 15 out of 100 and lower than in Williamson's study which, was 59.1 ± 9.5 out of 100 (12). The participant patients' demographic, socio-cultural characteristics and the type of the research tool might justify these differences as well.

In Ryan and associates' study, patients were satisfied with communication skills of approximately three-quarters of the medical students (72% of them) and 81% of nursing students (13). Their findings were not in consistence with the research findings of the present study.

In an ethnographic study at Shiraz University of Medical Sciences, based on in-depth interviews with 34 patients and their direct observations, the researchers concluded that there was a bad doctor-patient interaction among patients and under study physicians (14). Their finding is in consistence with ours and reveals a national need to include the course of interpersonal communication skills at medical curriculums. Similarly, in a grounded theory study at Shiraz University of Medical Sciences, based on 3 focus groups with 21 faculty members, doctor-patient relationship was not satisfactory and cultural barriers as well as accordingly "inefficient structure" was blamed for such an improper interaction (15).

Research findings of this study revealed a statistically significant relationship between patients' educational level and their overall score of their satisfaction with residents' communication skills. This finding was in accordance with the results of Narenjiha and associates' (16) and Ferranti and colleagues' (12) study.

In this study, the relationship between patients' family income and overall score of their satisfaction with residents' communication skills revealed was statistically significant. This finding was not similar to that in the Hall and colleagues' study (17).

Similarly, the relationship between patients' overall satisfaction score and their socio-economic level was statistically insignificant in this study. Not having such a correlation was intended in Mercer and colleagues' study in which an "empathy-based consultationprocess measure" was developed (18). On the contrary, search findings showed a significant relationship between patients' residential area and their overall satisfaction score. These findings were similar to that in the Hall and colleagues' study (17).

This study showed no statistically significant relationship between the type of residents' disciplines and their overall satisfaction score. Boissy and associates found the similar relationship between the 2 (19).

Similar to the findings in Loffler and colleagues (20) as well as Jamei and associates (12), there was not a statistically significant difference between patients'overall satisfaction score with residents' gender and between their age. This finding was unlike the one in Laidlaw and colleagues' study. In which, patients were significantly more satisfied with female residents' communication skills (19).

In line with Narenjiha and colleagues' study, in which patients' educational level and their occupational conditions were introduced as 2 effective factors in predicting patients' satisfaction (16), the linear regression model between patients'educational and income level and their satisfaction score in our study was meaningful.

In this study, patients' satisfaction with residents' communication skills number 3, 4, 5, 6, 7, 9, and 10 (according to the appendix 1 in Supplementary File) was less than the median score of statistical population. So these

Table 1. Statistics Regarding Patients*' (n = 488) Demographic Characteristics, Their Overall Satisfaction Score £ with Residents' (n = 198) Communication Skills and the Relationship Between the Two[a]

Number	Demographic Variables/Level	Number	Mean of Satisfaction Score, %	Statistical Test/ P Value	Significance of the Relationship	Explanations About Further Statistical Tests
1	**Sex**			T-Test/	Non-significant	
	Male	239	47.52	0.16		
	Female	237	49.82			
	No-response	12				
2	**Education level**			One-way	Significant	Bonferroni post-hoc test showed no differences between the mean of satisfaction score of those with high school education and the individuals with lower education level or illiterate people. However, the satisfaction rate of those with academic education is significantly lower than the other two groups. P value < 0.05
	Lower education	144	51.2	ANOVA/		
	Highschool	175	50.96	0.01, F = 2.3		
	Academic	164	44.76			
	No-response	5				
3	**Income level**			One-way	Significant	Bonferroni post-hoc test showed no statistically significant differences between the first two income groups; however, the difference between income group 3 and the first two groups was significant. P.value< 0.05
	Less than the family expenses		49.25	ANOVA/		
	Equal to the family	161	49.66	0.01		
	expenses	286	39			
	More than the family expenses	27				
	No-response	14				
4	**Socio-economic level**			One-way	Significant	Bonferroni post-hoc test showed no statistically significant differences between the weak and moderate groups; however, a significant difference was between group 3and group 2. Group 3 had no statistically significant difference with group 1. P value < 0.05
	Weak	123	49.43	ANOVA/		
	Moderate	296	49.68	0.03		
	Good	59	44.35			
	No-response	10				
5	**Residential area**			One-way ANOVA/	Non-significant	Bonferronipost-hoc test showed no differences between the mean of satisfaction score with residential area.
	Tabriz	227	48.2	0.24		
	Other cities in the province	175	50.82			
	Other cities in Iran	78	47.75			
	No-response	8				

[a] * Patients were visited at clinics of Imam Reza teaching and treatment center Tabriz in 2016. £ The score ranges 0 - 100 (the minimum value = 0, the maximum value = 100)

Table 2. Descriptive Statistics of Patients' (n = 488) Satisfaction Score* with Residents'£ (n = 198) Patient-Physician Communication Skills, Divided by Each of PSQ¥ Items[a]

Number	Items	Mean ± SD	P50	Minimum Score	Maximum Score
1	Making you feel at ease…(being friendly and warm towards you, treating you with respect; not cold or abrupt)	3.12 ± 1.3	3	0	6
2	Letting you tell "your" story…(giving you time to fully describe your illness in your own words; not interrupting or diverting you)	3.06 ± 1.3	3	0	7
3	Really listening…(paying close attention to what you were saying; not looking at the notes or computers as you were talking)	2.91 ± 1.3	3	0	6
4	Being interested in you as a whole person…(asking/knowing relevant details about your life, your situation; not treating you as "just a number")	2.79 ± 1.4	3	0	6
5	Fully understanding your concerns…(communicating that he/she had accurately understood your concerns; not overlooking or dismissing anything)	2.72 ± 1.4	3	0	6
6	Showing care and compassion…(seeming genuinely concerned, connecting with you on a human level; not being indifferent or " detached")	2.74 ± 1.4	3	0	6
7	Being positive…(having a positive approach and a positive attitude; being honest but not negative about your problems)	2.94 ± 1.4	3	0	6
8	Explaining things clearly…(fully answering your questions, explaining clearly, giving you adequate information; not being vague)	3.07 ± 1.5	3	0	6
9	Helping you to take control…(explaining with you what you can do to improve your health yourself; encouraging rather than "lecturing" you)	2.93 ± 1.5	3	0	6
10	Making a plan of action with you…(discussing the options, involving you in decisions as much as you want to be involved; not ignoring your views)	2.86 ± 1.3	3	0	6
11	How would you rate your consultation with this doctor today?	3.05 ± 1.3	3	0	6

[a] * Satisfaction score based on a 7-point Likert scale. £ At clinics of Imam Reza teaching and treatment center Tabriz, 2016. ¥ patient satisfaction score of Royal College of General Practitioners.

communication skills that patients were least satisfied with them should be constantly included in educational,

instructional, and training programs. Medical residents should be efficiently trained for actively listening to patients, being concerned with patients as a human not just with their disease, appreciating patients' concerns, having compassion and positive attitude to them, encouraging patients to improve their health, and finally shared decision making with them. To sum it up, residents should learn to have an illness perspective along with the usual biomedical perspective. The results of some other related studies on this issue (2), (16) and (13) confirm that physicians usually visit patients with a biomedical perspective.

Therefore, it is proposed to continuously train residents in communication skills as a part of their training curriculum and to evaluate the learned communication skills continuously in a clinical setting by professors. This develops communication skills of future physicians ultimately.

4.1. Conclusion

In this study, patients' overall satisfaction with medical residents' patient-physician communication skills was moderate and their satisfaction with most skills was less than the median score of statistical population. It is recommended that training and evaluation of communication skills should be a pivotal part of residents' formal curriculum in order to reinforce medical practice based on both biomedical and illness perspectives and consequently to improve patients' satisfaction and their health outcomes.

Supplementary Material

Supplementary material(s) is available here.

Acknowledgments

Footnote

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