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Original Article

Assessing Physicians' Communication Skills in their Different Medical Specialties Using the Communication Assessment Tool

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Abstract

Objective: This study assesses and compares physicians' communication skills based on their specialties from a patient perspective. We also compare their communication skills considering various dependent and independent variables.

Methods: This cross-sectional study used the Arabic version of the communication assessment tool (CAT) questionnaire for patients who visited family medicine, internal medicine specialty, and surgical specialty clinics in the Outpatient Department of the King Fahad Medical Military Complex in Dhahran, Saudi Arabia.

Results: Of the prospective 400 participants, 365 agreed to participate, a participation rate of 91.2%. The percentage of "excellent" ratings for all of the CAT questions varies between 80% and 90%. A comparison between specialties according to the CAT scores showed significant variation, with surgeons showing higher scores, compared with other specialties. Patient's responses varied widely when compared with the clinical experience of physicians ($P < 0.001$). Furthermore, there was a statistically significant difference in the results between physicians who had attended a communication skills course and those who did not or did not remember, based on patient's responses.

Conclusion: In general, patients were satisfied with the communication skills of the doctors working at King Fahad Medical Military Complex. Doctors from the surgery department received better feedback regarding their communication skills. Based on our results, we recommend that the questionnaire items that received the lowest rating from patients need to be improved to increase patients' overall satisfaction with physicians' communication skills.

Key words: Communication skills, Family medicine, Internal medicine, Surgery

INTRODUCTION

Communication skills are a vital component of physicians' patient management skills and are essential for delivering high-quality health care concerning both the diagnosis and treatment of disease.[1] Good communication skills also improve the physician-patient relationship, which can, in turn, improve compliance to physicians' instruction and satisfaction with the care provided. It is a well-known fact that a successful doctor is the one who knows how to communicate well with their patients. Medical education institutions teach their students to maintain a professional rapport with patients, uphold patients' dignity, and respect their privacy, from the very start. A variety of strategies have been used to assess physicians' communication skills, including behavioral checklists, thorough examinations and evaluations, and patients' satisfaction surveys.[2-6]

Patients' feedback concerning physicians' interpersonal and communication skills should be included in any evaluation system.[1] Studies have been conducted to assess how a doctor's communication skills affect patients' satisfaction.[7,8] Experience alone is not the only way to enhance communication skills; additional courses, lectures, or workshops could help to improve doctors' communication skills with patients. There

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are certain tools that we can use to evaluate patients' satisfaction with doctors' communication skills. However, when researchers used multiple elements in one study to evaluate communication skills, they often treated treatment satisfaction and communication skills as the same variable.[9,10] It is, therefore, difficult to draw accurate conclusions when using these tools and to highlight areas in need of improvement for physicians concerning their communication skills.[11]

The Communication Assessment Tool (CAT) was developed by Makoul *et al.* to assess the patients' perception of physicians' communication skills more precisely, compared with other previously developed assessment tools.[10] The original researchers documented all the steps of developing the instrument that made the tool reliable and valid. Items of the CAT focus on basic communication skill elements and it is vital to obtain patients' responses right after their visit to physician.

In this study, we investigated the impact of the physicians' specialty on their communication skills by comparing physicians' communication skills from a patient perspective in different specialties. Even though the CAT has been used extensively to assess doctors' communication skills, a comparison of these skills between different specialties has not been done. These specialties include family medicine, internal medicine specialty, and surgical specialty. We also compared their communication skills from the perspective of various dependent and independent variables. This comparison allowed us to understand the impact of specialty on physicians' communication skills.

METHODS

This cross-sectional study was conducted from January to April 2019 at outpatient's clinics of the King Fahad Medical Military Complex in Dhahran, Saudi Arabia. We obtained ethics approval for the study from the hospital's ethics committee. We used a stratified sampling technique to calculate sample size and decided to divide the study population into three subgroups: Family medicine, internal medicine specialty, and surgery clinic attendees. The calculated sample sizes for the strata were 298 for family medicine, 70 for internal medicine, and 32 for surgery clinics. Therefore, the total calculated sample size for the study was 400.

Only patients who visited the previously mentioned three outpatient clinics at the King Fahad Medical Military Complex were considered as participants for the study. If the patient was a minor, the parents or guardian could answer the questions. Two carefully selected interviewers with sound interpersonal communication skills assisted the researcher to interview patients or their guardians. The interviewers also received specific training on conducting the interviews and completing the questionnaire. One interviewer was dedicated to each of the targeted clinics and data were collected through face-to-face interviews. The interviewers introduced themselves, explained the purpose of the study, and obtained informed consent from the patient to participate in the study before starting interview. Participation was voluntary and role of interviewer was to document the patient's answers in an unbiased way, without any interpretations or leading questions.

Only patients who visited the clinics could participate in the study and this was the only inclusion criteria. The exclusion criteria include (1) non-Arabic patients and (2) patient with communication difficulty for medical reasons, i.e., medically unstable or psychiatric patients. The Arabic version of the CAT questionnaire was used after obtaining permission from authors. The tool was developed, translated, and validated by Makoul *et al.* to measure patients' immediate perception of physician communication skills. This questionnaire consists of three parts: The first and second parts were created by the researcher and the third part is the CAT questionnaire. The first part addresses the respondent to explain the purpose of the study and obtain their consent to participate in the study. The second part contains sociodemographic questions, while the third part comprises 14 CAT research questions.[10] To evaluate the communication and interpersonal skills of the physician, the CAT questionnaire asks the respondents to rate each statement provided using a 5-point Likert-type scale (1 = poor, 2 = fair, 3 = good, 4 = very good, and 5 = excellent). Respondents could also choose "do not know" or "not applicable."

Doctors working in the selected clinics were also asked a number of questions developed by the researcher. The purpose of this part of the data collection process was to evaluate patient's responses while considering information concerning doctors' age, gender, native language, specialty, professional title, clinical experience, and their last time attending a communication skills lecture or workshop. There were 25 doctors who agreed to participate and responded to the questions.

The Statistical Package for the Social Sciences v23 was used for data analysis. For each survey, an overall mean score was calculated as the sum of the items divided by total number of items answered. The percentage of items answered with a rating of 5 ("excellent") was also calculated by dividing the percentage of items scored as "excellent" by the number of items responded to. Cross-tabulation and bar diagrams were used to present descriptive statistics. For inferential statistics, an

analysis of variance (ANOVA) and *post hoc* test were used when the mean score was compared with the type of clinic visited. Two independent sample *t*-tests were used when mean score was tested with the gender of patients. Finally, the average CAT score was also tested with doctors' gender and native language using two independent sample *t*-tests. The physicians' professional title, experience, and last communication skills course attended were tested with an average score using ANOVA and *post hoc* tests. The significance level was set at 0.05.

RESULTS

Of the 400 patients invited to participate, 365 agreed and completed the questionnaire, a response rate of 91.2%. Considering the mean age, most respondents were aged between 45 and 60 years old. Furthermore, there were more male patients than female patients. Table 1 presents the patients' demographic data.

The 25 physicians from the selected clinics provided their demographics and educational information. The demographic data of these doctors are presented in Table 2. Of the 25 doctors who participated in the study, 12 had attended communication skills courses during the past 2 years, four attended 3–5 years ago, one attended 6–10 years ago, and two reported that they attended one more than 10 years ago. Three of them did not remember when they attended and three replied that they had never attended.

The results of the CAT analysis are presented in Table 3. The percentage of "excellent" ratings, the average score for each question, and the medians are provided. The lowest average score for a question was 4.22 and the highest 4.52. The effect of attending a communication skills course was analyzed using patients' CAT responses. It was found that only 82 of the 365 respondents received treatment from doctors who either did not attend any course or did not remember. The average of the "excellent" scores did vary significantly between the two groups of doctors (those who attended and those who did not attend or did not remember). Furthermore, the effect of attending the communication skills course on CAT score was also analyzed; however, the results were statistically insignificant with $P = 0.087$. Despite the above, Figure 1 shows an upward trend in the average of "excellent" rating in relation to doctors' experience in years. This trend was statistically significant with $P < 0.001$.

Figure 2 presents a comparison of the statements from the CAT questionnaire according to doctor's specialties. The statistical significance values in Table 4 can be read in two ways: Overall significance and significance between the two specialties. The overall significance was observed for each question. Furthermore, a group-wise comparison of specialties provided insignificant results at four decimal places [Table 4]. Concerning question 1, the satisfaction rate for internal medicine specialty and family medicine doctors was the same, while doctors from the surgery department got the highest satisfaction rate. For questions 9 and 10, the satisfaction rate for surgery doctors was also significantly

Table 1: Patients' demographic

	n (%)
Age (years)	
24 years or younger	90 (24.7)
25–44	135 (37.0)
45–60	95 (26.0)
>60 years	45 (12.3)
Gender	
Male	191 (52.3)
Female	174 (47.7)
Education	
Illiterate	17 (4.7)
Intermediate or less	38 (10.4)
Secondary	134 (36.7)
Higher than secondary	28 (7.7)
University	117 (32.1)
Master's or PhD	31 (8.5)

Table 2: Doctors' demographic and educational information (*n*=25)

	n (%)
Age (years)	
30 years or younger	5 (20.0)
31–39	13 (52.0)
40–49	6 (24.0)
60 years or older	1 (4.0)
Gender	
Male	16 (64.0)
Female	9 (36.0)
Specialty	
Medical specialty	7 (28.0)
Family medicine	13 (52.0)
Surgery	5 (20.0)
Native language	
Arabic	23 (92.0)
Non-Arabic	2 (8.0)
Professional title	
Resident	6 (24.0)
Registrar	3 (12.0)
Senior registrar	5 (20.0)
Consultant	11 (44.0)
Clinical experience	
5 years or fewer	5 (20.0)
6–10 years	8 (32.0)
11–15 years	5 (20.0)
16–20 years	3 (12.0)
More than 20 years	4 (16.0)
Attendance of communication skills course	
2 years or fewer	12 (48.0)
3–5 years	4 (16)
6–10 years	1 (4)
More than 10 years	2 (8)
Cannot remember	3 (12)
Never attended	3 (12)

Table 3: Overall percentage (%) of "excellent" ratings and mean for individual Communication Assessment Tool item

Communication Assessment Tool item	Rating (% excellent)	Mean (standard deviation)	Median
Greeted me in a way that made me feel comfortable	85.64	4.28 (0.85)	5
Treated me with respect	90.35	4.52 (0.69)	5
Showed interest in my ideas about my health	87.56	4.38 (0.76)	5
Understood my main health concern	86.57	4.33 (0.82)	5
Paid attention to me (looked at me, listened carefully)	85.92	4.30 (0.79)	4
Let me speak without interruptions	86.58	4.33 (0.76)	4
Gave me as much information as I wanted	87.29	4.36 (0.77)	5
Spoke in terms I could understand	88.33	4.42 (0.74)	5
Checked to be sure I understand everything	84.99	4.25 (0.83)	4
Encouraged me to ask questions	84.49	4.22 (0.86)	4
Involved me in decisions as much as I wanted	85.97	4.30 (0.84)	5
Discussed next step, including any follow-up plans	86.79	4.34 (0.82)	5
Showed care and concern	88.49	4.42 (0.75)	5
Spent the right amount of time with me	89.48	4.47 (0.79)	5

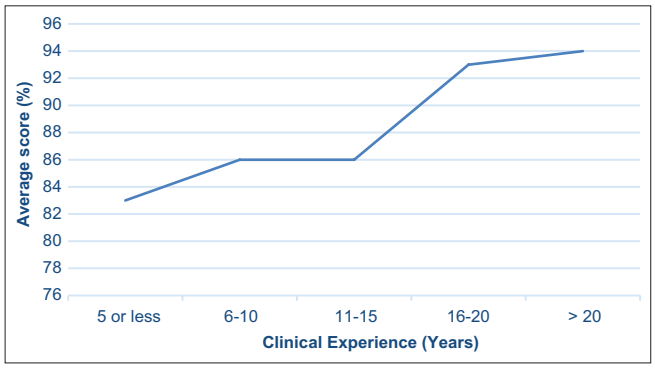

Figure 1: Relationship between doctors' clinical experience (years) and average "excellent" Communication Assessment Tool score

higher than that of the internal medicine specialty and family medicine doctors. In question 14, internal medicine specialty and surgery doctors scored the highest.

No statistical significance was observed in the variations of satisfaction level with doctors' communication skills based on their gender. In addition, except for questions 13 and 14, results concerning doctors' native language were also insignificant, meaning that patients were more satisfied with the communication skills of doctors for whom their native language was Arabic than non-Arabic doctors when asked about the care and concern showed by the doctor ($P = 0.034$). Similarly, significantly different responses were found concerning the time spent by the doctors with patients. Patients were satisfied with doctors for whom Arabic was their native language ($P = 0.016$).

DISCUSSION

The findings of the study showed that patients were generally highly satisfied with the communication skills of their physicians. The minimum average rating for all items was 4.2, which falls between "very good" and "excellent," according to the 5-point scale used in the questionnaire. There are very few existing studies from Saudi Arabia that used the CAT questionnaire to assess the patients' satisfaction with doctors' communication skills. Alsaad *et al.* conducted a study in Riyadh in 2016 and found that the lowest rate on items was 4.5.[12] In addition, the lowest rate of a CAT questionnaire item was reported to be 4.47 in a study conducted in the United States.[11] Considering all these studies, it can be seen that the CAT questionnaire tends to elicit "excellent" ratings for the majority of the questions. This effect can also be observed in studies that used other tools to assess patients' satisfaction.[13-16]

A comparison of patient's responses according to the type of clinics they visited showed that the percentage of "excellent" responses was the highest for surgery doctors, compared with internal medicine specialty and family medicine doctors. Patients gave the highest ratings for surgery doctors compared with the other specialties for questions 1, 9, and 10. These three questions concerned how a doctor communicates with their patient. This could be because surgery doctors usually make a point of making their patients completely aware of what the surgical procedure entails and why the procedure is required. Patients need to sign documentation before any surgical procedure; therefore, making them completely aware of all aspects of the procedure is always required. Another possible reason for the high satisfaction with surgery doctors compared with other specialties could be the consistency of patients' visit to a specific doctor when it involves surgery. Multiple visits to a specific doctor can help to develop better understanding and good doctor-patient relationship, which, in turn, develops good communication levels between doctor and patient. Due to limited available literature of the use of the CAT questionnaire to compare various medical specialties, it was difficult to compare the

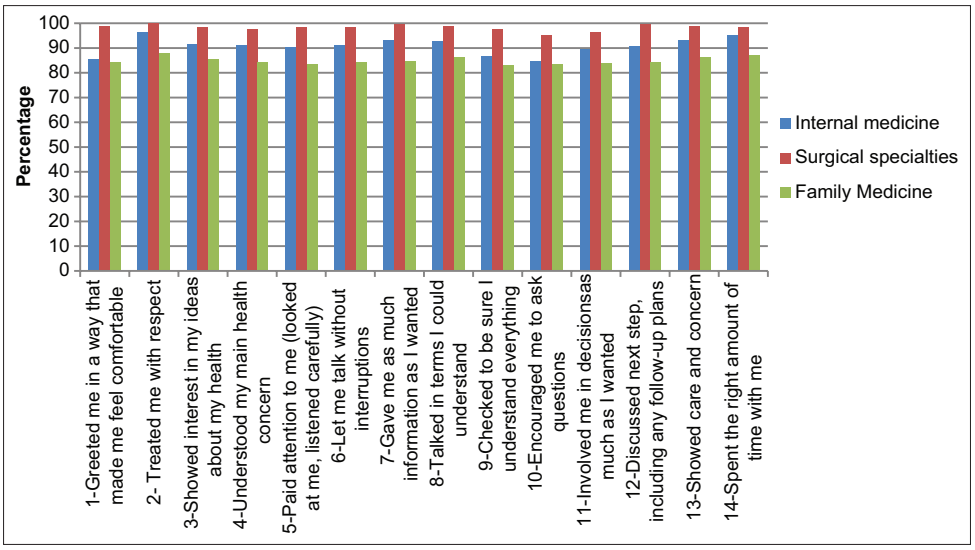

Figure 2: Mean percentages of "excellent" ratings according to doctors' specialty

Table 4: Specialty-based comparison of CAT responses

CAT item	% rated as excellent				M versus S	M versus F	S versus F
	M	S	F	*P*-value			
Greeted me in a way that made me feel comfortable	85.54	98.75	84.10	0.000*	0.00*	0.548	0.00*
Treated me with respect	96.31	100.00	87.76	0.000*	0.017*	0.00*	0.00*
Showed interest in my ideas about my health	91.38	98.12	85.37	0.000*	0.005*	0.004*	0.00*
Understood my main health concern	91.08	97.50	84.18	0.000*	0.023*	0.002*	0.00*
Paid attention to me (looked at me, listened carefully)	90.46	98.12	83.35	0.000*	0.002*	0.001*	0.00*
Let me talk without interruptions	91.07	98.12	84.10	0.000*	0.001*	0.001*	0.00*
Gave me as much information as I wanted	92.92	99.37	84.47	0.000*	0.00*	0.00*	0.00*
Talked in terms I could understand	92.61	98.75	86.04	0.000*	0.002*	0.001*	0.00*
Checked to be sure I understand everything	86.76	97.50	83.05	0.000*	0.00*	0.106	0.00*
Encouraged me to ask questions	84.61	95.00	83.20	0.000*	0.004*	0.55	0.00*
Involved me in decisions as much as I wanted	89.23	96.25	83.95	0.000*	0.023*	0.021*	0.00*
Discussed next step, including any follow-up plans	90.76	99.37	84.32	0.000*	0.00*	0.005*	0.00*
Showed care and concern	92.92	98.75	86.19	0.000*	0.013*	0.001*	0.00*
Spent the right amount of time with me	95.07	98.12	87.08	0.000*	0.20	0.00*	0.00*

*Statistically significant at 0.05 level of significance. CAT: Communication Assessment Tool

present study's findings with previously conducted studies. However, similar to our findings, Stausmire *et al.* found that questions 1 and 10 were among lowest rated overall.[17]

Another significant finding of this study was the effect of doctors' native language when the patients were only Arabic speakers. It was found that due to the language barrier, doctors spend less time with the patients and are perhaps not able to show their concern and care for the patients clearly to satisfy their patients. The gender of the physicians was also compared with the CAT scores, but no statistical significance was observed. Furthermore, the effect of attending communication skills lecture or workshop in recent years also did not have any significant relationship with patients' satisfaction with physicians' communication skills. Our findings revealed that the highest rating was received by the registrar for almost all the questions being asked. This may also have an explanation: The consistency of patient's visits with the registrar would be higher, compared with residents and consultants; therefore, the communication between doctor and patient would be better. We also noted that among the 365 participants, only 19 received treatment from registrars, unlike residents or consultants, who treated more than 100 of the patients that participated in the study. The small number of patients seen by registrars could possibly affect the comparison, considering that it showed the highest satisfaction of all the doctors.

Limitations

First, there was substantial variability in the number of surveys gathered per physician. Makoul *et al.* recommended a minimum of 20 surveys per doctor to reflect patients' perception accurately.[10] Second, the sample size was not quite enough to represent a health-care facility with a large number of patients registered and receiving treatment.

Studies with large sample sizes are recommended in future as well as including various specialties to provide more valid results and better comparison.

CONCLUSION

This study showed that patients were satisfied with the communication skills of the doctors working at King Fahad Medical Military Complex. Patients showed higher satisfaction with surgery doctors, compared with other specialties. However, there is still room for improvement in doctors' communication skills. This can be accomplished by arranging lectures and workshops to improve communication. We recommend that similar studies be conducted at other hospitals or primary health-care clinics to map out a larger picture of the communication skills of the doctors practicing in the Kingdom of Saudi Arabia.

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