Communication Skills of Resident Physicians in Aseer Region, Saudi Arabia

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Research article

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Abstract

Background: Effective communication improves patient-physician relationship and the overall quality of care.

Objectives: The aim of this study was to evaluate communication skills of resident physicians at different health care facilities in Abha, Saudi Arabia.

Methods: A cross-sectional, questionnaire-based study on a total of 210 resident doctors.

Results: The communication skills scores were nearly normally distributed with a mean score of 113.30 ± 32.25 . In comparing the skills by various socio-demographic factors, it was noted that gender and age played a significant role in specific communication skills. There was significant difference in mean scores of younger and older physicians in domains of interpretation and clarification ($p < 0.001$), asking ($p < 0.001$), feedback ($p < 0.01$), punishment and reward skills ($p < 0.001$). In asking skills, there was significant difference in mean scores of male and females ($p < 0.001$). Residents in the specialty of Internal Medicine had significantly higher scores than other specialties (CI 95% = 107.74–127.07; $p < 0.001$). Fifth-year residents had significantly higher scores than those of other levels (CI 95% = 123.94–142.05; $p < 0.001$). Residents with more than one year of experience after the basic degree had significantly higher scores than residents with lesser experience (CI 95% = 123.76–137.68; $p < 0.001$). Residents who had taken training in communication skills had higher scores than those who had no prior training (CI 95% = 112.78–124.48; $p = 0.07$).

Conclusion: The resident physicians are lacking in communication skills. Results of this study point towards a lingering need to focus on training of physicians in effective communication and efforts should be made to include it as a core competency in medical curriculum.

Background:

Communication is an essential skill for dealing with and relating to other people. Health care is delivered effectively when doctors communicate competently with patients, families, and carers. Strong communication skills lay the foundation for a successful doctor–patient relationship, which is considered to be the core element in the ethical principles of medicine.(1,2) Effective communication enhances the patient’s understanding of treatment, and improves compliance and health outcomes. It can also make the professional–patient relationship a more equitable one, ensuring a better quality of care and improved patient satisfaction (3). The importance of health communication as an essential component of the patient experience was outlined in the WHO world health report 2000 (4). Strong doctor–patient communication increases the patient’s confidence, thus enabling them to disclose relevant information and adhere to prescribed treatment (5). Better doctor–patient communication is associated with better patient health outcomes (6-7).

Doctor–patient communication is affected by a range of factors, namely, socio cultural norms, physician training, and organizational factors (8). Resident physicians form an important part of the health workforce and are often the first and most commonly encountered health professional for patients receiving care in teaching hospitals. Therefore, residents must have good communication skills to improve the overall success of management (9). Although research on the communication process of medical consultations has identified the quality of health care provider communication to be a vital aspect of care, and provided growing evidence of the influence of patient–provider communication on caregiver behaviors (10), the quality and impact of provider communication is not well documented in Saudi Arabia. The few studies conducted in Saudi Arabia have largely been confined to the capital Riyadh (8,9,11,12), with the exception of one regional study. Two of the studies in Saudi Arabia focused on residents of a particular specialty, and the others dealt with primary health care physicians and pediatric specialists. Some of the studies provided a dual perspective, i.e., that of the patients and the treating physician.

A brief overview of the previous studies helped us to formulate our research question and is provided here. Al-Zahrani et al. conducted a cross-sectional study to assess barriers, practice attitude, and knowledge of primary health care physicians about communication skills during medical consultations in primary health care centers at the National Guard Hospital in Riyadh, Saudi Arabia. A positive correlation between age, years of experience, and practicing communication skills was found. The study concluded that the knowledge of communication skills can improve with training, age, and experience. However, the improved knowledge does not affect the practice of communication skills (8). In a study by Alnasser et al., physicians and parents from general pediatrics wards at King Saud University Medical City completed a validated Criteria Cognitive Aptitude Test (CAT-T) questionnaire and a translated version of the CAT-T questionnaire, respectively (12). The results revealed a higher level of confidence in communication skills among experienced physicians compared to young physicians, who expressed concerns regarding their communication with parents, particularly concerning decision making. The parents rated the physicians' skill of introduction to be higher than the physicians' self-rating and that of active listening as poor. An important finding of this study was that the parents' satisfaction with the physicians' communication skills was inversely related to their level of education. Alsaad et al. studied patients' perceptions of the communication skills of family medicine residents. The study focused on perspectives of patients that were under the care of resident physicians from four family medicine residency programs in Riyadh. The results demonstrated that patients rated male residents higher than female residents with a significant difference (11). Pediatrics trainee residents working at 13 different hospitals in Saudi Arabia were interviewed to determine their attitude and confidence in the use of communication skills in the performance of their primary duties. The majority of the residents were shown to consider learning communication skills a priority in establishing a good patient–doctor relationship, and nearly one-third were very confident with regard to their communication skills (9).

Studies of the impact of postgraduate training in communication skills have identified a need to provide more effective communication skills teaching in clinical practice (13). In 2015, the Saudi Commission for Health Specialties (SCFHS) revised all Training Program Curriculums to include communication skills.

Specialties such as Family Medicine consider communication and consultation skills part of the training program, but the training approaches in most of these programs are primarily theoretical (14). To the best of our knowledge, no study has been conducted that focuses on the communication skills of resident physicians across specialties of the Saudi Board of Health Specialties in the Aseer region. This study was conducted to assess communication skills among resident physicians at health care facilities in the Aseer region, and to identify the socio-demographic and job factors that could affect those skills.

Methods:

This cross-sectional study took place between January and July 2018 in Abha City, which is the capital of the Aseer Region in Kingdom of Saudi Arabia (KSA). All residents in the specialty programs were invited to participate. A total of 210 resident physicians from the specialties of Family Medicine, Internal Medicine, Pediatrics, Obstetrics/Gynecology, and General Surgery took part in the study. The questionnaire was distributed to respondents at their place of training, namely, the outpatient clinics of Aseer Central Hospital, Abha Maternity and Children's Hospital, and primary health care centers accredited for Family Medicine training. All participants were briefed by the researcher about the objectives of the study and assured about the voluntary nature of their participation, anonymity and full confidentiality of their responses through an information sheet attached with the questionnaire. The study instrument was based on a self-administered pre-validated questionnaire from a previous study in Iran (15) for assessing the communication skills. It also included questions on personal characteristics, namely, age, gender, program of residency (specialty), level of residency (i.e., year of residency), years of experience (prior to joining the residency program), and formal training in communication skills. The second part comprised questions related to interpersonal communication skills and barriers of communication (not included in this paper). The alpha Cronbach coefficient ($\alpha = 0.89$) of the questionnaire was reported in the source study. The interpersonal communication skills section included 36 items grouped into seven domains of communication skills, i.e., general communication (6 items), speaking (5 items), listening (5 items), interpretation and clarification (5 items), asking (5 items), feedback (5 items), and reward and punishment (5 items). For each statement, there were 5 Likert-scale responses (never, rarely, sometimes, mostly, and always). The score for each item ranged from 1 to 5. The total score ranged from 36 to 180. The Statistical Package for Social Sciences version 23.0 (16) was used for data entry and analysis. In the presentation of results, categorical variables are presented as frequency and percentage distribution, and continuous variables as means and standard deviations. To examine the differences in the communication skills scores of physicians according to their socio-demographic and job characteristics, an independent t-test and ANOVA were applied. All tests were two-tailed, and results considered significant at 95% CI and a *p*-value less than 0.05.

Results:

Table 1 shows the background characteristics of participants. The total number of physicians included in the study was *n* = 210 doctors. There were 122 (58.1%) males and 88 (41.9%) females among the

participating residents. In terms of age, the mean age was 28.5 years ($SD \pm 1.78$ years), with a range of 25–33 years. The median age was 29 years. The majority ($n = 66$, 31.4%) were Internal Medicine trainees, followed by 57 (27.1%) who were Family Medicine trainees, 35 (16.7%) who were Pediatrics trainees, 31 (14.8%) who were Obstetrics and Gynecology trainees, and 21 (10%) who were Surgery trainees. The majority ($n = 63$, 30%) were second year resident (R2) trainees, followed by 60 (28.6%) R3 trainees, 45 (21.4%) R1 trainees, 36 (17.1%) R4 trainees, and only 6 (2.9%) R5 trainees. Only 73 (34.8%) had pre-residency clinical experience, compared to 137 (65.2%) who did not. This pre-residency clinical experience was less than one year for 55 (26.2%) trainees, and more than a year for 26 (12.4%) trainees. Previous training on communication skills was reported by 74 participants (35%), of which, 16.7 % had received continuing medical education (CME) and 18.7% had received other training methods.

Table 2 depicts the details of the communication skills scores of the study participants. The communication skills scores were nearly normally distributed with a mean score of 113.30 ± 32.25 and median of 108. The skewness was 0.261 and kurtosis was -0.407 . The mean and standard deviation of the total score of general communication skills was 20.46 ± 4.94 . For speaking and listening skills, the mean and SD were similar: 16.59 ± 4.54 and 16.34 ± 4.15 , respectively. For interpretation and clarification, and feedback, the scores were lower at 14.79 ± 5.24 and 14.80 ± 5.33 , respectively.

In comparing the skills by various socio-demographic factors, it was noted that gender and age played a significant role in specific communication skills. There was significant difference in mean scores of younger and older physicians in interpretation and clarification skills ($p < 0.001$), asking skills ($p < 0.001$), feedback skills ($p < 0.01$), and punishment and reward skills ($p < 0.001$). In asking skills, there was significant difference in mean scores of male and females ($p < 0.001$). Other socio-demographic factors did not show an effect on the communication skills of the participants. This information is presented in Table 3.

The differences between groups based on specialty, residency level, years of experience, training in communication skills, and type of training were studied for the total communication skills scores. Post hoc analysis was used to confirm the differences. Residents in the specialty of Internal Medicine had significantly higher scores than other specialties (CI 95% = 88.6488–102.3688; $p < 0.001$). Fifth-year residents had significantly higher scores than those of other levels (CI 95% = 81.3998–99.9335; $p < 0.001$). Residents with more than one year of experience after the basic degree had significantly higher scores than residents with lesser experience (CI 95% = 123.7650–137.6870; $p < 0.001$). Residents who had taken training in CME in communication skills had significantly higher scores than those who had no prior training or had attended other methods of training (CI 95% = 121.4108–135.3320; $p < 0.05$). Table 4 presents the above findings. The correlation between the total years of experience and communication skills mean score was significant at the 0.01 level, $r = 0.443$ (not shown).

Discussion:

It is well-known that communication skills are a pillar of clinical practice (1). To be an effective doctor, in addition to knowledge and technical skills, communication skills are also essential. These skills are not limited to talking, but include listening and nonverbal communication (17). The findings of the current study indicate that the level of communication skills of local resident trainees was not satisfactory and are similar to communication skill levels reported in regional studies (8,9,11,12,18).

Our study uncovered several important factors that could help understand communication issues among resident physicians. One of the findings of our investigation was that female gender is associated with better asking skills, whereas, in other components, there were no differences between female and male residents. This is contrary to past studies where Saudi patients rated male trainees higher than females (11). We also confirmed that older residents have higher scores in communication skills.

Pre-residence clinical experience also stood out as a factor for better communication skills. Work experience is an established factor in improving and refining communication skills for doctors and medical students (19). Interaction with patients leads to better understanding of their needs, better recognition of verbal and non-verbal cues, and better communication with both patients and their significant others (17,19). In this study, we found that the number of years of clinical experience had a strong association with better communication skills. This could be expected and is consistent with past research (20). In addition, local research has confirmed that experienced senior physicians are more competent in terms of communication skills than their younger colleagues (12).

In our study, the specific specialty did not affect communication skills, with the exception of Internal Medicine. Although Family Medicine necessitates particular communication skills, as it deals at the primary care level with patients of all ages and social backgrounds, and their families, their mean scores were lower than their counterparts in Internal Medicine, Surgery, and Obstetrics and Gynecology. Other studies have reported Family Medicine trainees are more skilled than Surgical trainees in providing information (18). It should also be noted that patients' perceptions of the communication skills of Family Medicine trainees in Saudi Arabia were shown to be relatively favorable in previous studies, however, this finding could not be replicated in the current study (11). This is an important finding that points towards gaps in specialty training in Family Medicine in the region and warrants further exploration. For pediatric trainees, there is inherent complexity around effective communication with patients and families (21). Communication skills' training for medical students has gained more focus recently (22), particularly in surgical specialties such as Obstetrics and Gynecology (23) and General Surgery (24), which may have some role in our study findings.

An important finding of our investigation is that communication skills were affected by the level of residency and attendance at training through CME events. In terms of the structure of the current training system for communication skills development, this is a positive finding. This clearly complements international literature that emphasizes improvement in communication skills with progression in training for residents across specialties (25). Training in communication skills has become a core competency in modern medical education (26) given its established positive effect on various clinical outcomes (27).

Effective training and teaching has been shown globally to enhance communication skills among post-graduate medical residents (28). Superior communication skills equip doctors with confidence in dealing with difficult situations and improve patient satisfaction (29,30). Communication thus deserves greater focus during doctors' training.

Any interpretation of the results of this study should be mindful of one important limitation. The cross-sectional design does not imply causation of poor levels of communication skills by the significant factors studied. However, it is clear that the communication skills of residents are lacking. Previous research has reported differences between self and patient perceptions of physicians' communication skills (31). This comparison is lacking in the current work and is one of its limitations.

Conclusions:

Results of this study suggest that communication skills are lacking among resident physicians and are affected by various factors like specialty and clinical experience. There is a lingering need to focus on training of physicians in effective communication and efforts should be made to include it as a core competency in medical curriculum, right from the undergraduate years. Considering the results of this study, and in light of the observations made in previous similar studies, the structure of the current medical curriculum in Saudi Arabia, particularly the Saudi Board post-graduate training in communication skills requires revision and reconsideration to bring it in line with international evidence-based standards. To achieve this goal, further longitudinal research is required to evaluate different educational interventions and their effects in enhancing communication skills amongst resident physicians.

Declaration:

On behalf of all authors, I declare that

- Ethical Consent- Ethical approval was obtained for the study from the King Khalid University Research Ethics Committee (REC#2018-01-16). Consent to participate was obtained with the filled survey questionnaire.

- Consent to publish: All authors have consented to publish the study findings

- Availability of data and materials: The datasets generated and analysed during the current study are available in the [Mendeley Data] repository, V2, doi: 10.17632/k7yr43yhv6.2

<http://dx.doi.org/10.17632/k7yr43yhv6.2>

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- Authors' Contributions: The authors contributed equally to the concept and design of the study, manuscript writing, editing and manuscript review. Author 1 collected the data and author 2 analysed the data.

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The authors declare this manuscript is based on original work and the work described has not been published, is not under consideration for publication elsewhere. The manuscript is approved by all authors and if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright holder.

Signature

Name Aesha Farheen Siddiqui

Date 05/08/2020

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Tables

Table 1:
Socio-demographic and Training Information of the study Participants.

Characteristic	Frequency (210)	Percentage (%)
Gender		
Males	122	58.1%
Females	88	41.9%
Age in years mean $\pm$ SD (median)	28.5 $\pm$ 1.78 (29)	
Program		
Internal Medicine	66	31.4%
Family Medicine	57	27.1%
Pediatrics	35	16.7%
Obstetrics and Gynecology	31	14.8%
Surgery	21	10%
Residency Level		
R1	45	21.4%
R2	63	30%
R3	60	28.6%
R4	36	17.1%
R5	6	2.9%
Pre-residency Clinical Experience		
$\leq$ 1 year	137	65.2%
>1 year	73	34.8%
Training Received		
Yes	74	35.2%
No	136	64.8%
Method of Training (n=74)		
CME	35	16.7%
Other methods (self-learning, online training etc.)	39	18.6%

Table 2:
Communication skill scores of participants for each skill component.

Skill component	Item	Item Mean $\pm$ SD	Component Mean $\pm$ SD
General Communication Total score-30	1. I greet my patients	3.35 $\pm$ 0.82	20.46 $\pm$ 4.94
	2. I talk with a smile	3.55 $\pm$ 0.87	
	3. I appear with sophisticated looking, clean and tidy	3.53 $\pm$ 0.91	
	4. I have integrity and privacy in communication	3.40 $\pm$ 0.98	
	5. During communication, I am interested in comfortable physical space conditions	3.24 $\pm$ 0.91	
	6. I make sure to end the communication in a polite manner	3.36 $\pm$ 0.88	
Speaking Total score -25	1. Talking tough, dignified, quiet, and fluency	3.46 $\pm$ 0.91	16.59 $\pm$ 4.54
	2. I try to use appropriate, simple and understandable words	3.33 $\pm$ 0.99	
	3. I try to use the head, face, hands and body as appropriately	3.34 $\pm$ 1.01	
	4. I may use walking and sitting when needed	3.26 $\pm$ 0.97	
	5. I speak with passion	3.18 $\pm$ 1.01	
Listening Total score 25	1. I listen carefully to what the patient expresses	3.31 $\pm$ 0.90	16.34 $\pm$ 4.15
	2. I pay careful attention to the tone and pace of speech and non-verbal gestures	3.30 $\pm$ 0.91	
	3. I frequently put myself in his/her position in order to better understand him/her	3.21 $\pm$ 0.91	
	4. I do not interrupt his/her talk	3.24 $\pm$ 0.95	
	5. I Don't look away from patient at the time of listening	3.25 $\pm$ 0.90	
Interpretation Clarification	1. I repeat important points in brief to the patient	2.86 $\pm$ 1.09	14.79 $\pm$ 5.24

Total score-25	2. I repeat his/her talk after getting approval from him/her	2.85 ± 1.16	
	3. I do not confirm his negative descriptions from himself	2.94 ± 1.11	
	4. I clarify the question, if it seems to be vague	3.06 ± 1.08	
	5. I pay attention to others' non-verbal gestures	3.05 ± 1.11	
Asking	1. I planning for a proper question to understand audience's feelings and concerns	3.08 ± 1.11	15.09 ± 5.14
Total score -25	2. I make sure to use friendly and respectful tone and pace of the question	3.10 ± 1.19	
	3. I outline a subject and wait to hear the same answer for the same questions	3.00 ± 1.03	
	4. I avoid questions with the word "Why?"	2.93 ± 1.06	
	5. I avoid questions that they answer "Yes" or "No"	2.97 ± 1.10	
Feedback	1. I evaluate the views not what the patient implies	3.02 ± 1.04	14.80 ± 5.33
Total score -25	2. I give feedback about his/ her new behaviors	2.95 ± 1.13	
	3. I give feedback about his/her inconsistent behavior	2.96 ± 1.12	
	4. I refusing giving feedback on several subjects simultaneously	2.89 ± 1.12	
	5. I give feedback on the proper time	2.96 ± 1.13	
Punishment-Reward	1. I encourage to continue talking with the proper words	3.10 ± 1.16	15.21 ± 5.45
Total score -25	2. I encourage to continue speaking with the proper head and body movements	3.09 ± 1.18	
	3. I demonstrate understanding of the emotions and the decisions of the audiences	3.00 ± 1.12	
	4. I show important feelings and decisions to the patient	3.03 ± 1.12	
	5. I refrain from blaming and judging about patient	2.98 ± 1.10	

Table 3:
Comparison of communication skills scores of the participants by their age and gender.

Skill	Variable (Age, Gender)	Mean ± S.D.	t	P value	Mean diff	SE diff	CI 95% Lower Upper	
General Communication	≤29 years	20.16 ± 4.61	-1.394	0.165	-1.050	0.753	-2.534	0.434
	>29 years	21.21 ± 5.64						
	Male	20.87 ± 4.57	1.420	0.157	.979	0.689	-.379	2.338
	Female	19.89 ± 5.38						
Speaking	≤29 years	16.24 ± 4.43	-1.765	0.079	-1.220	0.691	-2.582	0.142
	>29 years	17.46 ± 4.73						
	Male	16.43 ± 4.49	-0.603	0.547	-0.383	0.636	-1.639	0.871
	Female	16.81 ± 4.62						
Listening	≤29 years	16.00 ± 3.86	-1.867	0.063	-1.176	0.630	-2.419	0.066
	>29 years	17.18 ± 4.72						
	Male	16.18 ± 3.93	-0.667	0.505	-0.387	0.581	-1.533	0.758
	Female	16.56 ± 4.45						
Interpretation and clarification	≤29 years	13.94 ± 5.15	-3.857	0.000	-2.993	0.776	-4.523	-1.463
	>29 years	16.93 ± 4.88						
	Male	14.27 ± 5.51	-1.687	0.093	-1.232	0.730	-2.672	0.207
	Female	15.51 ± 4.78						
Asking	≤29 years	14.27 ± 5.10	-3.752	0.000	-2.860	0.762	-4.362	-1.357

	>29 years	17.13 ± 4.69						
	Male	14.26 ± 5.42	-2.791	0.006	-1.976	0.708	-3.372	-0.580
	Female	16.23 ± 4.50						
Feedback	≤29 years	14.07 ± 5.30	-3.187	0.002	-2.543	0.797	-4.116	-0.970
	>29 years	16.61 ± 5.00						
	Male	14.26 ± 5.57	-1.727	0.086	-1.283	0.742	-2.747	0.181
	Female	15.54 ± 4.91						
Punishment - Reward	≤29 years	14.28 ± 5.33	-4.063	0.000	-3.263	0.803	-4.846	-1.679
	>29 years	17.55 ± 5.06						
	Male	15.01 ± 5.90	-0.634	0.527	-0.483	0.763	-1.988	1.02125
	Female	15.50 ± 4.76						

Table 4:

Comparison of communication skills scores of the participants by their training characteristics.

Variable	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		F	P
					Lower Bound	Upper Bound		
Specialty								
Family medicine	57	95.50	25.85	3.42	88.64	102.36	7.55	<0.001
Pediatrics	35	116.02	29.88	5.05	105.76	126.29		
Surgery	21	122.42	13.68	2.98	116.19	128.65		
Internal medicine	66	117.40	39.32	4.84	107.74	127.07		
Obstetrics and Gynecology	31	128.06	24.09	4.32	119.22	136.90		
Year of residency								
R1	45	90.66	30.84	4.59	81.39	99.93	8.82	<0.001
R2	63	115.69	26.17	3.24	109.04	122.22		
R3	60	122.48	31.107	4.01	114.44	130.51		
R4	36	118.97	35.317	5.88	107.02	130.92		
R5	6	133.00	8.625	3.52	123.94	142.05		
Years of Experience								
≤1 year	137	104.02	29.62	2.53	99.02	109.03	38.48	<0.001
>1 year	73	130.72	29.83	3.49	123.76	137.68		
Training on Communication skills								
No	136	110.41	35.23	3.02	104.43	116.38	3.14	0.078
Yes	74	118.63	25.25	2.93	112.78	124.48		
Training method in communication (n = 74)								
CME	35	128.37	20.26	3.42	121.41	135.33	4.74	0.010
Other methods	39	109.89	26.31	4.21	101.36	118.42		

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Additionalfile1Communicationskillsquestionnaire.docx](#)
- [Additionalfile1Communicationskillsquestionnaire.docx](#)