

Knowledge and Attitudes of Resident Physicians Regarding Communication Skills in Holy Karbala Governorate

Noor Hameed Mohamed¹, Ali Abdulridha Abutiheen², Hasan Alwan Baiee³, Baidaa Ibrahim Selman⁴

¹Al-Moadhafin Primary Health Care Center, Karbala Health Directorate, Karbala, ²Family and Community Medicine Department, College of Medicine, University of Kerbala, Karbala, ³Department of Nursing, Hilla University College, Babylon, ⁴Public Health Department, Karbala Health Directorate, Karbala, Iraq

Abstract

Background: Communication is an important skill that should be learned by physicians and health sector workers. A physician's communication skills include the ability to collect information to reach for a definitive diagnosis, appropriate management, and instructions about lifestyle modification. Good communication enhances the doctor-patient relationship, increasing the satisfaction of the patient. **Objectives:** The objectives of this study were to assess the knowledge and attitudes of resident physicians about communication skills, and the correlates. **Materials and Methods:** A cross-sectional study was conducted to assess the resident physician's knowledge and attitudes from March 1 to April 20, 2020. A semi-structured self-administered online questionnaire was prepared by the researchers and delivered to 264 physicians enrolled in this study. The questionnaire consists of six sections that include demographic characteristics, educational items, knowledge domain, attitude domain, barriers, and open questions. **Results:** Only 185 physicians responded to this survey with a response rate of 70%, among them 112 (60.5%) were females and 73 (39.5%) were males, the female-to-male ratio was 1.5:1. The overall knowledge score of residents about communication was fair, 58.4% had good knowledge score and 36.8% had a very good score. The results also found that 70.8% of residents were exposed to training courses in communication skills. There is no statistically significant association between the mean knowledge score and gender of participants $P > 0.05$. There is a significant association between the mean knowledge score with the positive attitudes score $P < 0.05$. **Conclusions:** Resident physicians in Karbala had good knowledge of communication skills and a positive attitude toward these skills. Residents' physicians had the desire to attend more training courses despite a good knowledge score.

Keywords: Communication skills, Iraq, resident physicians

INTRODUCTION

Communication is an important power to establish a good physician-patient relationship. Communication consists of three main parts: verbal, nonverbal, and paraverbal, most physicians focus on the verbal component which constitutes only 10% of the message delivered to the patients.^[1]

Basic elements of communication found in the medical interview with the patient include the first impression: which is very important; in the first moments during which the patient decides if he will feel comfortable with the physician or not.^[2] Keeping eye contact, shaking hands, and introducing himself make patient feel comfortable and build a good rapport.^[3]

Listening accurately is important in creating a worthy physician-patient relationship, which is necessary for therapeutic success.^[4] Patients always complain about the communication and seeking for a better relationship with their physicians.^[5] A physician's communication skills include the ability to collect information to reach for definitive diagnosis, appropriate management, instructions about lifestyle modification, and keeping good relationships with his patients.^[6] These are essential

Address for correspondence: Prof. Hasan Alwan Baiee, Department of Nursing, Hilla University College, Babylon, Iraq. E-mail: hasanbaiee1951@gmail.com

Submission: 05-Apr-2024 **Accepted:** 06-May-2024 **Published:** 30-Sep-2025

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Mohamed NH, Abutiheen AA, Baiee HA, Selman BI. Knowledge and attitudes of resident physicians regarding communication skills in holy Karbala governorate. Med J Babylon 2025;22:879-86.

Access this article online

Quick Response Code:



Website:
<https://journals.lww.com/mjby>

DOI:
10.4103/MJBL.MJBL_204_24

for the effective delivery of health care and enhancing patient satisfaction.^[7]

Talking with patients and their families about the patient's problems, treatment choices, side effects of these treatments, and the prognosis of the disease, with good communicators, decreases patient stress, enhances his/her compliance with the treatment plan, and increases family satisfaction.^[8]

This sharing model has been recently encouraged by which the physician and patient share information about treatment options to arrive together at a better prognosis.^[9] Patient and physician may split, resulting in, a patient receiving either more or less information than what is needed.^[8] A study reveals that only one-third of adults with chronic illnesses underused their prescription medication.^[9] Another study found that <50% of hospitalized patients know their diagnoses due to poor communication with their physicians.^[10]

Poor communication leads to 70% of all medication errors and 80% of delays in the treatment that result in death or permanent loss of function for patients.^[11]

Physicians can learn and practice these skills, and be able to modify their communication style if there are enough motivation and stimulus for self-awareness, self-monitoring, and training, communication skills with correct teaching and training can be acquired by having positive attitudes and studying different ways like increasing knowledge.^[12,13] The medical knowledge has become a commodity between the physician and the patient, and treatment is customized to patients individually.^[14]

This study was conducted to evaluate the knowledge and attitudes of resident physicians in Karbala province about communication skills and to identify associated factors with the level of knowledge and attitudes.

MATERIALS AND METHODS

A cross-sectional study was conducted at Karbala Public Hospitals including Imam Al-Hussain Medical City, Karbala Teaching Hospital for Pediatric, Karbala Obstetrics and Gynecology Teaching Hospital, Safer Al-Hussain Surgical Hospital, Al-Hindiya General Hospital, Ain Al-Tamar General Hospital, and Al-Hussainia General Hospital. The duration of the study started from the first of April to March, 2020.

A convenient consecutive sampling technique was used to recruit the participants. The sample size of this study was estimated using the Fisher equation; the sample size was calculated by using single population proportion formula by considering the following assumptions:

The prevalence of resident doctors having capable knowledge in similar local study in Suleimaniyah^[15] (the prevalence of communication skills knowledge is 87%)

Confidence level = 95%

Margin of error (d) = 5%

$N = (Z \alpha/2)^2 \times P (1 - P) / d^2$

where

n is the sample size required.

P is prevalence of resident's doctors having a knowledge (acceptable knowledge).

d is marginal error (0.05)2.

$Z \alpha/2$ is standard normal value at $(1 - \alpha)$ 100% confidence level.

$$\frac{(1.96)^2 \times 0.87 (1-0.87)}{(0.05)^2} = 173.7 N=174$$

Using various social media programs a pretested questionnaire was prepared by the researchers, the questionnaires link to all residents' doctors. The questionnaire includes the following domains:

- 1 The first domain includes demographic information such as age, sex, marital status, current position, duration of employment (years), and workplace.
- 2 The second part of the questionnaire includes information regarding training in communication (breaking bad news and dealing with difficult (angry) patient, and their evaluation of these courses [which is evaluated by yes = satisfied, No = not satisfied, somewhat= partially satisfied, don't know]), and the desire to attend more courses for training in these issues.

It also includes the problems that facing residents during their work due to poor communication.

- 3 The third domain includes the attitude domain: This domain depends on communication skill attitude scale (CSAS),^[16] this scale designed by Rees *et al.* consists of two subscales: Positive Attitude Scale (PAS) and Negative Attitude Scale (NAS). Each one consists of 13 items, weighted by 5-point Likert scale ranging from (1 with strongly disagree to 5 with strongly agree). The choice of items is based on the communication skills residents need, all items are verified and subjected to content validation by three well-known experts in communication skills.
- 4 The fourth domain is knowledge domain which includes 14 items, weighted by 5-point Likert scale ranging from (1 with strongly disagree to 5 with strongly agree). Scoring include^[17]:
 - 1 1–1.80 Very bad
 - 2 1.81–2.60 Bad
 - 3 2.61–3.40 Undecided
 - 4 3.41–4.20 Good
- 5 The five domains include barriers to effective communication skills in medical consultation, which consists of barriers related to physician, patient, and

system. Weighted by 5-point Likert scale, while the sixth domain of the questionnaire includes the opinions of participants through two open questions.

Statistical analysis

Statistical analysis was done using Statistical Package for the Social Sciences version 26 (SPSS Inc. Chicago, Illinois, USA). Student *t* test, one-way ANOVA, Chi square, and the Pearson's correlation coefficient test were used when needed. A *P* value of less than 0.05 is considered statistically significant.

RESULTS

A total of 185 respondents were participated in this survey, females constitute 60.5% of the total sample, about 102 (55.1%) were married, and 98 (53%) permanent residents, as shown in Table 1.

Figure 1 shows the years of employment (duration of service of the residents) ranging from 1 to 10 years, with a mean and S.D. of (3.64 ± 2.12) years,

Table 2 shows that 70.8% had training in communication skills, about dealing with (angry) patient, only 27%

had training out of 180 participants who answered this question, while 72.4% had training in the field of breaking bad news out of 179 respondents.

Table 3 shows that 71.4% of residents had an interest in having training in communication skills, 80% in handling a difficult patient, and about 80.5% had an interest in breaking bad news.

Table 4 reveals that 41.6% have no problems, 1.6% had been experiencing problems with the patient, 24.3% with the patient and his relatives, and 56 (30.3%) with the relatives only.

Table 5 shows that the knowledge of residents about communication skills was very good for questions (3. Good and effective listening, 4. Avoid distractions, 13. The physician should explain to the patient all-available treatment options, 15. Sufficient and reasonable time for the medical interview). The knowledge score was undecided for question one (stand to greet the patient), and the knowledge score for all of the remaining questions was good, as shown in Table 5.

Table 6 depicts the relationship between mean knowledge score and training of the residents on communication skills, where there are no significant statistical associations between these variables *P* value =(0.885).

Table 7 shows that there are statistically significant differences between male and female residents and the presence of problems with their patients, 30.3% of female resident physicians having problems, while 25.9% of males having problems with *P* value < (0.05). There are no statistically significant differences of the problem occurring in different age groups with *P* > (0.05).

Table 8 explains that there are no statistically significant differences in the knowledge of communication skills according to years of service of the residents, with *P* = (0.275).

Figure 2 shows that there is a positive correlation between knowledge of residents and their different Age groups with (*P* value 0.010) and Pearson correlation (0.190), that is, the mean knowledge score of residents increases with increasing age.

There are significant associations between the mean knowledge score and PAS and NAS according to Pearson Correlation (0.29) with *P* value (0.00), and (0.42) with *P* value (0.00), respectively, as shown in Figures 3 and 4.

DISCUSSION

In this study, the results showed that most of the residents have good knowledge about communication skills, more than half of them, and according to their responses for knowledge domain, this may be related to the high proportion of participants who have previous exposure

Variables	Category	Frequency	Percent
Gender	Male	73	39.5
	Female	112	60.5
Marital state	Single	82	44.3
	Married	102	55.2
	Divorced	1	0.5
Current position	1st year resident	87	47
	Permanent resident	98	53

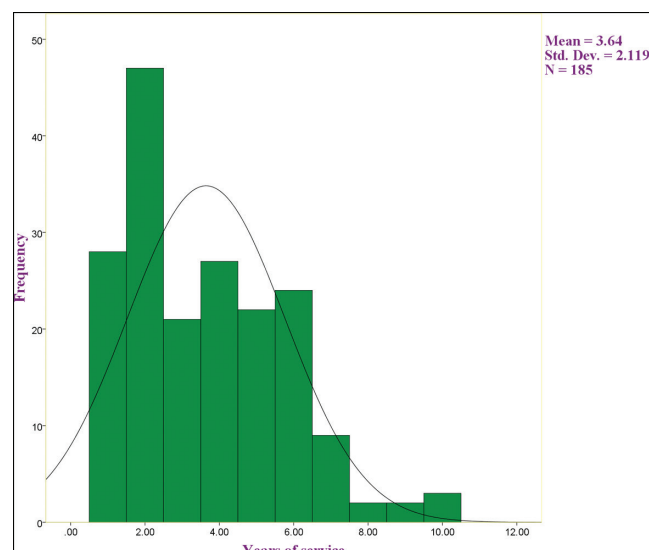


Figure 1: Years of employment of the participants in the study.

Table 2: Frequency of the residents that had training in communication skills ($n = 185$), dealing with a difficult (angry) patient ($n = 180$), and breaking bad news ($n = 179$)

Responses	Communication skills		Dealing with a difficult (angry) patient		Breaking bad news	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Yes	131	70.8	50	27	134	72.4
No	45	24.3	116	62.7	38	20.5
Not sure	9	4.9	14	7.6	7	3.8
Total	185	100	180	97.3	179	96.7

Table 3: Frequency of residents according to communication skills, breaking bad news, and treating difficult patients

Responses	Communication skills		Treating difficult (angry) patient		Breaking bad news	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Yes	132	71.4	148	80.0	149	80.5
Not sure	17	9.2	12	6.5	9	4.9
No	28	15.1	21	11.4	23	12.4
Total	177	95.7	181	97.8	181	97.8

Table 4: Frequency distribution of the problems facing physician's residents during their work

	Yes		No			
	<i>F</i>	%	F		%	
Have you experienced problems with the patient	104	56.2	77		41.6	
	Patient		Patient and relatives		Relatives	
	<i>F</i>	%	F	%	F	%
With home these problems had occurred <i>N</i> = 104 (56.2)	3	1.6	45	24.3	56	30.3

to training (70.4%). This finding goes in line with a local study^[15] and with other studies conducted in Saudi Arabia^[18] and Canada.^[19]

The current study found that the females constituted nearly two-thirds of residents among the studied group, which was compatible with Saudi Arabia,^[18] and Canadian studies,^[19] but it was incompatible with the finding of Iranian study in which male gender, represented the highest proportion.^[20] The higher proportion of females in the present study was comparable to the higher proportion of female residents' doctors recruited in Karbala governorate hospitals.^[21]

Two-thirds of the participants did not receive training in communication with difficult (angry) patients, only a few residents have training in the college before graduation; most of medical colleges in Iraq gave only some lectures about communication skills.^[22]

Most of the residents are partially (somewhat) satisfied with that training, and that may be the cause that led most of the residents to recommend increase the courses of training or may be related to the nature of undergraduate training which is theoretical rather than practical.^[22]

More than two-thirds of participants have a strong desire to attend training courses in communication skills during their career, especially in the issues of breaking bad news, and treating angry patients, which is a very good encouraging predictor, this finding agrees with that reported by a Saudi Arabia study which found that 90% of medical personnel need to improve their communication skills in the future.^[23]

There is a statistically significant association between the mean Positive Attitude Score (PAS) and Negative Attitude Score (NAS) among resident doctors and their knowledge score with Pearson correlation (0.29) for PAS and (0.42) for NAS means moderate correlation; residents with good knowledge have a positive attitude toward communication skills learning. This is compatible with the study of Rees *et al.*^[16]

The barriers to communication skills related to the physician, patient, and system were: lack of training, shy personality, language barriers, boredom, gender differences from the physician, and expectations about the physician role, lack of consultation time, too many patients, and lack of technical support. In addition, the fear of tribal claims that are widespread in Iraqi society as

Table 5: Descriptive statistics of the knowledge of residents about communication skills

	Question	strongly disagree	Dis Agree	Some What	Agree	strongly agree	Mean	S. D.	Degree
1. Stand to greet the patient	<i>F</i>	3	43	53	61	22	3.31	1.02	Undecided
	%	1.6	23.2	28.6	33.0	11.9			
2. Privacy guarantee is not necessary	<i>F</i>	94	57	4	17	13	4.09	1.24	Good
	%	50.8	30.8	2.2	9.2	7.0			
3. Good and effective listening	<i>F</i>	0	0	8	78	99	4.49	0.58	Very good
	%	0	0	4.3	42.2	53.5			
4. Avoid distractions	<i>F</i>	0	3	10	77	94	4.42	0.67	Very good
	%	0	1.6	5.4	41.6	50.8			
5. Sitting down and communicating with the patient	<i>F</i>	0	1	30	91	62	4.16	0.71	Good
	%	0	.5	16.2	49.2	33.5			
6. It is not necessary to speak in a simple/appropriate language	<i>F</i>	51	82	5	27	20	3.63	1.32	Good
	%	27.6	44.3	2.7	14.6	10.8			
7. The physician's consideration of the verbal and nonverbal clues	<i>F</i>	0	1	27	100	51	4.12	.67	Good
	%	0	.5	14.6	54.1	27.6			
8. Use open-ended questions	<i>F</i>	2	13	30	86	54	3.96	.91	Good
	%	1.1	7.0	16.2	46.5	29.2			
9. Encouraging the patient to express his feelings	<i>F</i>	0	5	28	98	51	4.07	.74	Good
	%	0	2.7	15.1	53.0	27.6			
10. Clarification of the physical examinations is not necessary	<i>F</i>	42	100	14	17	11	3.79	1.08	Good
	%	22.7	54.1	7.6	9.2	5.9			
11. Use of appropriate body language	<i>F</i>	1	3	31	100	48	4.04	.74	Good
	%	.5	1.6	16.8	54.1	25.9			
12. The physician should explain all-available treatment options	<i>F</i>	1	0	16	89	79	4.32	.68	Very good
	%	.5	0	8.6	48.1	42.7			
13. The doctor is the one who makes the decisions.	<i>F</i>	32	120	20	10	1	3.94	.74	Good
	%	17.3	64.9	10.8	5.4	0.5			
14. sufficient and reasonable time for the medical interview	<i>F</i>	0	1	8	118	57	4.26	.56	Very good
	%	0	0.5	4.3	63.8	30.8			

Table 6: Association between mean knowledge score and training of the residents on communication skills

		Training in communication skills		Total	P value	Df
		Yes	No			
Knowledge score	Very good	50 (27.1%)	18 (9.7%)	68 (36.8%)	0.885	4
	Good	75 (40.5%)	33 (17.9%)	108 (58.4%)		
	Undecided	6 (3.2%)	3 (1.6%)	9 (4.8%)		
	Total	131 (70.8%)	54 (29.2%)	185 (100%)		

Table 7: Association of problems occurring among residents and their demographic characteristics (age and gender) (N = 181)

Demographic characteristic		Problem occurring				Total	P value
		Yes		No			
Gender	Female	56	30.3%	55	29.7%	111 (60%)	0.016
	Male	48	25.94%	22	11.89%	70 (37.8%)	
	Total	104	56.2%	77	41.6%	181 (97.8%)	
Age group	≤ 28	59	31.9%	40	21.7%	99 (53.9%)	0.101
	29–32	37	20%	35	18.9%	72 (38.9%)	
	≥ 33	8	4.3%	2	1%	10 (5.3%)	
	Total	104	56.2%	77	41.6%	181 (97.8%)	

reported in a study in 2018 that found 67.3% of doctors in Iraq feeling unsafe during practicing their work.^[24]

About the problems facing the residents while dealing with the patient and his relatives, more than half of the residents had been experiencing problems with the patient and relatives which may be due to poor communication skills. This finding was supported by a study conducted by the Indian Medical Association.^[25]

The present study shows that there is a direct correlation between the knowledge score of the residents and their age, this finding goes with the findings of other studies.^[17,26]

The result of this study displays that there were no differences in knowledge score according to gender, current position, years of service, and marital state, this finding disagrees with the finding of other studies.^[19]

In this study, there were significant differences between male and female residents about problems occurring; female residents have more problems than male residents.

This result differs from a study carried out in Pakistan, which reveals that 76.9% of physicians have to experience verbal or physical abuse from patients or their relatives; male physicians were more likely to be exposed to such abuse.^[27] This may be related to many factors including poor and incompetent communication skills.

In the present study, there was no association between the level of the knowledge about communication skills and occurring of problems, this goes with what was reported in other studies.^[17] Good knowledge does not mean good practice. If physicians have the knowledge and do not know how to use it or how to manage a conversation, this will not be helpful.^[28-30]

The limitations of this study can be summarized as the study is cross cross-sectional study, including sample of resident physicians in Holly Karbala province; therefore, it cannot be generalized to all residents in Iraq and the causality cannot be measured. Also, using online questionnaires and poor internet lines made the data collection more difficult and complicated.

Table 8: ANOVA-test for mean knowledge score according to years of service

Years of service	Mean	Std. Deviation	F	Sig.
≥2.00	4.03	0.43	1.300	0.275
3.00–5.00	4.01	0.36		
≥6.00	4.13	0.39		

CONCLUSION

Resident physicians in Karbala have good knowledge and positive attitudes toward communication skills. There is a direct correlation between knowledge and attitude toward communication skill learning, while there is no relation between mean knowledge score and gender of participants. The residents have the desire to attend more training

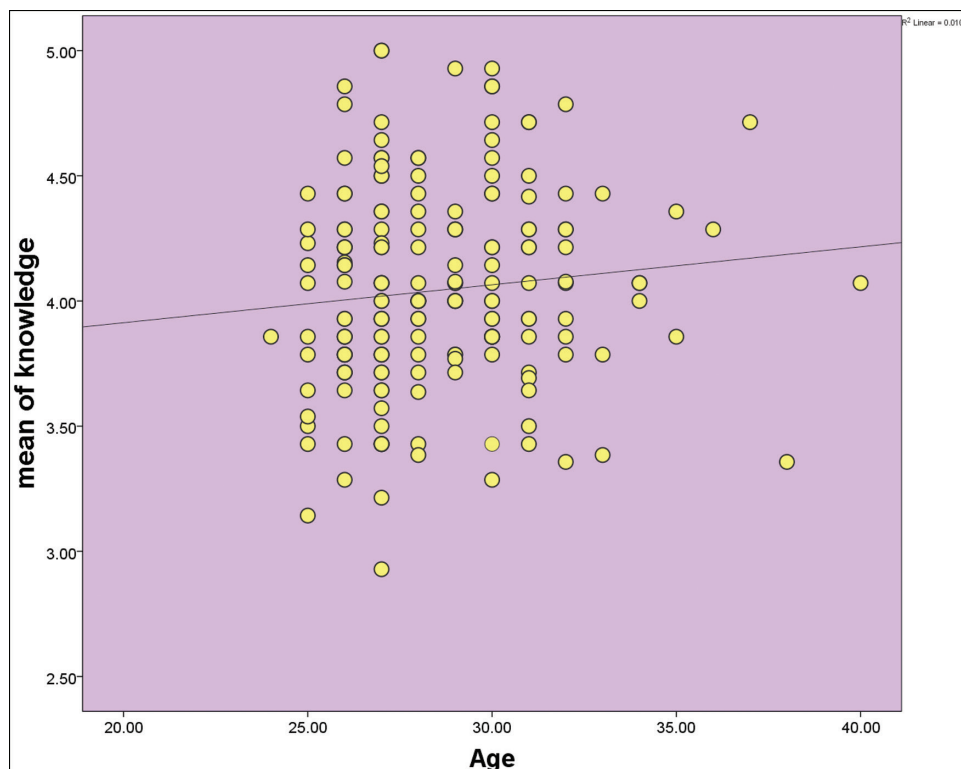


Figure 2: Correlation between overall knowledge and age of participants

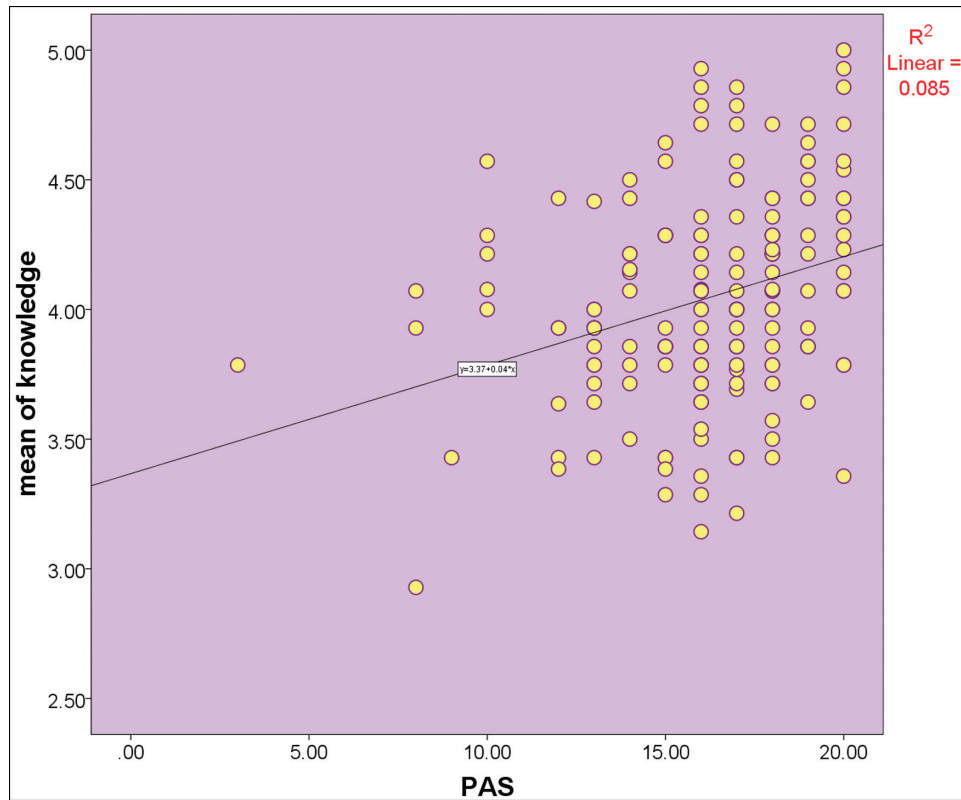


Figure 3: Correlation between Positive Attitude Score (PAS) score and mean knowledge score among participants

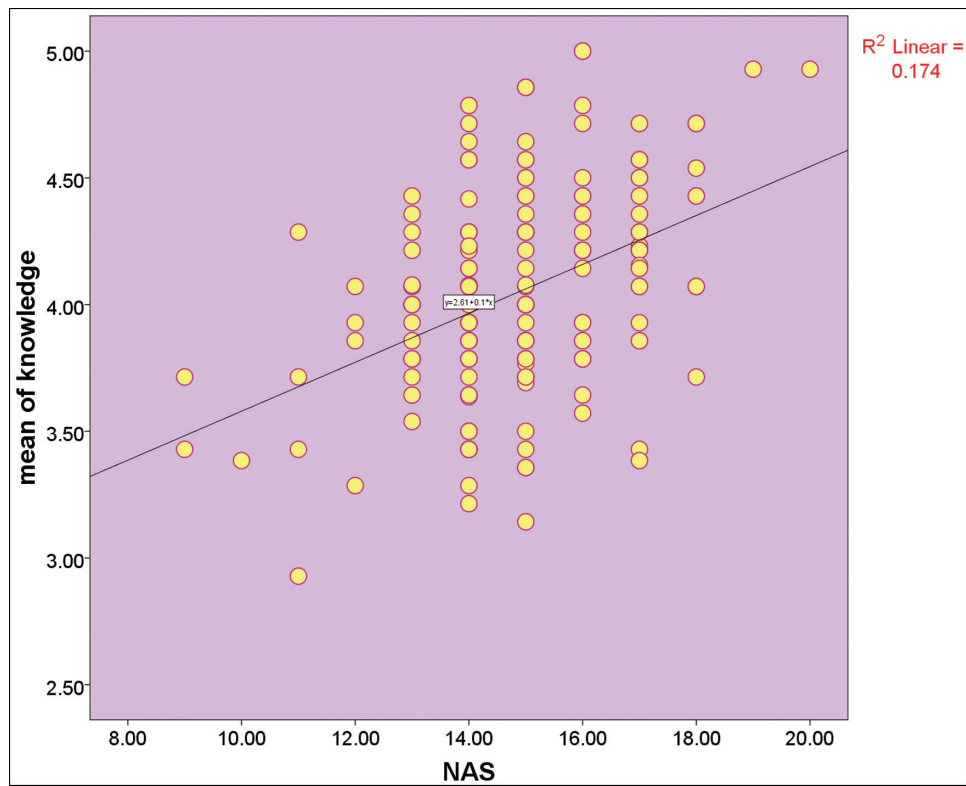


Figure 4: Correlation between Negative Attitude Score (NAS) score and mean knowledge score among participants

courses despite a good knowledge score. The residents in Karbala hospitals face many obstacles to communicate as well as lack of training of the physician in this field.

Acknowledgment

Authors express their thanks and appreciation to all participants for their cooperation and patience during conducting this study.

Financial support and sponsorship

Nil.

Conflicts of interest

There is no conflict of interest.

REFERENCES

- McCorry LK, Mason J. Communication Skills for the Healthcare Professional. Jones & Bartlett Pub Incorporated; 2020.
- Ranjan P, Kumari A, Chakrawarty A. How can doctors improve their communication skills? J Clin Diagnost Res 2015;9:JE01-4.
- Brittin ME. Keys to improving your listening skills. Fam Pract Manag 2005;12:68.
- Yasmeen BN. Communication: A basic skill of medical practice. North Int Med Coll J 2013;5:291-2.
- Van Zanten M, Boulet JR, McKinley DW, DeChamplain A, Jobe AC. Assessing the communication and interpersonal skills of graduates of international medical schools as part of the United States Medical Licensing Exam (USMLE) Step 2 Clinical Skills (CS) Exam. Acad Med 2007;82:S65-8.
- Brinkman WB, Geraghty SR, Lanphear BP, Khoury JC, del Rey JA, DeWitt TG, *et al.* Effect of multisource feedback on resident communication skills and professionalism: A randomized controlled trial. Arch Pediatric Adolescent Med 2007;161:44-9.
- Kelley AS, Back AL, Arnold RM, Goldberg GR, Lim BB, Littrivis E, *et al.* Geritalk: Communication skills training for geriatric and palliative medicine fellows. J Am Geriatr Soc 2012;60:332-7.
- Arraras JI, Wright S, Greimel E, Holzner B, Kuljanic-Vlasic K, Velikova G, *et al.*; EORTC Quality of Life Group. Development of a questionnaire to evaluate the information needs of cancer patients: The EORTC questionnaire. Patient Educ Couns 2004;54:235-41.
- Piette JD, Heisler M, Wagner TH. Cost-related medication underuse among chronically ill adults: The treatments people forgo, how often, and who is at risk. Am J Public Health 2004;94:1782-7.
- Makaryus, A. N., & Friedman, E. A. Patients' understanding of their treatment plans and diagnosis at discharge. Mayo Clin Proc 2005;80(8):991-994.
- Sendelbach S, Funk M. Alarm fatigue: A patient safety concern. AACN Adv Crit Care 2013;24:378-86; quiz 387.
- Perera J. Effective communication skills for medical practice. J Postgrad Inst Med 2015;2:20.
- Asperger K. BEME guide no. 2. Teaching and learning communication skills in medicine. J Postgrad Inst Med 2015;2:1-7.
- Paul ARD. Trust and communication in a doctor-patient relationship: A literature review. Arch Med 2018;3:36.
- Fattah FH. Effects of communication skills training courses on knowledge levels of the health workforce in Sulaimani. Zanco J Med Sci 2019;23:51-6.
- Rees C, Sheard C, Davies S. The development of a scale to measure medical students' attitudes towards communication skills learning: The Communication Skills Attitude Scale (CSAS). Med Educ 2002;36:141-7.
- Pimentel JL. A note on the usage of Likert scaling for research data analysis. USM R&D J 2010;18:109-12.
- Al-Zahrani BS, Al-Misfer MF, Al-Hazmi AM. Knowledge, attitude, practice and barriers of effective communication skills during medical consultation among general practitioners national guard primary health care center, Riyadh, Saudi Arabia. World Family Med J 2015;99:1-4.
- Laidlaw TS, Kaufman DM, MacLeod H, Van Zanten S, Simpson D, Wrixon W. Relationship of resident characteristics, attitudes, prior training and clinical knowledge to communication skills performance. Med Educ 2006;40:18-25.
- Tavakol M, Torabi S, Lyne OD, Zeinaloo AA. A quantitative survey of intern's knowledge of communication skills: An Iranian exploration. BMC Med Educ 2005;5:1-5.
- Karbala health directorate, registry statistical department, 2020.
- Al Helli A. Evaluation of medical colleges graduates in Iraq. Karbala J Med 2010;3:919-2536.
- Nourein AA, Shahadah RF, Alnemer MA, Al-Harbi SS, Fadel HT, Kassim S. Comparative study of attitudes towards communication skills learning between medical and dental students in Saudi Arabia. Int J Environ Res Public Health 2021;18:128.
- Jadoo SA, Torun P, Dastan I, Al-Samarrai MA. Impact of conflict related and workplace related violence on job satisfaction among physicians from Iraq-a descriptive cross-sectional multi center study. J Ideas Health 2018;1:14-22.
- Ghosh K. Violence against doctors: A wake-up call. Indian J Med Res 2018;148:130-3.
- Nourein AAE, Shahadah RF, Alnemer MA, Al-Harbi SS, Fadel HT, Kassim S. Comparative study of attitudes towards communication skills learning between medical and dental students in Saudi Arabia. Int J Environ Res Public Health 2021;18:128.
- Mirza NM, Amjad AI, Bhatti AB, Shaikh KS, Kiani J, Yusuf MM, *et al.* Violence and abuse faced by junior physicians in the emergency department from patients and their caretakers: A nationwide study from Pakistan. J Emerg Med 2012;42:727-33.
- Alnaser FA. Effective communication skills and patient's health. CPQ Neurol Psychol 2020;3:01-11.
- Qutaiba Allela, O. Evaluation of COVID-19 Vaccination Status among University's Students, Academic and Nonacademic Staff in Mosul, Iraq. Med J Babylon 2024; 21(Suppl 2): S171-S176.
- Hassan, S; Baiee, HA; Shaban, M; Zaky, ME; Mahdi, MT. Healthcare providers' knowledge and challenges they face regarding growth charts' utilization in primary healthcare practice. Med J Babylon 2023; 20: 574-578.