

<b>Access this article online</b>
Quick Response Code:

Website: www.jehp.net
DOI: 10.4103/jehp.jehp_860_22

# A cross-sectional evaluation of communication skills and perceived barriers among the resident doctors at a tertiary care center in India

Amandeep Singh, Piyush Ranjan, Archana Kumari<sup>1</sup>, Siddharth Sarkar<sup>2</sup>, Tanveer Kaur, Ramesh Aggarwal<sup>3</sup>, Ashish Datt Upadhyay<sup>4</sup>, Biswaroop Chakrawarty<sup>5</sup>, Jamshed Nayer<sup>6</sup>, Mohit Joshi<sup>7</sup>, Avinash Chakrawarty<sup>8</sup>

Department of Medicine, All India Institute of Medical Sciences, New Delhi, India, <sup>1</sup>Department of Obstetrics and Gynaecology, All India Institute of Medical Sciences, New Delhi, India, <sup>2</sup>Department of Psychiatry and National Drug Dependence Treatment Centre, All India Institute of Medical Sciences, New Delhi, India, <sup>3</sup>Department of Medicine, Lady Hardinge Medical College, New Delhi, India, <sup>4</sup>Department of Biostatistics, All India Institute of Medical Sciences, New Delhi, India, <sup>5</sup>Department of Pediatrics, All India Institute of Medical Sciences, New Delhi, India, <sup>6</sup>Department of Emergency Medicine, All India Institute of Medical Sciences, New Delhi, India, <sup>7</sup>Department of Surgical Disciplines, All India Institute of Medical Sciences, New Delhi, India, <sup>8</sup>Department of Geriatric Medicine, All India Institute of Medical Sciences, New Delhi, India

## Address for correspondence:

Dr. Piyush Ranjan,  
Department of Medicine,  
All India Institute of  
Medical Sciences,  
New Delhi, India.  
E-mail: drpiyushdost@gmail.com

Received: 18-06-2022  
Revised: 09-07-2022  
Accepted: 12-07-2022  
Published: 28-12-2022

## Abstract:

**BACKGROUND:** The study was conducted to assess the different components of communication skills and barriers to practicing good communication skills among resident doctors in a health care setting.

**MATERIALS AND METHODS:** A web-based cross-sectional survey was performed, and data were collected using a pre-validated questionnaire with a Cronbach's alpha (0.88). A total of 431 responses were statistically analyzed. Chi-square test was used to associate the socio-demographics and communication skills. Regression analysis was conducted to analyze the association between various communication domains and barriers, which were adjusted for potential confounders such as age and gender.

**RESULTS:** Resident doctors have differential levels of competencies in each domain of communication skills. Around two-thirds of the residents did not practice good communication skills while breaking the bad news and reported poor para-verbal skills. Some of the most common barriers to practicing good communication skills were found to be an infrastructural deficit, lack of time, and long working hours. These barriers significantly affected the communication skills such as para-verbal skills  $\{[-0.32; P < 0.01; C.I (-0.54 \text{ to } -0.09), [-0.27, P < 0.05, C.I (-0.54 \text{ to } 0.04)], [-0.32, P < 0.01, (0.07-0.56)]\}$ , the ability to break bad news  $\{[-0.42, P < 0.01, (-0.73 \text{ to } -0.11)], [-0.35, P < 0.05, (-0.75 \text{ to } -0.35)], [0.48, P < 0.01, (0.12-0.84)]\}$ , and communication with patients/attendants  $\{[0.39, P < 0.01, C.I (-0.71 \text{ to } -0.06)], [-0.88, P < 0.001, C.I (-1.2 \text{ to } -0.48)], [-0.88, P < 0.001, C.I (-1.2 \text{ to } -0.48)]\}$  after adjustment for confounding such as age and gender.

**CONCLUSION:** There is a scope for improvement in practicing good communication skills with patients, among the residents doctors in India. Structured modules for training and evaluation should be implemented in the medical curriculum.

## Keywords:

Communication, communication barriers, health personnel, workplace violence

## Introduction

The importance of training and periodic evaluation of communication skills among resident doctors is well recognized in many parts of the world. The Accreditation Council for Graduate Medical Education of

the United States of America (ACGME) has devised a structured framework for training and periodic evaluation of communication skills among medical students during their internships, residencies, and fellowships. Thirteen provincial and national health care organizations in Canada have developed

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:** Singh A, Ranjan P, Kumari A, Sarkar S, Kaur T, Aggarwal R, *et al.* A cross-sectional evaluation of communication skills and perceived barriers among the resident doctors at a tertiary care center in India. J Edu Health Promot 2022;11:425.

a canMEDS consortium to define the necessary competencies in all areas of medical practice including communication skills.<sup>[1,2]</sup> Thus, the awareness in western medical institutions is more as compared to India. Structured training in communication skills has been recently introduced into the medical curriculum for under-graduate students. The same is yet to be established for the resident doctors who are the backbone of patient care in large health care setups. Also, there is no mechanism for formal evaluation of different components of communication skills among post-graduate resident doctors, and there is still a lack of mechanisms in most of the medical universities in India.<sup>[3]</sup>

Knowledge of communication skills among health personnel has various components such as an understanding of para-verbal and non-verbal cues; art of communicating with patients and attendants in out-patient departments (OPDs), indoors, and intensive care units (ICUs); skills of breaking bad news; and communicating with colleagues and other para-medical staff.<sup>[4-6]</sup> Besides, knowledge of the barriers to practicing good communication skills can be instrumental in improving patient care and job satisfaction of resident doctors by health administrators and policymakers.

Considering the gap in the existing literature, we conducted this study to evaluate the different components of communication skills among resident doctors of different specialties. Moreover, an attempt has been made to understand the perceived barriers to practising good communication skills.

## Materials and Methods

### Study design and setting

A web-based cross-sectional survey was conducted and reported as per STROBE guidelines.

This study was conducted at the tertiary care teaching hospital in Northern India between August and November 2021.

### Study participants and sampling

The study included 431 medical students (junior and senior residents) from various specialties such as Medicine Obstetrics and Gynaecology, Emergency Medicine, Psychiatry, Surgery, Anesthesia, Pediatrics, and so on from tertiary care hospitals in Northern India. Participants were enrolled by purposive and snowball sampling techniques. Those who did not provide consent and did not complete the questionnaire were excluded from the study.

The sample size was calculated using a 95% confidence interval. The prevalence rate is expected up to 40%, with a calculated size of 369.

There could be a possibility of recall and performance bias by the participants.

### Variables

The following components were assessed in the study: Frequency of conflict/violence; communication skills including para-verbal skills, content, and setting of discussion; communication with patients/attendants; breaking bad news; team dynamics; and barriers to communication.

### Data collection tool and technique

A validated questionnaire, 'self-assessment tool for resident doctors' communication skills in India', was used to conduct this study.<sup>[7]</sup> The tool has good internal consistency (Cronbach's alpha = 0.885). The questionnaire consists of 41 items comprising three sections. Section A assesses the various forms of doctor-patient conflicts and the role of communication skills in mitigating these conflicts. Section B has items to assess communication skills in various settings and contexts. Last, section C has items that assess the barriers to practicing good communication skills.

The participant information sheet was attached along with the survey form to provide the objective of the study to the participants; any queries regarding the same were also resolved by the research team.

The data were collected via an online platform (Google Forms). The link to the questionnaire was shared along with the invitation message to the participants via e-mails and WhatsApp messages. Participants were asked to share the link with their friends and colleagues to increase the number of study participants.

Statistical analysis was performed using STATA/SE version 14.2 (StataCorp LP, College Station, TX, USA). The continuous variables (age and years of experience) were reported as mean and standard deviation. However, the descriptive characteristics (gender, designation, speciality) were reported in frequencies and percentages. Chi-square was calculated to find the association between socio-demographics and study variables. Regression analysis was conducted to analyze the association between various communication domains and barriers, which were adjusted for potential confounders such as age and gender.

### Ethical statement

This study was reviewed and approved by the Institute Ethics Committee of the institute (IEC/740/9/2019). Informed consent was obtained from all the study participants before enrolment in the study.

## Results

### Participants

A total of 450 responses were received. After removing the duplicate responses and responses from the respondents not meeting the inclusion criteria, 431 responses were analyzed.

### Descriptive data

#### *Socio-demographic profile*

A total of 431 participants completed the survey. The mean age and years of clinical experience of the participants were found to be  $28.73 \pm 3.44$  and  $5.06 \pm 2.97$ , respectively. There were more male participants in comparison to females. Approximately one-third of the participants were from medicine and allied fields (34.80%), followed by obstetrics and gynecology (16.24%), surgery (15.31%), and so on. The complete socio-demographic characteristic details of the participants are presented in Table 1.

### Barriers

Approximately 80% of the resident doctors believed that doctor–patient conflict can be resolved up to some extent by effective communication. However, some of the most common barriers to effective communication reported by the resident doctors were long working hours (39.44%), followed by an infrastructural deficit (27.15%), lack of time (20.65%), and so on. The complete information is presented in Table 2.

### Outcome data

- 1. Frequency of conflict/violence:** The findings indicated that approximately half (46.63%) of the study participants face minor conflict once in a week. One-third (37.12%) of the participants reported incidences of major verbal conflicts in every 3 to 6 months. Last, one-fourth (25.06%) of the participants had faced at least one incidence of physical violence in their residency period. The complete information is provided in Table 1.
- 2. Para-verbal component:** The analysis suggests that the female resident doctors often make eye contact while communicating ( $p < 0.05$ ). Psychiatry and anesthesia and critical care resident doctors often greet the patients in comparison to the other specialties ( $p < 0.05$ ). The complete information is provided in Table 3. However, barriers such as lack of time [ $-0.32$ ,  $P < 0.01$ , C.I. ( $-0.54$  to  $-0.09$ )], stress and fatigue [ $-0.27$ , ( $P < 0.05$ ), C.I. ( $-0.54$ ,  $0.04$ )], and long working hours [ $-0.32$ ,  $P < 0.01$ , ( $0.07$ – $0.56$ )] affect para-verbal skills of resident doctors even after adjusting for confounding such as age and gender [Table 4].
- 3. Content and setting of discussion:** Resident doctors did not always involve the patient in

**Table 1: Socio-demographic profile of the participants (n=431)**

Characteristics	n (%)
Age	
Gender	
Male	252 (58.47)
Female	179 (41.53)
Prefer not to say	-
Speciality	
Anesthesia and critical care	20 (4.64)
Medicine and allied fields	150 (34.80)
Dental	09 (2.09)
Emergency and trauma	58 (13.46)
Surgery and allied	66 (15.31)
Obstetrics and gynecology	70 (16.24)
Pediatrics	38 (8.82)
Psychiatry	20 (4.64)
Designation	
Junior resident	201 (46.64)
Senior resident	230 (53.36)
Number of years of clinical experience	5.06+2.97
Frequency of conflict/violence	
Minor conflicts	
Nearly daily	76 (17.63)
About once a week	125 (29.00)
About once a month	109 (25.29)
About once every 6 months	54 (12.53)
About once a year or less	67 (15.55)
Major verbal conflicts	
About once a week	15 (3.48)
About once a month	54 (12.53)
About once every 3 months	70 (16.24)
About once every 6 months	90 (20.88)
About once a year or less	202 (46.87)
Physical violence	
Four times or more	16 (3.71)
Three times	14 (3.25)
Two times	29 (6.73)
Once	49 (11.37)
None	323 (74.94)

decision making (60.56%), explained other available treatment options (57.08%), and asked for additional queries (68.45%). The residents were unable to do a proper discussion if they had a lack of time, difficulty in understanding the patient's language, lack of knowledge, deficits in infrastructure, and lack of training in communication skills {adjusted for confounding such as age and gender, [ $-0.52$ ,  $P < 0.001$ , ( $-0.84$  to  $-0.20$ )], [ $-0.44$ ,  $P < 0.01$ , ( $-0.82$  to  $-0.07$ )], [ $-0.40$ ,  $P < 0.05$ , ( $-0.81$  to  $-0.06$ )], [ $-0.43$ ,  $P < 0.02$ , ( $-0.79$  to  $-0.06$ )] in the multi-variable regression model}. A significant association between age and explanation for treatment options ( $p < 0.01$ ) was seen. The highest privacy was ensured by the resident doctors of psychiatry, followed by surgery and allied fields and so on ( $p < 0.001$ ).

**Table 2: Perceived barriers to effective communication**

Barriers	Response by participants				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
*Importance of communication skills	7 (1.62)	35 (8.12)	113 (26.22)	196 (45.48)	80 (18.56)
Lack of insight	22 (5.10)	37 (8.58)	23 (5.34)	73 (16.94)	276 (64.04)
Lack of time	89 (20.65)	16 (37.35)	65 (15.08)	63 (14.62)	53 (12.30)
Language	25 (5.80)	130 (30.16)	119 (27.61)	109 (25.29)	48 (11.14)
Stress and fatigue	76 (17.63)	191 (44.32)	73 (16.94)	56 (12.99)	35 (8.12)
Infrastructural deficit	117 (27.15)	183 (42.46)	50 (11.60)	52 (12.06)	29 (6.73)
Long working hours	170 (39.44)	155 (35.96)	46 (10.67)	37 (8.58)	23 (5.34)
Lack of knowledge	52 (12.06)	120 (27.84)	88 (20.42)	113 (26.22)	58 (13.46)
Lack of communication skills *About 100%, About 75%, About 50%, About 25%, None	65 (15.08)	148 (34.34)	110 (25.52)	72 (16.71)	36 (8.35)

- Communicating with patients/attendants:** The findings implied that the majority of the young participants and junior resident doctors obtained consent themselves in comparison to senior resident doctors ( $p < 0.001$ ). After adjustment for confounding, barriers such as stress and fatigue, lack of time, and long working hours played a crucial role in disrupting adequate communication with patients and attendants.
- Breaking bad news:** It was depicted that more than half of the resident doctors did not plan in advance when breaking the bad news (68.45%). They failed to attend to the emotional reaction (51.51%) and did not discuss future treatment plans (50.12%) with patients and their attendants. A significant association was found only between years of experience and discussion of the treatment plan ( $p < 0.05$ ). They had a lack of time [ $-0.42, P < 0.01, (-0.73 \text{ to } -0.11)$ ], stress and fatigue [ $-0.35, P < 0.05, (-0.75 \text{ to } -0.35)$ ], and lack of knowledge of the subject matter [ $0.48, P < 0.01, (0.12-0.84)$ ].
- Team dynamics:** The findings showed that approximately 70% of the participants showed courtesy toward the helping staff. However, less than 30% motivated them and around one-third of resident doctors provided them with positive or constructive criticism (34.80%). Participants in the age group of 25–30 years were found to be the most courteous, followed the by age group of 30–35 years ( $p < 0.01$ ). No association was found between years of clinical experience and team dynamics.

## Discussion

A well-defined relationship exists between good communication skills and improved patient care, patient satisfaction, and overall job satisfaction of the doctors. Well-defined modules for training as well as the evaluation of communication skills are developed and being followed as part of the training curriculum in the west.<sup>[8]</sup> However, India, which has 541 medical colleges with 44,000 resident doctors graduating every year, lacks structured training in communication skills

for resident doctors. Inadequate communication and inter-personal skills often lead to a disturbed doctor-patient relationship, resulting in verbal and physical violence toward the doctors in a health care setting.<sup>[9]</sup>

## Interpretation

This study presents baseline data regarding the evaluation of different components of communication skills (29 items in five domains) among the post-graduate resident trainee doctors in India using a well-validated standardized tool. This study highlights certain noteworthy findings. Resident doctors have reported differential levels of competencies in the different components of communication skills. Mostly, they fare well in some domains, whereas they lack in certain others.

Non-verbal and para-verbal components are far more important than the verbal components in good communication. This study finds that a considerable number of the resident doctors did not follow the ideal behavior, related to the non-verbal and para-verbal components of communication, especially while greeting their patients and avoiding interruptions (such as ringing cell phones) during interviews with patients and/or attendants. Such inappropriate practices may defeat the purpose of effective communication between doctors and patients, resulting in inappropriate information regarding investigation modalities and management strategies. The component of communication in the *content and setting* domain includes fundamentals of communication in OPDs and indoor settings. It was found that not all the participants always ensured privacy, used a simple language while discussing with patients and/or attendants, or involved patients and/or attendants in decision making. Studies suggest that when patients and/or family members are not involved in the decision-making process or are not provided with the adequate and appropriate information regarding the course and prognosis of disease, it often leads to incorrect and delayed decisions regarding the treatment.<sup>[10]</sup>



Table 3: Frequency of responses in self-assessment along with socio-demographic correlates

Domain	Response by participants					Socio-demographic correlates				
	Always	Often	Sometimes	Occasionally	Rarely	Age	Gender	Speciality	Designation	Experience
Para-verbal components										
Warm greeting	136 (31.55)	191 (44.32)	84 (19.49)	11 (2.55)	9 (1.09)	-	-	P<0.05	-	-
Address by name	194 (45.01)	171 (39.68)	5 (11.60)	8 (1.86)	28 (1.86)	-	P<0.05	-	-	-
Eye contact	298 (69.14)	116 (26.91)	14 (3.25)	3 (0.70)	-	P<0.001	P<0.05	P<0.05	-	-
Avoid interruptions	122 (28.31)	234 (54.29)	54 (12.53)	17 (3.94)	4 (0.93)	-	-	-	-	-
Pay attention to non-verbal cues	208 (48.26)	180 (41.76)	31 (7.19)	7 (1.62)	5 (1.16)	-	-	P<0.05	-	-
Content and setting (indoor/OPD)										
Ensure privacy	179 (41.53)	187 (43.39)	49 (11.37)	14 (3.25)	2 (0.46)	-	-	P<0.001	-	-
Use of a simple language	247 (57.31)	168 (38.98)	13 (3.02)	2 (0.46)	1 (0.23)	-	-	-	-	P<0.05
Explain about disease	211 (48.96)	184 (42.69)	30 (6.96)	5 (1.16)	1 (0.23)	-	-	-	-	-
Necessity and feasibility of investigations	210 (48.72)	164 (38.05)	45 (10.44)	11 (2.55)	1 (0.23)	-	-	-	-	-
Explain about treatment options	185 (42.92)	180 (41.76)	57 (13.23)	7 (1.62)	2 (0.46)	P<0.01	-	-	P<0.05	P<0.01
Involve in decision making	170 (39.44)	174 (40.37)	62 (14.39)	22 (5.10)	3 (0.70)	-	-	-	P<0.05	-
Ask for additional questions	136 (31.55)	151 (35.03)	92 (21.35)	37 (8.58)	15 (3.48)	P<0.01	-	-	-	-
Communicating with patients/attendants										
Answer their queries	89 (20.65)	175 (40.60)	117 (27.15)	31 (7.19)	19 (4.41)	-	-	-	-	P<0.05
Dynamic nature of disease	162 (37.59)	195 (45.24)	58 (13.46)	13 (3.02)	3 (0.70)	-	-	P<0.05	-	-
Explain multiple times in a day	193 (44.78)	164 (38.05)	54 (12.53)	14 (3.25)	6 (1.39)	P<0.05	-	-	-	-
Discuss with attendants	133 (30.86)	192 (44.55)	78 (18.10)	21 (4.87)	7 (1.62)	-	-	-	-	-
Take consent myself	220 (51.04)	150 (34.80)	46 (10.67)	7 (1.62)	8 (1.86)	P<0.001	-	-	P<0.001	P<0.05
Take consent after detailed explanation	203 (47.10)	162 (37.59)	43 (9.98)	17 (3.94)	6 (1.39)	-	-	P<0.05	-	-
Breaking bad news										
Plan in advance	136 (31.55)	159 (36.89)	83 (19.26)	23 (5.34)	30 (6.96)	-	-	-	-	-
Assess knowledge and attitude of patients/attendants	150 (34.80)	167 (38.75)	76 (17.63)	27 (6.26)	11 (2.55)	-	-	-	-	-
Provide information in small portions	172 (39.91)	177 (41.07)	59 (13.69)	15 (3.48)	8 (1.86)	-	-	-	-	-
Attend to emotional reaction	209 (48.49)	164 (38.05)	44 (10.21)	8 (1.86)	6 (1.39)	-	-	-	-	-
Discuss the future treatment plan	215 (49.88)	154 (35.73)	54 (12.53)	3 (0.70)	5 (1.160)	-	-	-	-	P<0.05
Team dynamics										
Appropriate courtesy	301 (69.84)	116 (26.91)	11 (2.55)	3 (0.70)	-	-	-	-	-	-
Equal value to supporting staff	248 (57.54)	135 (31.32)	38 (8.82)	7 (1.62)	3 (0.70)	P<0.01	-	P<0.05	-	-
Criticising in front of patients	301 (69.84)	106 (24.59)	20 (4.64)	3 (0.700)	1 (0.23)	-	-	-	-	-
Motivate	121 (28.070)	143 (33.18)	105 (24.36)	37 (8.58)	25 (5.80)	-	P<0.05	P<0.05	-	-
Appreciate supporting staff	169 (39.21)	164 (38.05)	75 (17.40)	13 (3.02)	10 (2.32)	-	-	-	-	-
Provide positive/constructive criticism	150 (34.80)	182 (42.23)	75 (17.40)	13 (3.02)	11 (2.55)	P<0.05	-	-	-	-

Table 4: Association of communication skills with perceived barriers

Communication Skill Domain	Barriers							
	Unfelt Importance of Communication Skills (Coeff*, P, C.I**)	Lack Of Time (Coeff*, P, C.I**)	Difficulty In Understanding the Patient's Language (Coeff*, P, C.I**)	Stress and Fatigue (Coeff*, P, C.I**)	Infrastructural Deficits (Coeff*, P, C.I**)	Long Working Hours (Coeff*, P, C.I**)	Lack of Subject Knowledge (Coeff*, P, C.I**)	Lack of Training in Communication Skills (Coeff*, P, C.I**)
Para-verbal Skills								
Unadjusted	[-0.25, (P<0.01), (-0.44--0.06)]	[-0.305, (P<0.001), (-0.48--0.12)]	[-0.19, P (<0.05), (-0.48--0.028)]	[-0.28, (P<0.01), (-0.47--0.83)]	[-0.85, (N.S), (-0.27--1.1)]	[8.34, N.S, (-0.2-0.2)]	-0.20 (P<0.05), (-0.38--0.2)]	[-.08, (P <0.05), (-0.28-0.11)]
Adjusted	-	[-0.32, (P<0.01), (-0.54--0.09)]	-	[-0.27, (P<0.05), (-0.54, 0.004)]	-	[-0.32, (P<0.01), (0.07-0.56)]	-	-
Content and setting of communication								
Unadjusted	[-0.22, N.S, 9-0.32-0.28]	[-0.53, (P<0.001), (-0.81--0.25)]	[-0.61, (P<0.001), (-0.94--0.29)]	[-0.49, P<0.01, -0.81--0.18]	[-0.37, (P<0.05), (-0.68--0.060)]	[.07, N.S, (-0.24-0.39)]	[-0.43, (P<0.01), (-0.72--0.14)]	[-0.13, N.S, (-0.32-0.29)]
Adjusted	-	[-0.52, (P<0.001), (-0.84--0.20)]	[-0.44, (P<0.01), (-0.82--0.07)]	-	[-0.40, (P<0.05), (-0.81--0.06)]	[0.76, (P<0.000), (-0.34, - 1.17)]	[-0.43, (P<0.02), (-0.79--0.06)]	[.44, (P<0.05), (0.04-0.83)]
Communication with patient/attendants								
Unadjusted	[-0.20, N.S, (-0.48, -0.08)]	[-0.62, (P<0.001), (-0.88--0.36)]	[-0.54, (P<0.001), (-0.85--0.24)]	[-0.78, (P<0.001), (-0.67--0.090)]	[-0.38, (P<0.01), (-0.67--0.09)]	[-0.12, N.S, (-0.42-0.17)]	[-0.26, (P<0.08), (-0.55-0.031)]	[-0.38, (P<0.006), (-0.65-0.031)]
Adjusted	-	[0.39, (P<0.01), (-0.71--0.06)]	-	[-0.88, (P<0.001), (-1.2--0.48)]	-	[0.61, (P<0.001), (0.25-0.97)]	-	-
Breaking bad news								
Unadjusted	[-0.15, N.S, (-0.42-0.11)]	[-0.51, (P<0.001), (-0.76--0.26)]	[-0.36, (P<0.01), (-0.65--0.060)]	[-0.50, (P<0.001), (-0.78--0.22)]	[-0.25, N.S, (-0.53-0.02)]	[-0.08, N.S, (-0.37-0.19)]	[-0.41, (P<0.01), (0.12-0.8)]	[0.28, (P<0.04), (-0.57--0.006)]
Adjusted	-	[-0.42, (P<0.01), (-0.73--0.11)]	-	[-0.35, (P<0.05), (-0.75--0.35)]	-	[0.48, (P<0.01), (0.12-0.84)]	[0.28, (P<0.05), (-0.57--0.006)]	-
Team dynamics								
Unadjusted	[-0.25, (P<0.01), (-0.44--0.06)]	[-0.305, (P<0.001), (-0.48--0.12)]	[-0.19, P (<0.05), (-0.48--0.028)]	[-0.28, (P<0.01), (-0.47--0.83)]	[-0.85, (N.S), (-0.27--1.1)]	[8.34, N.S, (-0.2-0.2)]	-0.20 (P<0.05), (-0.38--0.2)]	[-.08, (P <0.05), (-0.28-0.11)]
Adjusted	-	[-0.32, (P<0.01), (-0.54--0.09)]	-	[-0.27, (P<0.05), (-0.54, 0.004)]	-	[-0.32, (P<0.01), (0.07-0.56)]	-	-

\*Co-efficient, \*\*Class Interval, N.S - Not Significant

Another component of communication with patients is *communication in critical care/ICU settings*. The resident doctors were not very particular in addressing the pertinent queries of the patients. At times, they did not provide all necessary information to the patients and/or attendants especially related to the dynamic nature of the disease. Another important area where the improvement is required is consent taking. Half of the respondents accepted that they do not take the consent appropriately. *Breaking bad news* is considered as one of the most difficult tasks in clinical practice. Although residents understand the importance of learning these skills, they accepted the deficiency in its appropriate practice.

### Comparison with the existing literature

Most of the respondents revealed that they did not plan in advance or did not assess the knowledge of the patients and/or attendants when breaking the bad news and often failed at attending to the emotional reaction of the patients and/or attendants. This finding is consistent with a similar study from the United States, which reported that only 40% of the doctors practiced effective communication skills while breaking bad news.<sup>[11]</sup> The domain of *team dynamics* determines the cordial learning and teaching atmosphere in any organization, and its importance in a health care setting cannot be over-emphasized. This study found that a very limited number of resident doctors try to motivate the supporting staff such as nursing officers and other paramedics by providing them with feedback and constructive criticism. Some even do not recognize the equal importance of these supporting staff in patient care. Such an attitude has been shown to induce stress in the working environment resulting in conflicts and limiting overall productivity.<sup>[12]</sup>

It is important to understand the barriers a resident doctor perceives in practicing good communication skills. Such information may be vital for health administrators and policymakers in formulating the structure of training and developing mechanisms for giving adequate appropriate and periodic feedback. The participants reported that long working hours, infrastructural deficit, and language barriers are the major hurdles to practicing good communication skills. The majority of resident doctors acknowledge the importance of soft skill training in medical practice and have an insight that communication skill training and evaluation if incorporated into the curriculum for resident doctors, will prove to be effective when dealing with patients.

### Generalizability

There could be various ways of evaluating communication skills among resident doctors. One such method could be direct observation in which the evaluation is performed by peers, patients, and other staff. This method has

gained popularity and has been used in a couple of studies.<sup>[13]</sup> This technique, however, requires larger infrastructural support and may pose difficulty in interpretation. A standardized self-assessment tool is easy to administer and bound to increase self-awareness and motivation for improvement.

### Limitations and recommendation

This study is probably the first ever evaluation of the communication skills of resident doctors in India using a validated tool. Although the study has limitations of snowball sampling, it will make way for a nationwide study with stratified sampling for better representativeness. Second, there lies a possibility of recall bias.

### Conclusion

To conclude there is a scope for improvement in practicing good communication skills with patients, among the residents doctors in India. Structured modules for training and evaluation should be implemented in the medical curriculum.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

### References

1. Goodbred A, Snyder R, Sweeny J, Marchionni C, Bhatt B, Domer G, et al. Starting new accreditation council for graduate medical education (ACGME) residency programs in a teaching hospital. *Contemporary Topics in Graduate Medical Education-Volume 2* [Working Title]. IntechOpen; 2020. Available from: <http://dx.doi.org/10.5772/intechopen.93617>.
2. Wooster E, Van Melle E, Chan M, Dath D, Sherbino J, Frank JR. Updating CanMEDS in 2015: Ensuring quality in the change process. *J Grad Med Educ* 2014;6:796.
3. Ghose S. Medical Council of India - Regulations on Graduate Medical Education 2012. *Annals of SBV*. Jaypee Brothers Medical Publishing; 2013. Vol 2. p. 1–22.
4. Chichirez CM, Purcărea VL. Interpersonal communication in healthcare. *J Med Life* 2018;11:119-22.
5. Heshmati H, Shakibazadeh E, Mortaz Hejri S, Foroushani AR, Sadeghi R. Development of a comprehensive communication skills curriculum bases on intervention mapping in response to

- an urgent need for community health workers' education reform: A study protocol. *J Educ Health Promot* 2020;9:75.
6. Rezaei F, Askari HA. Checking the relationship between physicians' communication skills and outpatients' satisfaction in the clinics of Isfahan Al-Zahra(S) Hospital in 2011. *J Educ Health Promot* 2014;3:105.
  7. Baitha U, Ranjan P, Sarkar S, Arora C, Kumari A, Dwivedi SN, *et al.* Development of a self-assessment tool for resident doctors' communication skills in India. *J Educ Eval Health Prof* 2019;16:17.
  8. Modi JN, Anshu, Chhatwal J, Gupta P, Singh T. Teaching and assessing communication skills in medical undergraduate training. *Indian Pediatr* 2016;53:497–504.
  9. Ranjan P, Kumari A, Chakrawarty A. How can doctors improve their communication skills? *J Clin Diagn Res* 2015;9:JE01-4.
  10. Effects of poor communication in healthcare. *HIPAA Journal*. Available from: <https://www.hipaajournal.com/effects-of-poor-communication-in-healthcare/>. [Last accessed on 2022 Mar 30].
  11. Monden KR, Gentry L, Cox TR. Delivering bad news to patients. *Bayl Univ Med Cent Proc* 2016;29:101–2.
  12. Babiker A, El Hussein M, Al Nemri A, Al Frayh A, Al Juryyan N, Faki MO, *et al.* Health care professional development: Working as a team to improve patient care. *Sudan J Paediatr* 2014;14:9-16.
  13. Shanmugam L, N K. Assessment of communication skills in the 2<sup>nd</sup> year MBBS students of a tertiary medical center in Melmaruvathur. *Natl J Physiol Pharm Pharmacol* 2020;10:834-7.