



ATTITUDES OF PHYSICIANS TOWARDS COMMUNICATION WITH PATIENTS AND THEIR RELATIVES IN THE INTENSIVE CARE UNIT: A CROSS- SECTIONAL STUDY FROM A TERTIARY CARE HOSPITAL IN KARACHI, PAKISTAN

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ABSTRACT

Background: Effective communication between physicians and the relatives of critically ill patients is central to shared decision-making, family satisfaction and psychological outcomes in the intensive care unit (ICU). Physicians' communication attitudes have not been studied in Pakistan.

Objective: To assess the attitudes of physicians towards communication with patients and their relatives in the ICU, and to examine whether these attitudes differ by gender, designation, age, experience, specialty and year of training.

Methods: This cross-sectional study was conducted in the Department of Anaesthesiology, The Indus Hospital, Karachi, from 27 May to 24 November 2019. Using non-probability consecutive sampling, we enrolled 238 consultants and residents from critical care and primary teams who

communicated with ICU patients or relatives at least once a day. Participants completed a 24-item, 5-point Likert communication attitude scale adapted from Cicekci et al. The scale has three subscales: informing (8 items), empathy (10 items) and trust (6 items). A total or subscale score at or above the scale midpoint was classified as a positive attitude. Groups were compared with the independent t-test, ANOVA and the χ^2 or Fisher's exact test.

Results: The median age of participants was 29 years (interquartile range [IQR] 28–40); 132 (55.5%) were men and 173 (72.7%) were residents. The mean total communication attitude score was 92.34 ± 9.98 out of a possible 120. Subscale scores were 30.11 ± 3.31 for informing (out of 40), 39.01 ± 4.79 for empathy (out of 50) and 23.21 ± 3.80 for trust (out of 30). Overall, 233 of 238 physicians (97.9%) had a positive communication attitude. By subscale, 99.2% had a positive attitude in informing, 97.1% in empathy and 94.5% in trust. Total scores did not differ by gender, designation, specialty or year of training. Consultants scored higher than residents on empathy (39.98 ± 4.22 vs 38.65 ± 4.95 ; $p = 0.041$). A positive trust attitude was more common among physicians older than 30 years than among those aged 30 or younger (98.8% vs 92.3%; $p = 0.034$).

Conclusion: Physicians in this ICU reported positive attitudes towards communicating with patients and their relatives. Trust was the weakest dimension, and younger physicians and residents scored slightly lower on trust and empathy. Structured communication-skills training, particularly for junior physicians, and studies that include the perspective of patients' relatives are recommended.

Key words: communication; intensive care unit; physician attitudes; patient relatives; empathy; trust; Pakistan

INTRODUCTION

Communication between doctor and patient is a core clinical skill. It shapes mutual understanding, adherence, satisfaction and health outcomes.^{1–3} In the intensive care unit (ICU), this communication takes place largely with relatives rather than patients, because most critically ill patients cannot take part in decisions about their own care. Relatives therefore act as surrogate decision-makers, often under extreme emotional strain and in an unfamiliar, highly technical environment.⁴

Families consistently rate communication with physicians as one of their most important needs in the ICU. In early studies by Molter and Leske, relatives ranked receiving honest, understandable information and feeling that there was hope above almost all other needs.^{5,6} Despite this, communication often falls short. In a French multicentre study, about half of the families of ICU patients did not adequately understand the diagnosis, prognosis or treatment explained to them.⁷ Communication is also a major determinant of family satisfaction with ICU care.^{8,9} Poor communication contributes to anxiety, depression and post-traumatic stress symptoms among relatives.¹⁰ In contrast, structured, empathic communication strategies reduce this psychological burden.^{11,12} International guidelines on family-centred care now recommend routine, structured communication with families of ICU patients.⁴

Physicians' attitudes underpin how they communicate. Three dimensions are particularly relevant in the ICU: willingness to inform relatives fully and in understandable language, empathy with their distress, and building a trusting relationship.^{13,14} These attitudes are not fixed. Empathy may decline during medical training,¹⁵ and communication skills can be taught and improved, including among anaesthetists and critical care physicians.^{16–18} Physician characteristics such as gender may also influence communication style.¹⁹ Culture shapes expectations of medical communication as well,²⁰ so findings from Western ICUs cannot simply be applied to South Asia.

Cicekci et al. examined communication between ICU physicians and patients' relatives in Turkey using informing, empathy and trust dimensions.¹³ A recent Indian survey found that only half of ICU trainees had received formal communication training and that many found breaking bad news difficult.²¹ To our knowledge, no study has examined the communication attitudes of physicians working in ICUs in Pakistan. We therefore assessed the attitudes of physicians towards

communication with patients and their relatives in the ICU of a tertiary care hospital in Karachi. We also examined whether these attitudes differ by gender, designation, age, experience, specialty and year of training.

METHODS

Study design, setting and ethics

This cross-sectional study was conducted in the Department of Anaesthesiology, The Indus Hospital, Karachi, Pakistan, over six months, from 27 May to 24 November 2019. It is reported in line with the STROBE statement.²² The study was approved by the Institutional Review Board of The Indus Hospital and by the College of Physicians and Surgeons Pakistan. All participants were told the purpose of the study and gave informed consent. Questionnaires were anonymous.

Participants

Physicians from the critical care team and from primary teams who looked after patients in the ICU were eligible. The critical care team comprised anaesthesia and critical care consultants and residents. The primary teams comprised consultants and residents in cardiology, pulmonology, gastroenterology, infectious diseases, nephrology, paediatrics, general surgery, orthopaedics, urology, internal medicine and family medicine.

Inclusion criteria were:

- age 25–75 years, of either gender
- communication with ICU patients or their relatives at least once a day
- consent to take part

Nursing staff and physicians from the emergency and obstetrics and gynaecology departments were excluded. A patient was defined as an individual admitted to the ICU for at least one day. Relatives were defined as the parents, siblings, spouse or guardian of an ICU patient. Participants were recruited by non-probability consecutive sampling, and 238 physicians were enrolled.

Data collection and instrument

The principal investigator or a team member approached each consenting physician. Participants completed a self-administered questionnaire and returned it on the same day. The questionnaire recorded age, gender, department, designation (consultant or resident), year of training (residents) and years of work experience (consultants).

Communication attitudes were measured with a 24-item scale adopted and modified from the instrument developed by Cicekci et al.¹³ Items were rated on a 5-point Likert scale from “never” (1) to “always” (5), and negatively worded items were reverse-scored. The scale has three subscales:

- Informing** (items 1–8; possible score 8–40), for example adequacy of information and use of understandable language
- Empathy** (items 9–18; possible score 10–50), for example caring about the patient and relatives and staying calm in difficult interactions
- Trust** (items 19–24; possible score 6–30), for example building a trusting relationship with relatives

The total score was the sum of all items (possible range 24–120). A score at or above the scale midpoint was classified as a positive attitude, and a score below it as negative. The midpoint corresponds to an average item score of 3, or “sometimes”: 24 for informing, 30 for empathy, 18 for trust and 72 for the total score.

Statistical analysis

Data were analysed using SPSS version 24. Age and years of experience are summarised as median and interquartile range (IQR). Scale scores are presented as mean $\pm$ standard deviation (SD), and categorical variables as frequency and percentage.

- Mean scores:** compared between genders, between consultants and residents, and between junior (R1–R2) and senior (R3–R5) residents using the independent-samples t-test, and

across departments using one-way ANOVA.

•**Proportions with a positive attitude:** compared across gender, designation, age group (≤ 30 vs > 30 years), experience (< 10 vs ≥ 10 years), department and year of training using the χ^2 test, or Fisher's exact test where expected counts were small.

Age and experience were also examined by stratification. A two-sided p-value below 0.05 was considered statistically significant.

RESULTS

Participant characteristics

All 238 physicians were included in the analysis (Table 1). Median age was 29 years (IQR 28–40), and 132 (55.5%) were men. There were 65 consultants (27.3%) and 173 residents (72.7%). Consultants had a median of 12 years of work experience (IQR 5–20). Of the residents, 93 (53.8%) were in their first or second year of training and 80 (46.2%) in their third to fifth year. The largest groups of participants came from paediatrics ($n = 55$, 23.1%) and anaesthesia ($n = 49$, 20.6%), followed by internal medicine ($n = 29$, 12.2%) and orthopaedics ($n = 28$, 11.8%).

Table 1. Characteristics of participating physicians ($n = 238$)

Characteristic	n (%) or median (IQR)
Age, years	29 (28–40)
Age ≤ 30 / > 30 years	155 (65.1) / 83 (34.9)
Male / female	132 (55.5) / 106 (44.5)
Consultant / resident	65 (27.3) / 173 (72.7)
Work experience of consultants, years ($n = 65$)	12 (5–20)
Residents in years R1–R2 / R3–R5 ($n = 173$)	93 (53.8) / 80 (46.2)
Department	
Paediatrics	55 (23.1)
Anaesthesia	49 (20.6)
Internal medicine	29 (12.2)
Orthopaedics	28 (11.8)
General surgery	22 (9.2)
Cardiology	15 (6.3)
Urology	11 (4.6)
Nephrology	9 (3.8)
Pulmonology	8 (3.4)
Critical care	6 (2.5)
Gastroenterology	3 (1.3)
Infectious diseases	2 (0.8)
Family medicine	1 (0.4)

Communication attitude scores

The mean total communication attitude score was 92.34 ± 9.98 , about 77% of the maximum possible score (Table 2). Mean subscale scores were 30.11 ± 3.31 for informing (75% of the maximum), 39.01 ± 4.79 for empathy (78%) and 23.21 ± 3.80 for trust (77%).

Total and subscale scores did not differ significantly between men and women. Consultants had a significantly higher mean empathy score than residents (39.98 ± 4.22 vs 38.65 ± 4.95 ; $p = 0.041$), but there was no difference in informing, trust or total score. Scores did not differ between junior

(R1–R2) and senior (R3–R5) residents (Table 2), or across departments (informing $p = 0.094$, empathy $p = 0.722$, trust $p = 0.530$, total $p = 0.298$; Table 4).

Table 2. Communication attitude scores by gender, designation and year of training (mean $\pm$ SD)

Subgroup	n	Informing (8–40)	Empathy (10–50)	Trust (6–30)	Total (24–120)
All physicians	238	30.11 $\pm$ 3.31	39.01 $\pm$ 4.79	23.21 $\pm$ 3.80	92.34 $\pm$ 9.98
Male	132	30.27 $\pm$ 2.93	39.46 $\pm$ 4.68	23.36 $\pm$ 3.64	93.09 $\pm$ 9.05
Female	106	29.92 $\pm$ 3.74	38.45 $\pm$ 4.89	23.02 $\pm$ 3.99	91.40 $\pm$ 11.01
p		0.432	0.107	0.488	0.194
Consultant	65	29.91 $\pm$ 2.35	39.98 $\pm$ 4.22	23.14 $\pm$ 3.24	93.03 $\pm$ 7.46
Resident	173	30.19 $\pm$ 3.61	38.65 $\pm$ 4.95	23.24 $\pm$ 3.99	92.08 $\pm$ 10.78
p		0.485	0.041	0.859	0.443
Residents R1–R2	93	30.48 $\pm$ 3.25	38.63 $\pm$ 4.63	23.65 $\pm$ 3.46	92.76 $\pm$ 9.58
Residents R3–R5	80	29.85 $\pm$ 4.00	38.66 $\pm$ 5.33	22.76 $\pm$ 4.52	91.28 $\pm$ 12.06
p		0.252	0.970	0.148	0.367

Independent-samples t-test. Values for all participants were pooled from the gender subgroups.

Prevalence of positive communication attitudes

Overall, 233 of 238 physicians (97.9%) had a positive communication attitude. By subscale, 236 (99.2%) had a positive attitude in informing, 231 (97.1%) in empathy and 225 (94.5%) in trust (Table 3).

Physicians older than 30 years were significantly more likely than those aged 30 or younger to have a positive trust attitude (98.8% vs 92.3%; $p = 0.034$). Empathy showed a similar, borderline difference (100% vs 95.5%; $p = 0.051$). All consultants had a positive attitude in informing, empathy and overall communication, compared with 96.0–98.8% of residents, but these differences were not significant. The proportion with a positive attitude did not differ significantly by gender, experience, year of training (Table 3) or department (all $p > 0.8$). All five physicians with a negative overall attitude were residents aged 30 years or younger: three from paediatrics, one from anaesthesia and one from general surgery.

Table 3. Physicians with a positive communication attitude, by subgroup, n (%)

Subgroup	n	Informing	Empathy	Trust	Overall
All physicians	238	236 (99.2)	231 (97.1)	225 (94.5)	233 (97.9)
Male	132	131 (99.2)	129 (97.7)	126 (95.5)	130 (98.5)
Female	106	105 (99.1)	102 (96.2)	99 (93.4)	103 (97.2)
p		0.876	0.496	0.487	0.482
Consultant	65	65 (100)	65 (100)	64 (98.5)	65 (100)

Subgroup	n	Informing	Empathy	Trust	Overall
Resident	173	171 (98.8)	166 (96.0)	161 (93.1)	168 (97.1)
p		0.384	0.100	0.103	0.166
Age ≤30 years	155	153 (98.7)	148 (95.5)	143 (92.3)	150 (96.8)
Age >30 years	83	83 (100)	83 (100)	82 (98.8)	83 (100)
p		0.299	0.051	0.034	0.098
Experience <10 years	200	198 (99.0)	193 (96.5)	188 (94.0)	195 (97.5)
Experience ≥10 years	38	38 (100)	38 (100)	37 (97.4)	38 (100)
p		0.536	0.242	0.402	0.325
Residents R1–R2	93	93 (100)	89 (95.7)	88 (94.6)	90 (96.8)
Residents R3–R5	80	78 (97.5)	77 (96.3)	73 (91.3)	78 (97.5)
p		0.125	0.854	0.384	0.776

χ^2 or Fisher's exact test. A positive attitude was defined as a score at or above the scale midpoint.

Table 4. Communication attitude scores by department (mean ± SD)

Department	n	Informing	Empathy	Trust	Total
Anaesthesia	49	29.41 ± 3.50	38.20 ± 4.72	21.98 ± 3.64	89.59 ± 9.38
Critical care	6	29.33 ± 3.50	39.50 ± 4.68	23.33 ± 4.17	92.17 ± 11.03
Cardiology	15	29.40 ± 2.72	39.27 ± 4.38	23.33 ± 3.95	92.00 ± 9.41
Pulmonology	8	27.63 ± 2.82	37.13 ± 4.12	21.13 ± 1.95	85.88 ± 6.66
Gastroenterology	3	31.67 ± 4.04	38.67 ± 4.04	22.67 ± 2.30	93.00 ± 10.32
Infectious diseases	2	32.00 ± 1.41	44.00 ± 1.41	22.00 ± 4.24	98.00 ± 1.41
Nephrology	9	29.89 ± 2.31	38.11 ± 3.88	23.44 ± 5.29	91.44 ± 9.30

Department	n	Informing	Empathy	Trust	Total
Paediatrics	55	29.84 ± 3.62	39.15 ± 5.70	23.67 ± 4.16	92.65 ± 11.82
General surgery	22	30.86 ± 2.60	38.64 ± 5.12	24.05 ± 3.51	93.55 ± 9.65
Orthopaedics	28	30.54 ± 2.95	40.18 ± 4.26	23.14 ± 3.75	93.86 ± 9.01
Urology	11	31.09 ± 2.91	38.91 ± 4.41	22.82 ± 2.44	92.82 ± 7.96
Internal medicine	29	31.59 ± 3.52	39.76 ± 4.34	24.66 ± 3.52	96.00 ± 9.61
Family medicine	1	27.00	34.00	20.00	81.00
p (one-way ANOVA)		0.094	0.722	0.530	0.298

DISCUSSION

This study is, to our knowledge, the first to assess the communication attitudes of physicians working in ICUs in Pakistan. Nearly all participants (97.9%) reported a positive overall attitude towards communicating with patients and their relatives, and mean scores were about three-quarters of the maximum on every subscale. Informing was the most consistently positive dimension and trust the least. Consultants scored higher than residents on empathy. Physicians older than 30 years were more likely than younger physicians to report a positive attitude to building trust. There were no differences by gender, specialty or year of training.

The ICU is a technologically complex environment, and families often find it intimidating and distressing. Clear, consistent communication helps reduce their anxiety when they are facing uncertainty and possible loss.^{4,10} Families across cultures consistently rank honest information, the physician's attitude and a sense of trust among their most important needs.^{5,6} The three dimensions measured here therefore correspond closely to what families value. The high proportion of positive informing attitudes in our study is encouraging. However, physicians' self-reported willingness to inform does not guarantee that families understand. In the study by Azoulay et al., about half of families had not understood the information they were given, even though physicians believed they had communicated adequately.⁷ Observational studies show that communication problems are a leading source of family dissatisfaction in the ICU, often because time with clinicians is limited, information is inconsistent and it comes from several different providers.^{8,9,23}

Trust had the lowest proportion of positive attitudes (94.5%). It was also the only dimension that differed significantly by age, with physicians aged 30 or younger less likely to report a positive trust attitude. Trust between relatives and clinicians develops through repeated, consistent and honest interactions, and through the continuity of care that senior physicians are better placed to provide.^{13,14} The higher empathy scores of consultants than residents are consistent with the idea that communication skills mature with clinical experience. They may also reflect the stress, workload and burnout that affect junior doctors in critical care, all of which can reduce empathic engagement.^{15,24} All five physicians with a negative overall attitude were young residents. This suggests that communication training would be most useful early in postgraduate training.

The literature suggests that female physicians tend to engage in more patient-centred and emotionally focused communication.¹⁹ Cicekci et al. found that female ICU physicians showed

more empathy towards relatives, and that internal medicine physicians scored higher on empathy and trust than anaesthesiologists and cardiovascular surgeons.¹³ In our study, men and women had similar scores and positive-attitude rates. Differences between departments were not statistically significant, although internal medicine had the highest and pulmonology and anaesthesia among the lowest mean scores. Many departments had small numbers of participants, so the study had limited power to detect differences between specialties. Cultural norms of family involvement and physician–family interaction in Pakistan may also differ from those in Turkey and Western settings.²⁰

The very high proportion of positive attitudes should be interpreted with caution. First, a positive attitude was defined as a score at or above the scale midpoint, equivalent to answering “sometimes” on average. This is a lenient threshold, which produces a ceiling effect: almost everyone is classified as positive, and differences between groups are hidden. The continuous scores, which averaged 75–78% of the maximum, show more clearly that there is room for improvement. Second, self-reported attitudes are prone to social desirability bias and do not necessarily match observed behaviour. Physicians often rate their own communication more favourably than families do.^{7,21} Indian ICU trainees, for example, reported frequent difficulty breaking bad news and limited formal communication training.²¹

Communication skills can be learned. Structured approaches such as the SPIKES protocol for breaking bad news,²⁵ proactive family conferences with a structured format,^{11,12} and simulation-based or experiential training improve clinicians’ communication and family outcomes.^{16–18} Communication failures also contribute to medical errors,²⁶ which strengthens the case for formal communication training in anaesthesia and critical care residency programmes in Pakistan. Such training should particularly target junior residents and the trust dimension.

Strengths and limitations. This study was carried out in a large tertiary hospital and included physicians from the critical care team and from 12 primary specialties. It used an instrument with defined informing, empathy and trust subscales and reported both continuous scores and categorical classifications. It also has several limitations:

- It was a single-centre study with non-probability sampling, which limits generalisability.
- The questionnaire was adapted from an instrument developed in Turkey and was not formally re-validated (for example, internal consistency) in our population.
- Attitudes were self-reported and were not compared with observed communication or with relatives’ perceptions.
- The midpoint threshold for a positive attitude is lenient.
- Several subgroups, particularly departments, were small.
- Multiple comparisons were made without correction, so the isolated significant findings (empathy by designation, trust by age) should be regarded as exploratory.

Future studies should use observed or relative-reported measures of communication, include relatives’ satisfaction with care, and evaluate the effect of communication training.

CONCLUSION

Physicians working in the ICU of a tertiary care hospital in Karachi reported positive attitudes towards communicating with patients and their relatives in informing, empathy and trust. Trust was the weakest dimension. Younger physicians and residents scored slightly lower on trust and empathy than older physicians and consultants. Because communication attitudes and skills can be learned, structured communication-skills training should be built into postgraduate training, particularly for junior residents in anaesthesia, critical care and the primary specialties. Future research should include the perspective of patients’ relatives.

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