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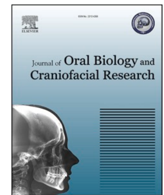

# Contextual barriers in effective interpersonal communication with patients: A qualitative analysis

Rameshwari Singhal [a,*], Samiksha Dubey [a], Richa Khanna [b], Shuchi Tripathi [c], Pavitra Rastogi [a], Rhythm Bains [d]

[a] *Department of Periodontology, Faculty of Dental Sciences, King George's Medical University, Lucknow, UP, India*
[b] *Department of Pediatric Dentistry, Faculty of Dental Sciences, King George's Medical University, Lucknow, U P, India*
[c] *Department of Prosthodontics, Faculty of Dental Sciences, King George's Medical University, Lucknow, U P, India*
[d] *Department of Conservative Dentistry, Faculty of Dental Sciences, King George's Medical University, Lucknow, UP, India*

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ABSTRACT

*Purpose:* Competence building in interpersonal communication (IPC) between undergraduate students and patients requires deep understanding of the factors influencing their interaction. These factors, contextual to our clinical setup were explored from multisource perspectives to understand the perceived barriers in IPC.
*Method:* Qualitative hermeneutic phenomenological analysis was done for patient's semi-structured interviews (n = 16); interns (n = 15) and faculty (n = 14) unstructured focus group discussions. Three independent authors transcribed the data, derived codes and themes individually, and then collated and reflected on them to draw conclusions. Different collection methods, multisource perspectives, and multilevel analysis provided for triangulation and validation of the study results.
*Results:* This study's multisource feedback identified seven inter-dependent barriers to interpersonal communication between students and patients. They were time constraints, lack of trust and respect, cultural diversity, loco-regional linguistic differences, lack of empathy, illiteracy, and financial constraints.
*Conclusions:* The study concluded by identifying the unique set of barriers preventing interpersonal communication in our clinical microsystem. Addressing these contextual factors by preparing training modules and workshops would prepare undergraduate students for patient-centered care and partnership.

## 1. Introduction

Interpersonal communication refers to the information sent and received between a small group.[1] This information is not solely dependent on the words being spoken, but also on the nuances, gestures, postures, and non-verbal dialogue accompanying verbal content. All information is received and processed in context to interacting individuals' circumstances, situations, environment, social, and psychological orientation. In doctor-patient interaction, context becomes all the more important as it would eventually determine the interpersonal relationship fostered, the effectiveness of information exchanged, and also guide the treatment decisions taken.[2] Ignorance of patient-related context in doctor-patient communication, termed contextual error, has major implications for quality of care.[3]

Unlike other specialties, dental students start work on patients in the third year of their undergraduate training. We believed that teaching interpersonal communication skills (ICS) to undergraduate students (UG) starting their clinical interaction with patients was imperative to creating a competent dental graduate.[4] This would help pave a strong foundation for quality health care on patient-centered services and partnership concepts since life-long habits are developed early.[5] Students need to understand the patients in context to the environment, time, space, gender, culture, etc towards forming a congenial working environment.[6]

Evidence suggests a lot of discontent amongst patients regarding quality of care and attention provided by doctors, contributing towards growing rift in doctor-patient relationship.[7] Interventions teaching ICS resulted in positive change in doctor-patient communication[8] and led to favourable outcomes in terms of accurate diagnosis, better treatment decisions, job satisfaction, and reduced work-related stress for doctors.[9]

* Corresponding author. Department of Periodontology, Faculty of Dental Sciences, King George's Medical University, Lucknow, U P, India.
*E-mail addresses:* rameshwarisinghal@kgmcindia.edu (R. Singhal), drsamikshadubey@gmail.com (S. Dubey), richa.bahal@gmail.com (R. Khanna), dr08shuchi@yahoo.co.in (S. Tripathi), pavitrarastogi@kgmcindia.edu (P. Rastogi), docrhythm77@gmail.com (R. Bains).

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ICS improved patient compliance, adherence to treatment, and patient satisfaction, eventually leading to less medico-legal conflicts.[10–12]

This study aimed to explore contextual barriers to effective interpersonal communication between dental UG & patients by diving deep into the problem's psyche and understanding perceived barriers preventing effective communication. This explorative knowledge would help find solutions for implementing policies, teaching modules, and interventions to overcome these barriers.

## 2. Methodology

### *2.1. Study design- qualitative study design, methodological framework with deductive reasoning*

Multisource hermeneutic "phenomenology" was used to explore barriers to effective ICS. This method permitted interpretation of the participants' experiences and reflection on the contextual factors behind those experiences.[13]

### *2.2. Study participants and setting*

Study was conducted in Faculty of Dental Sciences. Study recruitment and data collection were done after getting ethical clearance from the Institutional Review Committee. First interaction of dental undergraduates with patients starts in the third year of their training. The participants were included by purposive sampling and were divided into three groups: i) Dental faculty from all departments involved in UG clinical teaching; ii) Interns who recently completed their UG training; iii) Patients in the waiting area of dental faculty on a second or subsequent visit having been exposed to dental treatment by the dental undergraduate. We recruited patients who were fully satisfied with the study purpose and interested in talking about their experiences.

We conducted needs assessment before this study commencement. Thirty-one dental faculty from our college participated in an online survey. 71 % (n = 22) faculty believed good interpersonal communication between students-patients to be of utmost importance; 51.6 % (n = 16) thought current situation to be poor and; 77.4 % (n = 24) felt that effective ICS would help in good treatment outcomes. With this pretext, we commenced this study.

The six-point approach of *van Manen (1990)* was followed to guide the study execution and data analysis.[14] These steps were dynamic and followed a cyclic pattern, reverting to previous steps forward and backward to understand, interpret, reflect, and put the final useful information into words.

A semi-structured guide was used with broad, open-ended questions (Annexure 1) to conduct patient interviews in the waiting room of various clinical dental departments. Patient interviews were conducted by a single researcher (RS) in the local language i.e., Hindi. The total duration of the interviews for patients was between 20 and 50 min in one sitting, recorded in a smartphone audio recorder. On average, two sessions sufficed for the interview conclusion. We started the interview by asking about the patient's perceived experience with the student-doctor and the factors influencing those experiences. Probe questions were used, wherever required, to guide the interview.

We used an unstructured format for FGD. The discussion started with asking participants to recall and narrate their experience where they feel interpersonal communication skills between patients and students were lacking along with reflection on its causative factors. The participants were allowed henceforth to build on each other's live-in experiences. We got a lot of ponderings, reflections, viewpoints, opinions, and suggestions that all added towards the richness of the transcript. The FGD took around 60–90 min in one session and was conducted in a mixed language of English and Hindi. We had a moderator (RS), timekeeper (PR), and rapporteur (RK) for each session. Two sessions with 7 participants each were conducted for faculty, and three sessions with 5 participants each were conducted for interns. We conducted sixteen interviews on patients to achieve saturation of data.

We transcribed the interviews and FGD from written notes and mobile audiotaped recordings. Two independent researchers (RS and ST) individually analysed the transcripts. The phrases, terms, repeated wordings, statements, and sections were highlighted. We tried to suppress our professional bias as much as possible while reading and re-reading transcripts to get to the real meaning of the phenomenon studied. When fully satisfied, that our highlights align with the study question, we progressed to label these statements with codes. We coded the text after reflecting on and interpreting the text in context to the situation related to the narrated experience. These codes formed a basis for sub-themes and themes. Coding for patients, interns, and faculty was done separately. We separated jargon from the relevant portion of the transcripts that answered the study question.

This study's limitation was the reflection and interpretation required to understand the context. Even though we tried to keep aside our individual biases while interpreting transcripts, some may have inadvertently seeped through.

All transcripts, codes and broad themes with individual notes were supplied to the external reviewer (SS) for final compilation, resolution of differences, and condensation of like concepts into sub-themes leading to the final seven themes.

## 3. Results

We analysed the whole picture, reflected on the contextual barriers to effective interpersonal communication between our students and patients, and concluded on seven broad themes (Table 1).

Demographic characteristics of participants enrolled are given in Table 2.

We found seven broad themes related to contextual factors acting as barriers to effective ICS between our students and patients (Table 2).

### *3.1. Theme1-time constraint*

Patients, interns, and faculty all felt that lack of time contributed to ineffective communication. Interns felt that as UG students had limited clinical, so were in a rush to complete their assigned quota, and thus failed to make introductions, talk to the patient and, make rapport. It was a common consensus amongst faculty that since students were learning to work on patients; they were "slow, unsure, and clumsy" and took a "lot of time in doing smallest procedures." Faculty opined that student dismissed the patients without properly concluding the appointment. Patients conveyed that out-patient department had huge rush of patients, leading to long waiting periods and discontent among patients. They also felt they had to come "again and again" for small procedures and students didn't have time to discuss their problems, give advice or listen to them.

### *3.2. Theme 2- Lack of respect, trust and empathy*

Interns felt that as UG students, lacked the confidence and smoothness of gestures required to assure patients and tried to compensate by being aggressive and "bossing". Students were more engrossed in the "nitty-gritty of arranging instruments, remembering procedural details and other things", forgetting the most important task of making the patient comfortable. Patient's interviews conveyed a pre-conceived notion that, the student doctor was but a kid, and they were sure to have a problem later. They tried to gain the attention of supervising residents or faculty to get their work transferred to a senior doctor even though they had no pain or discomfort during treatment. Faculty experiences conveyed that the students were learning to work on patients and therefore asked for help between procedures. This created a feeling of mistrust amongst patients.

**Table 1**
Contextual barriers (Themes) to interpersonal communication between students and patients and their supporting statements.

| Theme (Contextual barriers) | Supporting statements |
|---|---|
| Time constraint | Patient:<br>*"Bahut time lagta hai"* (It takes a lot of time)<br>Intern:<br>"Patient wants everything to be done at once"<br>"Have to rush to another class"<br>"Lack of time leads to ineffective communication"<br>Faculty:<br>"New students are learning and are asked to repeat or correct"<br>"No proper appointment given"<br>"Patient allotted during end of posting, work to be completed by other student, creates a lot of mistrust in patients" |
| Lack of trust, respect and empathy | Patient:<br>"*unko aata nahin hai, dard karte hain..*" (they don't know how to do, they cause pain)<br>"*Doctor kaam nahin karte, naye bacchon se karvate hain*" (doctors don't do our work, we are treated by new kids"<br>"*dard to nahin hua, par mujhe nahin lagta unhe theek se aatat hai.."* (it didn't pain but I am still not convinced that he knew his job"<br>Intern:<br>"it's difficult to be confident when doing it for the first time" ....<br>"they should treat us like doctors,' "get it checked by senior doctor"<br>Faculty:<br>"have to show mistakes in front of patients" ...<br>"gross errors have to be corrected by residents". |
| Cultural diversity and religious beliefs | Patient:<br>"*Mere daant hil jayenge ... dawai nahin de sakte*" (my teeth will become mobile by cleaning, why can't they give medicine)<br>"*aankh kamzor nahin ho jayegi.*" (by extracton won't my eyesight be affected)<br>"*kal hamara upwas hai.. kam kaise karwa payenge*" (it is my fast, how will I get work done)<br>"*hum to kisi ladke se ilaaz nahin karayeng*" (I will not get treatment from male doctor)<br>Interns<br>"Due to lack of knowledge patient have lot of myth"<br>"Want to come at their convenience."<br>Faculty<br>"Do not understand patients background"<br>"Should try to go slow and reason out rather than force their opinion" |
| Loco-regional linguistic differences | Patient:<br>"*hamari bhasha nhi samajhte hain*" (do not understand our dialect)<br>"ishare karke samjhaya kaun daant piraat hai" (had to point out which tooth had pain)<br>Intern:<br>"asked one of my batch mates to help ."<br>Faculty:<br>"Often have language barrier in effectively eliciting history taking skills especially rural patients"<br>"Students from non-Hindi speaking areas find it difficult to communicate" |
| Limitations in body language | Patients felt that student's behaviour lacked empathy.<br>"*Hamari peeda kyun samjhenge*" (why will they understand our pain)<br>Intern:<br>"don't have enough time for this"<br>Faculty:<br>"Appropriate body language and tone should show empathy and interest"<br>"Anxious child patient ... has to handle anxiety and fear of both patient and parents" |
| Illiteracy | Patient:<br>"*doc saab ne likhke de diya, samjhaya bhi nahin*" (just gave us a written paper, didn't explain anything)<br>Intern:<br>"I wrote everything in detail, patient was still pestering about details, then I realized he cannot read"<br>Faculty:<br>"patient not able to understand what is written on his opd ticket."<br>"Verbally communicating instructions better' |
| Financial constraints | Patient:<br>"*inse se ilaaz isliye kara rahe hain ki paisa nahin hai*" (getting treatment from them because don't have money)<br>Intern:<br>"Difficult to explain ... basic token amount to be deposited"<br>"Difficult attitude after payment"<br>Faculty:<br>"Need to know about government and institutional policy for poor patients" |

**Table 2**
Characteristics of study participants 2018–2019.

| Participant group | Age (in years) | Gender |
|---|---|---|
| Patients (n = 16) | 42.54 ± 3.42 (27–68) | Males = 7<br>Females = 9 |
| Interns (n = 15) | 24.87 ± 1.30 (23–27) | Males = 5<br>Females = 10 |
| Faculty (n = 14) | 40.85 ± 4.80 (35–52) | Males = 7<br>Females = 7 |

### 3.3. Theme 3: Cultural diversity

Interns felt that patients had their religious beliefs and superstitions made the explaining very difficult. Contradicting beliefs and explaining scientific facts made the patient aggressive. Also, patients were more at ease getting treatment from students of their ethnicity and relied more on home-remedies and merely wanted relief from acute symptoms. Patients felt that students made fun of their beliefs and wanted to change their age-old customs. They felt that student doctors should be more sympathetic to their needs and social commitments. Faculty felt that students were at an impasse when patients were unwilling to listen. The faculty thought that diversity was not to be seen in patients only. The difference in the background of both students and patients made communication even more difficult. Also, the gender bias associated with certain religions could deter smooth communication.

### 3.4. Theme 4: Loco-regional linguistic differences

Patients felt that the doctors could not understand what they were speaking and had to gesticulate a lot for students to understand. Interns felt that the biggest hurdle was in deciphering the problem the patient was trying to convey they had to rely on patient gestures, pointing out the problem area and on clinical examination to finally be able to understand the patient's predicament. It made history taking and giving post-treatment instructions a tedious job, leaving the patient dissatisfied. The faculty felt the patients were more at ease when communicating in their dialect. Failure of which created a feeling of inadequacy in students while understanding the patient's problems and effectively conveying their message.

### 3.5. Theme 5: Limitation in body language

Patient's interviews revealed that treating doctors were busy arranging things and didn't bother to greet or smile or make eye contact. Student's treatment of them was very cavalier and "as inanimate" they were fidgety, self-absorbed, and concerned with the job assigned.

Interns called their behaviour "more of robotic" as they were trying to keep so many things focused on their mind that they failed to see the pain and fear in the patient. Faculty felt that a pre-clinical soft skills workshop was required to inculcate the importance of "values, feeling and emotions" in students. Students had to learn that they were dealing with fellow human beings with similar feelings and fears as they had and not just as assigned work.

### 3.6. Theme 6: Literacy

Patients seeking treatment comes from all walks of life, some being educated while others being illiterate or with limited literacy especially English. Patient interviews revealed unique communication barriers faced when they were given prescriptions, detailed instructions on paper (mostly in English), which they could not understand, leading to dejection and helplessness. Interns felt that they were writing everything in detail as was taught in prescription writing. It never occurred to them that the patients could not read, and it was only at a subsequent appointment they realized that patients were not following instructions. They blamed the patients for not being forthright about their problems. Faculty felt that students missed out on the demographic aspect of history taking and understanding the short-comings in their patients thus failed to deal with the patient's lack of skill. Faculty had seen patients returning repeatedly with the smallest queries to the busy students leading to discontent, delusion, embarrassment, and perplexity.

### 3.7. Theme 7: Financial

Patients felt that they came to a government setup so they were entitled to free treatment. They were perplexed about why they had to deposit procedural charges when kids were learning procedural skills through them. Patients also felt objectified for financial gain. Interns felt that it was tough convincing patients that they were being charged only token money which was a meagre amount and part of policy with students having nothing to do with it. Interns reminisced that once patient had paid; their attitude became overbearing; as if they own the doctor and wanted to get everything done at once. Faculty believed that the student's knowledge of government policies and the provisions under which free treatment could be given would have been useful in dealing with poor patients. Students should try to listen to patients' woes and be solution-oriented rather than being overbearing.

## 4. Discussion

Qualitative research had a plethora of methodologies but we chose phenomenology to answer our research question since it offered an in-depth exploration of viewpoints, lived in experiences, and perspectives, that helped understand the true human phenomenon of interpersonal communication.[13,15]

Multilevel, multisource, and multidimensional perspectives unfolded the drama on the clinical stage between the newly exposed UG student and an individualistic patient. Perspectives of stakeholders were considered in various studies of curriculum development.[8,16,17] We studied contextual barriers to ICS from patient's and student's perspectives and faculty perspectives provided a neutral, unbiased, and balancing overview (Fig. 1). These diversified and multisource reflections provided a three-dimensional comprehensive understanding of the whole phenomenon along with triangulated data.[18] We further validated study results through multilevel data analysis.

Patient-centered care, as defined by the Institute of Medicine (IOM) in their report on Crossing the Quality Chasm, was "respecting and responding to patients' wants, needs, and preferences so that they can make choices in their care that best fit their circumstances." [19] Individual circumstances posed a significant challenge towards ICS, impeding healing relationships, emotional support, shared decision-making, job satisfaction, and patient enablement.[20]

The Cochrane review emphasized the need to strengthen the quality of the evidence on the long-term effects of interventions on students'

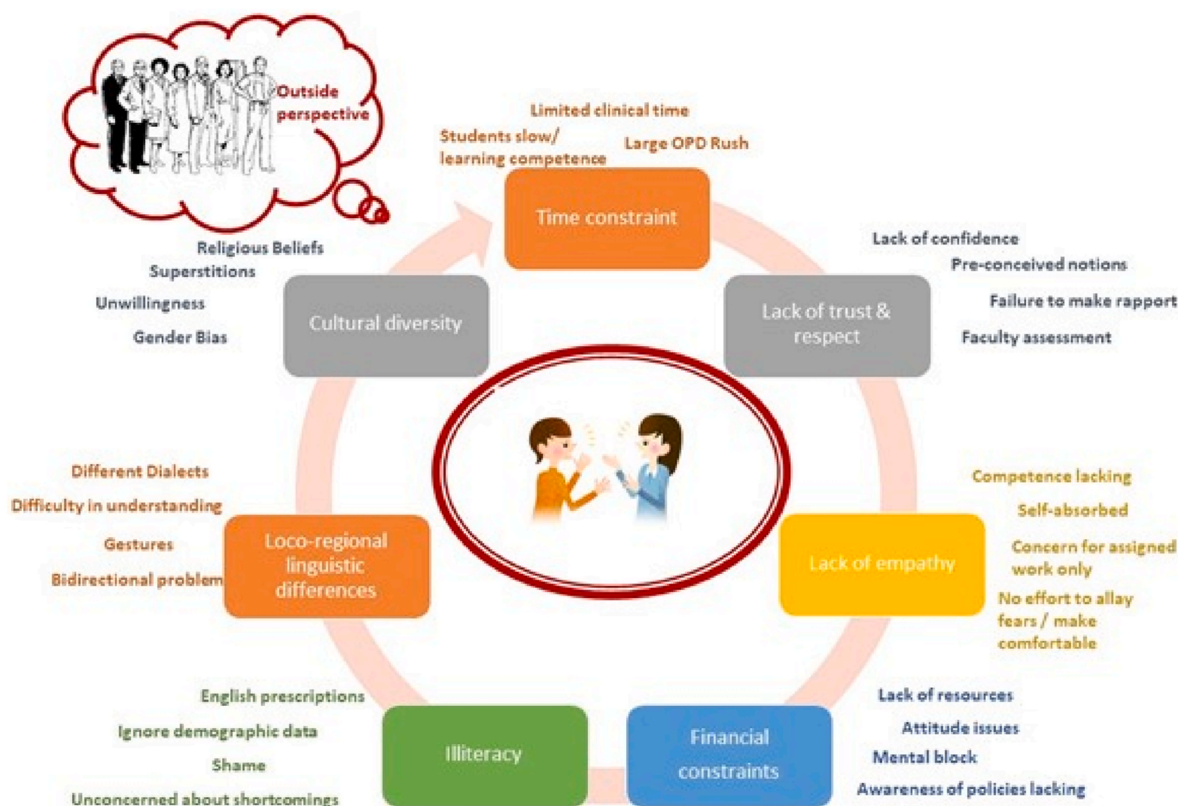


**Fig. 1.** Pictorial representation of Interpersonal communication in between UG students & patients in context to the factors governing this interaction.

interactions with patients and the resultant impact on patient outcomes.[21] The communication barriers studied, like empathy, rapport building, linguistic differences, and cultural diversity, were similar to the themes gathered in our study.

Various studies had considered student perspectives, contextual factors, and real-world patient scenarios while developing curriculum and modules specific to their requirements.[7] Our study dealt with issues of our institute, so it may not be generalized to another curriculum *per se*. However, this study validates that every setup has unique barriers that must be studied individually to find sustainable, specific, and contextual solutions with a larger sample size that fully represents the diverse experiences and backgrounds of all dental students, faculty, and patients. Generalized solutions where human behavior was concerned would never work. There is a need to understand the perpetrator of specific action and study the aggregate complexities of individual interactions in context to the social, psychological, environmental, and regional variations.

## 5Conclusions and future directions

Study results concluded that all the patients, faculty and the interns, agree that the UG students faces difficulty in ICS at multiple levels due to many constraints and they all agree upon the inclusion of ICS teachings in the curriculum.

This has brought to focus lot of grey areas present in our setup but were overlooked, mostly due to the ignorance of their existence. Prospects include workshops, patient feedback, role-modelling, dramatics, and simulated patients to make the student comfortable and confident in dealing with patients and teach ICS, empathy, cultural diversity, and body language. Assessment of time justified quota requirements, limiting number of patients in one-day OPD, faculty supervision from a distance, appreciative inquiry and creating conducive environment for building mutual trust and respect would be done. Introductory class for specific terminologies of various loco-regional linguistic dialects, understanding of government policies with provisions for fee waiver, schemes for helping out poor may be added to the pre-clinical curriculum. Students would be encouraged to give in-detail verbal instructions, keeping in mind the patient's literacy status.

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None to declare.

## Patient/gaurdian consent

None to declare as it is not a clinical study.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## References

1. Berger CR. Interpersonal communication: theoretical perspectives, future prospects. *J Commun.* 2005 Sep 1;55(3):415–447.
2. Ong LM, de Haes JC, Hoos AM, Lammes FB. Doctor-patient communication: a review of the literature. *Soc Sci Med.* 1982. 1995 Apr;40(7):903–918.
3. Weiner SJ, Schwartz A. Contextual errors in medical decision making: overlooked and understudied. *Acad Med J Assoc Am Med Coll.* 2016;91(5):657–662.
4. Kurtz S, Silverman J, Benson J, Draper J. Marrying content and process in clinical method teaching: enhancing the Calgary-Cambridge guides. *Acad Med J Assoc Am Med Coll.* 2003 Aug;78(8):802–809.
5. Berkhof M, van Rijssen HJ, Schellart AJM, Anema JR, van der Beek AJ. Effective training strategies for teaching communication skills to physicians: an overview of systematic reviews. *Patient Educ Counsel.* 2011 Aug;84(2):152–162.
6. Nelson EC, Batalden PB, Huber TP, et al. Microsystems in health care: Part 1. Learning from high-performing front-line clinical units. *Jt Comm J Qual Improv.* 2002 Sep;28(9):472–493.
7. Rao JK, Anderson LA, Inui TS, Frankel RM. Communication interventions make a difference in conversations between physicians and patients: a systematic review of the evidence. *Med Care.* 2007;45(4):340–349.
8. Jha V, Quinton ND, Bekker HL, Roberts TE. Strategies and interventions for the involvement of real patients in medical education: a systematic review. *Med Educ.* 2009 Jan;43(1):10–20.
9. Maguire P. Key communication skills and how to acquire them. *BMJ.* 2002 Sep 28; 325(7366):697–700.
10. Meyer EC, Sellers DE, Browning DM, McGuffie K, Solomon MZ, Truog RD. Difficult conversations: improving communication skills and relational abilities in health care. *Pediatr Crit Care Med J Soc Crit Care Med World Fed Pediatr Intensive Crit Care Soc.* 2009 May;10(3):352–359.
11. Silverman J. Teaching clinical communication: a mainstream activity or just a minority sport? *Patient Educ Counsel.* 2009 Sep;76(3):361–367.
12. Zolnierek KBH, Dimatteo MR. Physician communication and patient adherence to treatment: a meta-analysis. *Med Care.* 2009 Aug;47(8):826–834.
13. Manen M van. Phenomenology of practice : meaning-giving methods in phenomenological research and writing [internet]. *Routledge*; 2016 [cited 2020 Jun 20]. Available from: https://www.taylorfrancis.com/books/9781315422657.
14. Manen M van. *Researching Lived Experience : Human Science for an Action Sensitive Pedagogy [Internet]*. Routledge; 2016 [cited 2020 Jun 20]. Available from: https://www.taylorfrancis.com/books/9781315421056.
15. Creswell JW. In: *Qualitative Inquiry and Research Design: Choosing Among Five Approaches.* second ed. Thousand Oaks, CA, US: Sage Publications, Inc; 2007. xvii, 395 pp. (Qualitative inquiry and research design: Choosing among five approaches, 2nd ed).
16. Beaudoin PL, Labbé M, Fanous A, et al. Teaching communication skills to OTL-HNS residents: multisource feedback and simulated scenarios. *J Otolaryngol - Head Neck Surg J Oto-Rhino-Laryngol Chir Cervico-Faciale.* 2019 Jan 28;48(1):8.
17. Kassam A, Ruetalo M, Topps M, et al. Key stakeholder opinions for a national learner education handover. *BMC Med Educ.* 2019 May 16;19(1):150.
18. Carter N, Bryant-Lukosius D, DiCenso A, Blythe J, Neville AJ. The use of triangulation in qualitative research. *Oncol Nurs Forum.* 2014 Sep;41(5):545–547.
19. Institute of Medicine (US) Committee on Quality of Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century [Internet]*. Washington (DC): National Academies Press (US); 2001 [cited 2020 Jul 4]. Available from: http://www.ncbi.nlm.nih.gov/books/NBK222274/.
20. Levinson W, Lesser CS, Epstein RM. Developing physician communication skills for patient-centered care. *Health Aff.* 2010 Jul;29(7):1310–1318.
21. Gilligan C, Powell M, Lynagh MC, et al. Interventions for improving medical students' interpersonal communication in medical consultations. *Cochrane Database Syst Rev.* 2021 Feb 8;2(2), CD012418. https://doi.org/10.1002/14651858.CD012418.pub2.