ORIGINAL ARTICLE

Undergraduate medical students' perspectives on communication skills learning modes in two medical schools in Zambia

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ABSTRACT

Background: This study sought undergraduate medical students' views on the effectiveness of their modes of instruction in communication skills knowledge and skills acquisition and transfer. Understanding the teaching-learning experiences from the students' viewpoint could influence communication skills course facilitators to adopt instructional modes and learning experiences that enhance competency development in communication skills, especially as literature on the effectiveness of the training methods in communication skills within undergraduate medical training in Africa is scant. It could also emphasize the need for curriculum developers to review the medical school curriculum, specifying student-centred and active learning pedagogical practices.

Methods: The qualitative study involved an in-depth semi-structured interview of eight undergraduate medical students from two medical schools in Zambia who participated in communication skills training, selected through a purposive nonprobability sampling. To maintain a systematic approach and rigor, the study mostly appropriated Tracy's phronetic iterative analysis of the textual data collected between April and May 2022.

Results: The participants affirmed the importance of communication skills in their medical training but decried the dominance of lecture-based delivery, limited interactive sessions, untimely and inadequate feedback from teachers and peers, inefficacy of teaching communication skills as theory, and limited understanding and distraction from online delivery as factors that hindered communication skills teaching-learning. The clinical students preferred practical training within the clinical setting, unlike the preclinical students who were more concerned with the limited interactions.

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Conclusion: Although the students expressed communication skills as pivotal to their training and medical practice, their experiences learning the skills through non-experiential and traditional lecture-based methods did not facilitate the motivation required for mastery and competency. This suggests that the communication skills course facilitators and curriculum planners should reevaluate the teaching-learning modes and processes.

INTRODUCTION

The learner remains core to the discourse of learning, notwithstanding the course. Illeris' learning triangle illustrates the centrality of the learners by situating them in a social, cultural, cognitive, and emotional learning context to acquire meaning[1]. The social dimension positions the learner in a set comprising other people, attitudes, rules, beliefs, and culturally oriented habits; the cognitive addresses knowledge and proficiency, and the emotional enables the learner to react appropriately to external stimuli[1]. Learning becomes the process through which the learner interacts with the social environment and acquires knowledge, emotional stability, and proficiency toward the phenomenon or subject matter[2].

According to Baldwin and Ford, the learner's characteristics, the training design, and the environment might affect the outcome of an educational intervention[3]. Learning experiences that are meaningful and engaging predispose to academic success and effective transfer outside the learning environment[4]. This paper considered the views of selected undergraduate medical students from two medical schools in Zambia on their communication skills learning experiences, focusing on their modes of instruction identified in a study by Ezeala and Volk[5] as one of the areas of concern in teaching-learning communication skills in Zambia undergraduate medical education.

A study among medical students emphasized that communication benefits the patient, healthcare, and the economic system[6]. Communication consists of skills that students can learn. Similarly, Hardee and colleagues identified that intensive communication skills training increased patients' satisfaction with the medical personnel and the effects of such training lasted even twelve months after the training[7]; hence, training in communication skills is vital in medical education. Although every human being can communicate, relationship-building and maintenance skills sustained by effective communication require attitudes developed and strengthened through meaningful teaching-learning processes. A learning process with methods that are collaborative and experiential and allow medical students to play active roles enhances skills and knowledge transfer and develops self-reflective and independent learning attitudes in the learners[8-10].

Team-based learning, student self-evaluation, facilitator feedback, role-plays, oral presentations, videos, and dramatization were beneficial strategies for learning[11-14]. Likewise, studies that applied interactive learning methods to communication skills facilitated reflective habits and self-directed and team learning[15]. Similarly, Wolff and colleagues[16] discussed techniques that would engage learners in medical education and promote learning rather than retaining didactic teaching delivery that hinders knowledge and skills retention. This evidence suggests that the methods of teaching communication skills implicate the attitude to the mastery of the skills. Lecture-centred learning without modifications to engage students may not effectively enhance competence in communication skills[2].

Despite the suggestions in literature to use learning methods and strategies that involve small groups, collaboration among learners and teachers, simulations, and experiential learning, especially in competence-based curricula as used in the two medical schools that participated in this study, didactic lectures remain the predominant methods of learning in resource-poor settings with the increased student population and shortage of

faculty as experienced currently in many medical schools in Africa. A study in Sudan demonstrated that students in a physiology class found 'lectures based on problems' more stimulating and engaging than the conventional lectures despite the large class population[17]. Another study indicated that the team-based lecture method facilitated interaction, self-reflection, and deep learning, unlike traditional lectures[10]. These studies, therefore, imply that conventional lectures are less effective modes of teaching in medical education; however, a teacher can modify the lectures to make the learning interactive, engaging, and meaningful.

Based on the study by Ezeala and Volk[2] involving communication skills training in undergraduate medical education at the University of Zambia (UNZA) and Mulungushi University (MU), which highlighted that sixty-eight percent of the participants reported didactic lectures as their main training mode, this study sought the views of students from these two universities toward their teaching-learning methods in communication skills. The intent was to understand from the learners how to make communication skills learning meaningful for skills and knowledge transfer and acquisition by gaining their perception regarding the effectiveness of the instruction modes.

MATERIALS AND METHODS

Settings

Two of the eight medical schools in Zambia participated in this study and their geographical locations were in different provinces. The School of Medicine, University of Zambia (UNZA), Ridgeway Campus, is in Lusaka and has offices at Ridgeway and the University Teaching Hospital. Its' Bachelor of Medicine and Bachelor of Surgery degree (MBChB), which is the focus of this study, offered communication skills to the clinical students in their fifth year as a component of a course combining communication skills, healthcare ethics, and professionalism. Mulungushi University (MU) has its medical school domiciled in Livingstone, Southern Province, and offered communication skills to second-year preclinical students in combination with psychology under behavioural sciences during this study period. Despite the difference in the academic years of the participants, the two medical schools observe competency-based curricula with 'similar contents'[5].

Communication skills content in both schools include topics such as history-taking, communicating with different patients, breaking bad news, difficult situations, intercultural communication, gender roles in communication, collaborative practice in healthcare settings, and healthcare documents. Furthermore, both schools examine the students' communication skills through continuous assessments and an end-of-year examination with similar weightings.

Study design and ethical considerations

Data collection for this study occurred between 22 April and 27 May 2022. The venues for the interviews varied from the Ridgeway Campus to the offices at the University Teaching Hospital (UTH), Lusaka, for participants from UNZA, and offices at the 219 Campus of the MU School of Medicine and Health Sciences, and Simoonga Clinic, Livingstone. The venues were chosen to ensure the participants' comfort and convenience in venues private for discussions. Eight participants purposively selected through maximum variation based on study level and gender took part in the study: four participants from MU and UNZA respectively, stratified into two females and two males from the second (MU) and fifth (UNZA) academic years, aged between 20 and 25 years. The participants were registered for and offered the communication skills course and participated in the study by Ezeala and Volk[2]. Additionally, the study did not seek further participants because the data collected from the eight participants were exhaustive, yielding detailed information and comprehensive understudying of the student's perception of their communication skills' teaching-learning approaches.

The study obtained ethical approval from the ethical review committee of MU, a clearance from the

National Health Research Authority, and permission from the deans of the two medical schools. Before the interviews, the researchers sent an electronic copy of the information and consent forms explaining the purpose of the interviews to the participants, inviting them to indicate their willingness to participate by identifying the appropriate time. The investigators conducted the interviews personally to understand the needed information clearly. To mitigate any potential bias from power differential, the researchers met the participants at their convenience, delineated the participants' centrality in the study, and through openness in verbal and nonverbal cues, stimulated a symbiotic relationship where both parties sought solutions to a common problem.

The researchers presented the participants with a hard copy of the interview consent form for their attestation after ascertaining the participants' understanding of the purpose of the interviews. The participants also provided written permission to audiotape the proceedings and publish the findings. The researchers stored the consent forms securely. An interview guide helped structure the proceedings but did not hinder the flexibility and flow of information. The discussions lasted between 15 and 35 minutes each. The researcher conducted an initial verbatim transcription of the audiotapes shortly after the interviews to ensure retention and accurate recording before typing and filing the transcripts. The transcripts have no personally identifiable information as the researchers anonymized the data to maximize the participants' confidentiality by preserving their privacy.

Data analysis

While many researchers affirm that data analysis in qualitative research has no recipe that must be strictly adhered to for a particular result[18-20], many qualitative methodologies, such as grounded theory and phenomenology, have defined practical analytical processes to ensure credibility and dependability in the results. This study adopted Tracy's phronetic iterative analysis[21] in its thematic analysis of the textual data to help guide and provide a degree of thoroughness and explicitness in describing how this study arrived at its themes, actively and consciously. The phronetic iterative analysis focuses on parts of the collected data that manage pragmatic issues, rather than the entire data. It bases its categorization on the participants' narratives[21], hence its appropriateness to this study. Its emphasis on the context of research and the effects of the analysis on the practical lives of the participants facilitate a concentrated effort in addressing a study's objectives; however, the choice does not imply that this study used the analytic procedure as a cookbook. This approach to qualitative analysis provided the direction this study needed to maintain quality while allowing it the flexibility to respond to issues related to the study setting.

The descriptive first level, analytic second level coding, and developing a codebook compose the three stages of the phronetic iterative analysis. The analytic procedures included manual and computer-assisted output using Microsoft Word documents. During the organization and data preparation stage, the researchers prepared a face sheet containing information about each interviewee comprising the identification marker, gender, study level, interview date, venue, and the main interview question. The audio record of the discussions was transcribed and stored as a Microsoft Word document. After organizing the data, the investigators read and reread the transcribed data, noting reflections about the data in a notebook and underlined words, phrases, or sentences that resonated with the study objectives from the printed transcribed texts. The iterative reading and interactions with the scripts provided an intimate understanding of the participants' views, what qualitative researchers call immersion[22, 20]. At the first-level or primary-cycle coding (Supplement 1), the researchers read through segments of the transcriptions and designated words or phrases that evoked or reflected the meanings the texts harboured. The researchers noted these in red ink at the edge of the Word document while underlining

significant verbatim statements from the participants.

During the second level, secondary-cycle coding, the researchers consulted the literature on constructivist learning and empirical studies concerning the most appropriate mode of delivering communication skills to learners, selected and combined the significant codes from the first level coding, thereby condensing or "zooming" the codes to "focused codes"[20] or "themes"[23] that are analytical and reflective of empirical themes in communication skills course delivery. Related codes occupied the same category with an umbrella theme. The secondary-cycle coding provided an interpretive 'working skeleton'[21] that led to a codebook, defining themes understood by this study and excerpts from the participants' narratives that highlighted them. The codebook used in this study refers to the notes organized under the themes or codes reflecting the needs or problems highlighted from the data and literature, the study's assigned meaning, and examples from the transcripts. The researchers kept writing reflections about the data and the analytic procedures throughout the analysis, including notes that deviated from the developing narratives.

RESULTS

Description of the participants

The participants comprised two male and two female students from year five at UNZA and year two at MU, respectively. The participants' ages ranged from 20 to 25. Tables 1 and 2 summarize the information about the participants and the interview.

Table 1: Participants and interview details

Characteristics of the participants and the interviews	
Number of participants interviewed	8
Length of interview	14.21 minutes to 35.16 minutes
Average length of interview	21.21 minutes
Ages of the interviewees	20 to 25
Average age of the interviewees	22.6
Gender	Male: 4
	Female: 4
Study levels	Year 2: 4 interviewees
	Year 5: 4 interviewees
Locations during interviews	Clinic 6, Department of Psychiatry, UTH and Ridgeway Campus, UNZA Simoonga Clinic, Livingstone and 219 Livingstone Campus, MU

Table 2. Additional data on the interviewees

Participant code	**Gender**	**Age**	**Study level**
ME1	Male	22	Year 2
MT1	Male	20	Year 2
US1	Male	25	Year 5
UK1	Male	25	Year 5
MR11	Female	22	Year 2
MH11	Female	20	Year 2
KU11	Female	23	Year 5
UE11	Female	24	Year 5

Study mode and subthemes

Table 3 captures the theme of the study mode and its subthemes arising from the participants' views.

Table 3. Themes and subthemes

Theme	Subthemes
Modes of learning communication skills	Preponderance of lectures
	Insufficient interactive sessions and non-interactive lectures
	Teaching it as a theory rather than practically
	Untimely and little feedback from teachers and peers
	Online delivery was challenging and distracting

Preponderance of lectures and theory

While almost all the interviewees found communication skills interesting because:

> *'… most of these other courses that we do require us to just sit and listen, but then communication skills course was more interactive, given we get to interact with the lecturers as well…'* (MR11)

> *Communication skills in the practice of medicine … allowed myself as a student and I assume, other students, to observe and reflect on the variation between classroom teaching and real-life practice in this field. The integration of communication skills into medicine bridged the gap between the reality in this field of practice and the real environment of classroom teaching, which is the main cause of anxiety for a student coming from the preclinical years.* (UK1)

They still complained about the predominantly lecture-based teaching mode and the need to include more interactive teaching approach such as role-plays, team discussions, and simulated learning. One of the participants stated:

> *'I think the way we were trained could be better improved. The way the information was delivered to us could be better. … When you lecture or teach a certain group, you are not talking to everyone …. …, most of the times we have our lectures we're basically just receiving, we're not actually reciprocating.'* (MT1)

MH11 reminisced about the video she saw during her communication skills lectures and asserted that she could still picture the events and that videos should be added to communication skills lectures. Another interviewee delineated the practicality of communication skills and the limitations of teaching them theoretically. According to the participant:

> *I consider communication skills to be practical instead of theory …. I think it would help if it were to be put as a practical course instead of sitting and waiting to be taught…. For you to teach it as practical, you'll want to observe your students … in the ward to see how they best interact with their patients* (ME1).

KU11 also complained about the lack of practice during their learning experiences and highlighted the need for examining communication skills practically:

> *…just not practicing enough, everything was just theoretical; so, the chances of people carrying that knowledge are slim. …more practice; practice sessions and also practical exams because when it's just hearing or just writing to pass, but practical exams can make it stick more.* (KU11)

Limited interactive sessions and poor feedback

Further to these statements, another interviewee specified the need for participatory learning through role-plays and timely feedback rather than lectures:

> *Apart from lecturing, we could set up a scenario-based type of learning, where*

we could play out roles or maybe a specific kind of case scenario where specific students are chosen to play so that they know how to interact because a lot of us really don't know how it feels in a real situation; most of us come here without experience. So, it's different for us when we enter the field; … it's better if we were given those scenarios when teaching (MT1).

*So, I feel, maybe introducing, I don't know if I can call it drama or sketches, like where students may, maybe … role play as the patient, then they're subdivided like that, … then people will present and then from there now, their friends, or maybe the entire class or the moderator will say, "There is a mistake you did and such and such." Then they can be role-playing things, like breaking bad news, and then because it can be so easy to memorize how to break down bad news; but when somebody is given a role, I think even for that person involved, as well as the people watching, I think it sticks more because they'll always remember, 'oh, that's the mistake that my friend made there' (*US1*).*

A participant also commented about the dissatisfaction with lecturers who do not facilitate positive relationships with the students during communication skills learning:

'*… It's an interactive course and it has to be a person that's interactive with the students…. Because I feel the more students are able to interact, the more they are able to ask questions. I think the real thing will be an interactive and accommodating facilitator.'* (US1).

Problems with online learning

Participants from the UNZA had most of their communication skills classes online because of COVID-19. The interviewees expressed dissatisfaction with the online mode of delivering communication skills because of distractions. According to an interviewee:

…the online one disadvantaged me personally because level of concentration … would be different, not interactive. … I'll have other things to do… but in the end, you'll find that there's really nothing you've gotten from the lecture … you'll have to go and study on your own, which sometimes would be hard because some things which were explained by the lecturer, you've missed them. So, for me, the online one was bad, but I feel if it was done physically, it was going to be more helpful, too, and I would understand more than I did during the online lesson (ME11).

… I learned my communication skills during the pandemic and in most cases, our lectures were done online and the time we had to have the experience with our perfector wasn't that much. …; I think that's the most challenge I encountered (UK1).

KU11 also complained about the online nature of their communication skills delivery.

'We learned a lot, but the way it was online … didn't help me a lot.' (KU11)

The participants expressed positive attitudes toward learning communication skills. They viewed the course as central to medical training and practice; however, their expressed concerns about aspects of their predominantly lecture-based teaching-learning mode is an issue of concern.

DISCUSSION

This study explored the perception of undergraduate medical students at MU and the UNZA regarding their predominantly lecture-based communication skills teaching-learning mode, concentrating on the subthemes relating to ineffective teaching methods. Other qualitative studies also applied thematic analysis to identify the barriers to teaching communication skills in Spanish medical schools and South Africa[6, 24]. Qualitative studies in communication skills have yielded much information in the field[25-26].

The participants all affirmed that the communication skills course is vital to undergraduate medical education because of its central role in relationship-building and enhancing understanding. Several studies also demonstrated that undergraduate medical students consider communication skills crucial in building the confidence of medical students for effective interactions[27- 29]. Although this current study's participants lauded the importance of the communication skills training they received, they still expressed dissatisfaction with aspects of their training relating to the mode of course delivery.

Methods for delivering communication skills effectively to medical students have been the context of several studies. Agago and colleagues[12] posited that undergraduate medical students preferred interactive teaching-learning modes and demonstrated that a simulated patient-based approach enhanced learning and performance in communication skills more than the case-based technique in a medical school in Ethiopia. Another study in Sudan compared two teaching modes, verifying that the students enjoyed their sessions in 'lectures based on problems,' participated actively, and retained information on physiology more than in the traditional lecture approach[17]. A study reported an improvement in the interview skills of third-year medical students who experienced standardized patient training in the group trained with conventional lectures in a randomized controlled trial[30].

Similarly, a randomized crossover study conducted in a medical school in Saudi Arabia demonstrated students' preference for team-based learning and better performance in clinical reasoning than in lectures[31]. These highlighted studies align with the participants' views that traditional lectures in communication skills are not as effective in enhancing communication skills competencies as participatory teaching-learning modes such as modelling appropriate communication skills before learners at the clinics[32] and using role-plays, simulated patients, and experiential learning[33-35]. Despite the students' partiality to interactive and small group learning and their effectiveness in skills acquisition, the cost and time implications of using these interactive strategies affect the adoption of communication skills, especially in settings with a high student population and limited resources. Concurring with this view, Chege and Njengere[36] posit that lecture-based training might serve well in resource-limited settings, but it is not the best for skills transfer. It is not, therefore, farfetched to declare that the teaching-learning approach that will improve communication skills in medical schools like MU and the UNZA must consider the learning context and economical yet efficient mode of teaching-learning.

The clinical students from the UNZA unlike the pre-clinical MU participants in the interviews complained about their difficulties with online learning as a teaching mode. Several studies reported the challenges that medical students, who were not used to online learning platforms, faced during the COVID-19 pandemic[37-38]; others identified the positive aspects of online learning, especially when blended with face-to-face mode for learning clinical skills[39-41]. Like this current study that concentrated on communication skills in medical education, Lange and colleagues[42] investigated the viability of online history taking, comparing the students' evaluation of their learning through the online and lecture training modes. Though the students performed well in the online history taking, which they conducted as teams, and

commended the flexibility it afforded them, they still preferred the traditional lectures in history taking. This preference could be because the students would still prefer physical lectures to online learning due to the versatility and interactions that face-to-face teaching-learning affords. The clinical students from this study, used to physical interactions with patients, preferred communication skills training modelled after reality dissimilar from the MU participants who did not express much dissatisfaction with their online training except based on its limited interaction.

However, this study's participants from both schools considered communication skills a practical course, which implies that using online mode to teach communication skills requires careful planning of the teaching-learning activities to enable effective interactions among the teachers and learners. Coincidentally, research suggests that communication skills learned in the classrooms rarely translate to medical practice[43-44] because of the disconnect between content and theory learned in the class and the practice of communication at the clinics[45]. Furthermore, an empirical study[46] identified that many medical schools rarely meet the guidelines and recommendations for teaching communication skills because they teach the course alongside theoretically based subjects such as ethics and psychology independent of the clinical courses. Students had minimal opportunities to practice, and the training limited the assessments to the traditional written examinations without structuring them in simulated or hospital settings. The practicality of communication skills further requires feedback that immediately addresses communication behaviour, hence the need for interactive approaches to teaching-learning.

Study limitations

This study focused on students' perspectives without considering the issues faced by the course facilitators during communication skills course delivery and the impact of the learning environment on skills and knowledge transfer. These could hinder empirical information on the pedagogical challenges that course facilitators encounter during delivery; thereby limiting knowledge on the more efficient method of delivering and acquiring communication skills. Furthermore, this paper did not explore much of the differences in perception between the two schools because of the study's frontier role in Zambia's undergraduate communication skills' medical literature. Further studies portraying these differences will facilitate a balanced understanding of the more effective teaching methods.

CONCLUSION

Undergraduate medical students who participated in this study considered learning communication skills appropriate for developing communicative competence in clinical and interpersonal skills; however, the preponderance of traditional lectures, poor interactive sessions and feedback, and improper curriculum representation and administration of the communication skills course were factors the participants considered ineffectual teaching mode. Different teaching modes including lectures, team-based learning, role-plays, presentations, and simulations should be combined during communication skills teaching-learning sessions. Communication skills facilitators must proactively apply pedagogical modes that enable skills acquisition and transfer. Additionally, curriculum planners should review and modify the integration of communication skills with theory-based courses and from evidence, identify the best way to integrate the course in the pre-clinical and clinical classes. This will enhance communication skills training and facilitate competence in students for effective clinical practice.

Data availability

All data generated and analysed in this study are included in this article. Further enquiries can be addressed to the corresponding author.

Competing interests

The authors declare they have no competing interests.

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Authors' contributions

Conceptualization: ME; Data curation: ME. Validation: ME, JV; Methodology: ME. Validation: ME, JV; Project administration: ME. Supervision: JV. Writing – original draft preparation: ME. Writing – review and editing: ME, JV.

Supplement 1

Example of the primary circle coding

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