INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH IN MULTIDISCIPLINARY EDUCATION
ISSN(print): 2833-4515, ISSN(online): 2833-4531
Volume 02 Issue 04 April 2023
DOI: 10.58806/ijirme.2023.v2i4n06
Page No.165-171

A Survey of Students' Attitudes and Comments about Needed Changes in Communication Skills Learning in Zambia: A Descriptive Study

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ABSTRACT: Introduction: Challenges abound in 21st-century medical education due to the rapidly changing health, technological, socio-political, and economic social milieus, implying the need for a health force that can traverse the complexities of modern society. To meet the demands of the complex and interconnected modern world, medical education is on the tangent to producing doctors competent in the art and science of medicine through the mastery of interpersonal, communication, and clinical skills. Training in communication skills has become a component of undergraduate medical training in many nations. Students' attitudes to learning influence their interest, self-reflexivity, and mastery of concepts and skills. This study sought to determine the attitudes of undergraduate medical students in Zambia regarding their experiences of communication skills learning. Methods: Undergraduate students from two medical schools in Zambia who participated in communication skills training completed the Communication Skills Attitude Scale (CSAS) and a demographic questionnaire. The quantitative observational design used the SPSS software to facilitate the computation of the descriptive statistics on the mean scores and standard deviations of the CSAS global, subscales, and individual-items scores. Cronbach's alpha and confirmatory factor analysis confirmed the reliability and validity of the measure and dataset. Results: There was a 96.1% response rate to the distributed questionnaires. The global mean score was 103.6, 55.5 on the positive attitude subscale, and 48.0 on the negative subscale. The students' comments highlighted teaching-learning methods, course length, and timing as issues of concern. Conclusion: Despite the favourable disposition of undergraduate medical students in Zambia toward learning communication skills, teaching methods, course timing, and length hinder knowledge and skills transfer.

KEYWORDS: Attitudes, Communication Skills, Communication Skills Attitudes Scale (CSAS), Medical Education, Teaching Learning Methods, Undergraduate Students

I. INTRODUCTION

Medical and health education in the 21st century tends towards an educational practice that equips learners with the competencies needed to navigate any health system. A curriculum and teaching mode tailored to adapt to the changing world is tantamount. However, the required changes in healthcare and the needs of the people have not witnessed concomitant changes in the operations of most medical schools [1]. Jason and Douglas [2] argue that only a few doctors have the required skills to influence the health behaviours of others or become members of a collaborative inter-professional team. To facilitate inter-professional and effective doctor-patient relationships, the medical personnel must be trained and competent in skills that endear them to others, enabling a holistic medical practice that includes scientific knowledge and skills and people management skills. The ability to communicate effectively forms the bedrock of this holistic medical practice.

Traditionally, the physician is a professional proficient in knowledge and skills for the care of the patients. The paternalistic role of the physician and society's high expectations of the physician as an iconic miracle worker and high achiever evolve into a collaborative relationship among clinicians, healthcare seekers, and the community [2]. To successfully navigate this paradigm shift, medical personnel must enhance their interpersonal skills by improving their communication, empathy, and professional skills. The previously exalted physician based on medical knowledge and skills no longer suffices as current society requires care for an individual, not merely a diseased body, and a physician who provides the patients with candid interpretations about the statement their body or mind makes.

Consequently, recent research suggested a positive association between good doctor-patient communication and health outcomes; ineffective communication negatively with errors in medication and claims of malpractice [3, 4, 5]. Educating the physician exceeds acquiring medical knowledge and technical expertise to include effective doctor-patient communication,

especially as the patients consider a doctor's ability to communicate effectively as part of the physician's clinical competence [6]. Many medical schools have included communication skills in their curricula due to their importance to healthcare [7].

While Africa has adopted models of Western medical schools' curricula, challenges specific to the continent continue to plague its medical education and healthcare system. Its decades-long battles with communicable infections, the increasing prevalence of non-communicable diseases [8], and the frequent transfer of skilled workforce to Western nations have depleted the human and material resources of the region. Training healthcare workers who can competently navigate the health challenges of a society that is increasingly laden with a variety of diseases and people who are beginning to articulate their rights due to exposure to information and technological explosion is expedient. Africa must align medical competencies with 21st-century health needs [9]. Adopting features from international guidelines in teaching communication skills has not reduced the communication challenges in medical education and clinical practice; hence the need for a context-specific study of communication skills in medical education, as there is limited study in this area within the African setting.

Effective communication is part of the transformation agenda to build a responsive, results-driven, and accountable health organisation in the African region [10]. Medical education in Zambia has been transforming to meet the global consensus starting with the creation of the first medical education unit in 2000 at the University of Zambia. While the South African medical training council (HPCSA) recommended the competency-based-CanMEDS model of medical education adopted in 2012 [9], medical education in Zambia attempts to move from the traditional medical education model to innovative methods through the integration of community-based and competency-based approaches.

Many medical schools in Zambia teach and assess undergraduate medical students on communication skills; however, there is a dearth of knowledge regarding students' views on studying communication skills during medical training and how predictive their attitudes to communication skills depend on the learning experiences. While the curricula may reflect the standard professional competencies and international declarations on communication skills due to their acknowledged importance, the students' perception of the relevance of the course will provide a wealth of information necessary for addressing the learning needs of the medical students, which will help stakeholders to address curriculum and delivery deficiencies. Experiences during learning can endear learners to positive or negative attitudes [11]. Learning experiences that are meaningful and engaging predispose to academic success and effective transfer outside the learning environment [12]. However, the benefits remain unrealised due to the predominance of lecturing in many medical schools. Research indicates that lectures alone cannot achieve outcomes in the affective domain; they inhibit knowledge retention and skills transfer and do not promote critical thinking skills [13]. Fink further argues that the modes of teaching and students' attitudes affect the outcome of an educational experience. The experiences and perception of communication skills are essential to developing an educational experience that will foster lifelong learning and effective clinical practice in prospective physicians. However, without understanding the essence of communication skills training as experienced by the students, who are compelled by the complexity of the 21st century and changes in medical and clinical practice to move beyond their comfort zone, medical training in Zambia would be operating blindly.

Students' perceptions of their communication ability, instructions, and experiences during their study periods affect learning and communication competencies. Studies identified a correlation between learners' positive evaluation of their learning experiences and the ability to transfer the learning to another setting [14]. Medical training programs in communication skills must be meaningful to the students and conducted to display appropriate content, time allocation, structure, and timing to translate into positive attitudes that will reflect on their studies and later clinical practice. A favourable attitude toward communication skills learning depended on the nature of students' training. Students that used an integrated curriculum, which allowed reflection, case-based learning, and multi-methods facilitation, showed a more favourable attitude towards communication skills throughout their learning programs, unlike those that used the teacher-centred traditional curriculum [15]. This study analysed the attitudes of the undergraduate medical students in Zambia toward their experiences of communication skills learning and identified thematic areas the students considered limiting to learning communication skills.

II. METHODS

To realise the objectives, this study adopted a quantitative descriptive design. The Communication Skills Attitude Scale (CSAS)[16] facilitated the collection of information from undergraduate medical students at Mulungushi University (MU) and the University of Zambia (UNZA) regarding their experiences of communication skills learning. The study obtained ethical approval from Mulungushi University School of Medicine and Health Sciences Ethical Review Committee (reference number SMHS-MU3-2021-17) and clearance from the National Health Research Authority (reference number NHRA00014/29/09/2021). The Deans of the two schools of medicine provided written permission to conduct the study and John Wiley and Sons provided official permission to use the scale. Research assistants helped in data collection to forestall the effects of power differential. Margin error of 5 %, 95% confidence level, communication skills course enrolment across the different study levels and response distribution of 50% enabled the computation of the sample size. The study population at MU was 315, providing a sample size of 174, 207 from the 446 communication skills study population at UNZA. The Open-source epidemiologic statistics for public

health, version 3 (OpenEpi: available at www.openepi.com) enabled the sample size calculation and an online random sampling calculator available at: -https://www.randomizer.org/- facilitated the random selection of participants, stratified according to year of study. The prospective participants received the information sheet detailing the purpose of the study and expectations from them.

Rees, Sheard, and Davies developed the communication skills attitude scale (CSAS) in 2002 to investigate medical students' attitudes concerning learning communication skills. There are 26 close-ended questions in the CSAS that yield count data. Each question has a 5- point Likert-like scale, ranging from strongly disagree, represented as 1, to strongly agree, 5.The developers structured the items as 13statements on the positive and negative subscales respectively to examine how the students view aspects of their training in communication skills, centrality of communication skills to students' performance in exams and future clinical practice, and in respectful relationship with colleagues and clients. Unlike the original scale, item 1in the current study ('To be a doctor I must have good communication skills') is in the positive subscale 1. The range for each scale is between 13 and 65 with the higher score indicating a favourable inclination to communication skills. The researchers reverse –coded the negative attitudes before importing the data to the IBM Statistical Software for Social Sciences (SPSS) version 28 so that the item-higher scores would indicate a more positive attitude. Additional to the 26 items, the researchers included demographic details and an open-ended question constituting the 27th item on the CSAS. The question 'If you had the opportunity of changing anything in your communication skills learning, what two things would you like to change and why would you like to change them?' enabled the participants to express their perspectives on limiting aspects of the course delivery.

The study anonymised the participants by not collecting identifying information and maintained confidentiality by securing the rated questionnaires in password protected Excel worksheets and storing the sorted copies. The study determined the mean global and subscale scores and individual item scores. The analysis of the responses to the open-ended question took a manual approach. There was an initial coding of randomly selected samples with themes arising from the study objectives and literature. The analysis comprised computing the number of respondents in each theme and stating them as a percentage of the total number of the responses analysed. Further tests included the confirmatory factor analysis test for validity and Cronbach's alpha test for internal consistency (reliability).

III. RESULTS

A. Participants' Demographics

Three hundred and seventy participants responded to the distributed 385 questionnaires providing a response rate of 96.1%. 369 questionnaires were suitable for analysis since one (1) was not completed properly and had to be discarded. Of these, 176 (48%) came from MU, School of Medicine and Health Sciences and 193 (52%) from the UNZA, School of Medicine. There were 57% (n=212) male participants and 43% (n=157) female participants. The ages varied between 18 and 44 years (mean age = 24.0, standard deviation (SD) = 3.8). Majority of the participants (n = 252, 68%) indicated lectures as the predominant teaching-learning methods in their communication skills classes, followed by lectures combined with videos (n=73, 20%). 1% (n=3) specified that their lectures combined videos and 11% (n=41) participants agreed that their teaching-learning modes combined all the teaching modes. Table 1 describes the demographics.

Table 1: Participants' Demographics

Variables	Category	Number	Percent (%)
University	MU- School of Medicine	176	48
	UNZA- School of Medicine	193	52
	Total	369	100
Gender			
	Male	212	57
	Female	157	43
Teaching-learning methods			
	Lectures	252	68
	Lectures and tam-based learning	73	20
	Combination of all the teaching methods	41	11
	Lectures and videos	3	1
Age (years)			
	Mean	Standard deviation (SD)	*Range*
	24.0	3.8	18-44

B. CSAS Scores

The mean global score for the 369 participants was 103.6 (78%, SD= 9.5). The mean score for the positive attitude subscale (PAS) was 55.5 (85%, SD = 5.2) and 48.0 (74%, SD = 5.8) for the negative attitude subscale (NAS). The range for the global score was 64.0 - 128.0; 36.0 - 65.0 for the positive subscale and 27.0 - 64.0 for the negative subscale. The distribution of the total scores was Gaussian, tending towards a negative skewness of -0.55 and a kurtosis value of 1.02. The skewness for the PAS was -0.54, with kurtosis at 0.52; -0.27 skewness and kurtosis at 0.65 for the NAS. These indicate a 'more positive than negative attitude' to learning communication skills among the participating medical students. Similarly, the scores for the individual medical schools indicated favourable attitudes toward communication skills learning. MU had a global mean score of 106.0 (82%, SD = 8.9), and the UNZA had a mean score of 101.3 (78%, SD = 9.46).Table 2 presents the mean global and subscale scores including the Cronbach alphas for the study participants.

Individual item analysis based on the subscales showed that no item scored below 2.5, the lowest being 3.1 on item 13 of the NAS, "learning communication skills is too easy." Item 1 on the PAS, "to be a doctor, I must have good communication skills," recorded the highest mean score of 4.8 (standard deviation=0.57). The study yielded a Cronbach's alpha of 0.80 for the 26 items of the CSAS. The Cronbach's alpha for the PAS was 0.73 and 0.70 for the NAS. Furthermore, the study determined the Cronbach's alpha for the individual schools: MU at 0.78 and UNZA at 0.80.

A confirmatory factor analysis using the original 2-factors construct accounted for 30.4% of the total variance. A measure of the samples' adequacy and suitability using the Kaiser-Meyer-Oiken (KMO) measure yielded a value of 0.869 (acceptable values must be > 0.50). Bartlett's test of sphericity provided a significant value of <0.001 (acceptable values ≤ 0.05), indicating the adequacy of the dataset for the analysis.

Table 2: CSAS Global and Subscale Scores

	Mean (%)	SD	Range	Skewness	Kurtosis	Rating category	Cronbach's alpha
Global score	103.6 (80)	9.5	64 –128	-0.55	1.02	More positive than negative	0.80
Positive attitude subscale	55.5 (85)	5.2	36 – 65	-0.54	0.65	More positive than negative	0.73
Negative attitude subscale	48.0 (74)	5.8	27 – 64	-0.27	0.52	More positive than negative	0.70

C. Participants' Comments about Needed Changes

Responses to the open-ended question on what the students would like to change about their learning experiences in communication skills yielded three thematic areas encoded as teaching-learning methods, course length, and course timing (see figure 1). The theme of teaching-learning methods tops the list: 51% of the respondents expressed concern that the lecture-dominated teaching method in communication skills does not enhance learning in a course that requires practical experiences, student engagement, and prompt feedback. 31% of the respondents, organised under course length, centred their concern on the course duration, stating that the time the schools allocated to the course was limited and should be prolonged. The period during which the schools offered communication skills was another issue of significant concern highlighted by 18% of the respondents. The respondents expressed the worry that the likelihood of forgetting the skills existed if the entire course was taught in their preclinical years only; if taught in their clinical year, they might not have acquired the skills they would need for their clinical rotations.

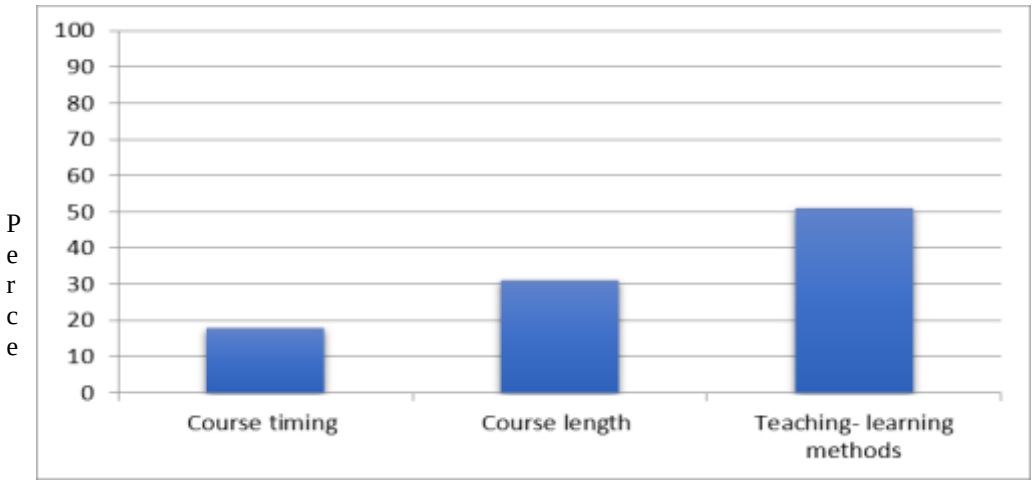

Figure 1: Proportion of Participants Responding to Each Theme

Teaching-teaching issues

IV. DISCUSSION

This study aimed to analyse the attitudes of the undergraduate medical students at MU and UNZA regarding their experiences of learning communication skills and to determine the issues that hinder skills transfer. Comparing the results to similar studies among undergraduate medical students [17, 18], this study recorded an impressive response rate of 96.1%. According to Fincham, survey research should target response rates from 60% upwards [19]. Hence, the high response rate demonstrated the students' interest in the study and the commitment exhibited by the research assistants.

A 103.6 global score, 55.5 PAS score and 48.0 NAS score demonstrate a highly positive attitude toward learning communication skills and compare favourably with similar studies in undergraduate medical programs elsewhere[5, 20]. Bagle and colleagues [21] recorded a mean PAS score of 55.5 and a mean NAS score of 30.6 in a medical school in India. While the PAS mean score equates with this study, an apparent difference in the NAS mean scores exists. The difference could be because this current study reversed the scores on the NAS before computation to make the scores unidirectional. Another study recorded a lower global mean score to this study [22].

The positive attitude towards learning communication skills transcended the medical schools in this study. The positive attitude exhibited by the participants could be because they participated voluntarily, implying their interest in communication skills. Additionally, the participants' positive attitudes could accrue from their training in communication skills because the current trend in medical education requires medical professionals to communicate effectively and empathetically. Several studies suggest that training in communication skills predisposes toward a positive attitude contrary to students without communication skills training [23, 24]. However, a study observed less positive attitudes among fourth-year medical students trained in communication skills than their untrained first-year counterparts [11]. The researchers, however, qualify that the decline could be related to teaching methods; rather than the importance students attach to communication skills learning. This implies the relevance of an effective learning-teaching process in acquiring competence in communication skills because the attitude students develop could increase or devalue the importance they attach to retaining and applying the skills and knowledge in their interactions.

Although the attitudes of the participants from the individual medical schools in this study favoured communication skills teaching-learning, the mean scores in attitudes between participants from MU (106.0, SD=8.9) and the UNZA (101.3, SD=9.5) highlighted a difference that could be significant and require further statistical assessments. These two medical schools operated a similar competency-based medical curriculum at the time of this study, though with differences regarding communication skills. MU offered communication skills in combination with psychology during one semester in the second year; UNZA was during the fifth year when the students began their clinical postings. These differences in the time of offering could have affected participants' attitudes toward communication skills.

The predominance of didactic lectures and the students' dissatisfaction with the course timing and length suggest the need for a relook at communication skills curriculum and teaching methods. .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. Learning processes with methods that are collaborative and experiential, and allow medical students to play active roles facilitate skills and knowledge transfer and develop self-reflective and independent learning attitudes in the learners [24]. Givron and Desseilles recorded a decline in PAS six months after training, without reinforcement [23]. Communication skills training should recur at intervals [26]. The training length may not affect the outcomes if a medical

school employs appropriate teaching strategies and structure communication skills training to revisit skills and knowledge at intervals during the medical training.

V. CONCLUSIONS

Undergraduate medical students in Zambia disposed positively toward their communication skills learning experiences during the study period, demonstrated by the global and subscale scores in attitudes to communication skills learning. However, the issues that the students highlighted concerning the preponderance of conventional lectures, limitations in their course timing and length suggest that positive attitudes toward communication skills learning do not necessarily indicate pervasive effective learning process resulting in the required outcomes. Communication skills curriculum and the learning process could hinder competency development. The limitation s of the study includes its quantitative design. A mixed methods approach could provide detailed understanding of the highlighted issues. An exploratory study to examine the relationship between the students' demographics and attitudes could yield information to enhance communication skills teaching in undergraduate medical education in Southern Africa.

ACKNOWLEDGMENT

We would like to thank the class representatives from the two medical schools who served as research assistants.

REFERENCES

1) Jason, H. and Douglas, A. 2015. Are the conditions right for a 21st-century medical school? *Medical Education*, 6736(14):62480-62486.
2) Lazcano-Ponce, E., Angeles-Llerenas, A., Rodriguez-Valentin, R., Salvador-Carulla, L., Dominguez-Esponda, R., Astudillo-Garcia, C.I., Madrigal-de-Leon, E. and Katz, G. 2020. Communication patterns in the doctor-patient relationship: evaluating determinants associated with low paternalism in Mexico. *BMC Medical Ethics*, 21(125). Available from: https://doi.org/10.1186/s12910-020-00566-3.
3) Jalal, Z., Cox, A., Goel, N., Vaitha, N., King, K. and Ward, J. 2018. Communications skills in the pharmacy profession: a cross sectional survey of UK registered pharmacists and pharmacy educators. *Pharmacy*, 6(132):1-14.
4) Perron, J.N., Cronauer, K.C., Hautz, S.C., Schnabel, K.P., Breckwoldt, J., Monti, M. and Feller, S. 2018. How do Swiss medical schools prepare their students to become good communicators in their future professional careers: a questionnaire and interview study involving medical graduates, teachers and curriculum coordinators. *BMC Medical Teacher*, 18(285). Available from: http://doi.org.unza.remotexs.co/10.1186/s12909-018-1376-y.
5) Timilsina, S., Karki, S. and Singh, J.P. 2019. Attitudes of recently admitted undergraduate medical students towards learning communication skills: a cross-sectional study from Chitwan Medical College. *Advances in Medical Education and Practice*, 10(November 15):963-969.
6) Berman, A.C. and Chutka, D.S. 2016. Assessing effective physician-patient communication skills: "Are you listening to me, doc?" *Korean Journal of Medical Education*, 28(2):243-249.
7) Accreditation council for graduate medical education (ACGME). Common program requirement. Retrieved November 3, 2020, from: https://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/CPRs_2017-07-01.
8) Gouda, H.N., Charson, F., Sorsdahl, K., Ahmadzada, S., Ferrari, A., Erskine, H., Leung, J., Santamauro, D., Lund, C., Aminde, L.N., Mayosi, B.M., Kengne, A.P., Harris, M., Achoki, T., Wiysonge, C., Stein, D.J. and Harvey, W. 2019. Burden of non-communicable diseases in sub-Saharan Africa, 1990-2017: results from the global burden of disease study 2017. *Lancet Global Health*, 7(10):e1375-1387. Available from: https://doi.org/10.1016/S2214-109X(19)30374-2.
9) Matthews, M.G. and Van Wyk, J.M. 2018. Exploring a communication curriculum through a focus on social accountability: a case study at a South African medical school. *African Journal of Primary Health Care &Family Medicine*, 10(1). Available from: https://doi.org/10.4102/phcfm.v10i1.1634.
10) Musumali, M., Sikazwe, A., Sibonde, M., Chime, J.K., Masaninga, F. and Mazaba, M.L. 2016. Progress of WHO Zambia towards the WHO reforms through transformation agenda. *Medical Journal of Zambia*, 43(2):50-56.
11) Ruiz-Moral, R., Garcia de Leonardo, C., Caballero-Martínez, F. and Monge-Martín, D. 2019. Medical students' attitudes toward communication skills learning: comparison between two groups with and without training. *Advances in Medical Education and Practice*, 10(February 12): 55-61.
12) Evans, C., Mujis, D, and Tomlinson, D. 2015. *Engaged student learning: high impact strategies to enhance student achievement.* York, GB: Higher Education Academy.
13) Fink, L.D. 2013. *Creating significant learning experiences: an integrated approach to designing college courses*. San Francisco, CA: Jossey-Bass.

14) Cooley, S., Burns, V. and Cumming, J. 2016. Using outdoor adventure education to develop students' group work skills. *Journal of Experiential Education*, 39(4):329-354.
15) Gude, T., Tyssen, R., Anvik, T., Grimstad, H., Holen, A., Baerheim, A., Vaglum, P. and Løvseth, L. 2020. Have medical students' attitudes towards clinical communication skills changed over a 12- year period? A comparative long-term study. *BMC Medical Education*, 20(11). Available from: https://doi.org/10.1186/s12909-019-1915-1.
16) Rees, C., Sheard, C. and Davies, S. 2002. The development of a scale to measure medical students' attitudes towards communication skills learning: the communication skills attitude scale (CSAS). *Medical Education*, 36(2):141-147.
17) Panczyk, M., Iwanow, L., Zarzeka, A., Jaworski, M. and Gotlib, J. 2019. Communication skills attitude scale: a translation and validation study in a sample of registered nurses in Poland. *BMJ Open*, 9(5):e028691. Available from: http://dx.doi.org/10.1136/bmjopen-2018-028691.
18) Nourein, A.A.E., Shahadah, R.F., Alnemer, M.A., Al-Harbi, S.S., Fadel, H.T. and Kassim, S. 2021. Comparative study of attitudes towards communication skills learning between medical and dental students in Saudi Arabia. *International Journal of Environmental Research and Public Health*, 18(1):128.
19) Fincham, J. 2008. Response rates and responsiveness for surveys, standards, and the journal. *American Journal of Pharmaceutical Education*, 72(2):43.
20) Tripathi, R., Tripathi, N., Tripathi, M., Shrestha, R., Kesari, D. and Chhetri, P. 2019. Assessment of students' attitude towards learning communication skills: an exploratory study. *Journal of Universal College of Medical Sciences*, 7(19):42-45.
21) Bagle, T., Patel, T. and Baviskar, P. 2021. Cross sectional evaluation of communication skills attitude in undergraduate medical students. *Journal of Medical and Allied Sciences*, 11(1):45-50.
22) Piryani, S., Piryani, R. and Deo, G. 2020. Medical students' attitudes toward communication skills learning in Chitwan medical college. *Nepal. Journal of BP Koirala Institute of Health Sciences*, 3(1):96-104.
23) Givron, H. and Desseilles, M. 2021. Longitudinal study: impact of communication skills training and a traineeship on medical students' attitudes toward communication skills. *Patient Education and Counseling*, 104(4):785-791.
24) Mata, A., de Azevedo, K.P.M., Braga, L.P., de Medeiros, G.C.B.S., Segundo, V.H.dO., Bezerra, I.N.M., Pimenta, I.D.S.F., Nicolás, I.M. and Piuvezam, G. 2021. Training in communication skills for self-efficacy of health professionals: a systematic review. *Human Resources for Health*, 19(30). Available from: https://doi.org/10.1186/s12960-021-00574-3.
25) Bosméan, L., Chaffanjon, P. and Bellier, A. 2022. Impact of physician-patient relationship training on medical students' interpersonal skills during simulated medical consultations: a cross-sectional study. *BMC Medical Education*, 22(1):117. Available from: http://doi.org/10.1186/s12909-022-03171-7.