



<https://africanjournalofbiomedicalresearch.com/index.php/AJBR>

Afr. J. Biomed. Res. Vol. 27(4s) (November 2024); 3717-3722

Research Article

Assessment of Knowledge, Attitude and Perception on AETCOM module- Empathy and Communication Skills among Phase I medical students

Abeetha S¹, Suba A², Suma S³, Stephy Sebastian^{4*}, M Chitra⁵, K.M. Shruthy⁶

¹ Professor, Department of Physiology, ACS Medical College & Hospital, Dr.MGR Educational and Research Institute, Chennai, India.

² Assistant Professor, Department of Physiology, ACS Medical College & Hospital, Dr.MGR Educational and Research Institute, Chennai, India.

³ Associate Professor, Department of Physiology, Saveetha Medical College and hospital, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, India.

⁴ Assistant Professor, Department of Physiology, ACS Medical College & Hospital, Dr.MGR Educational and Research Institute, Chennai, India.

⁵ Professor, Department of Physiology, ACS Medical College & Hospital, Dr.MGR Educational and Research Institute, Chennai, India.

⁶ Professor, Department of Anatomy, Sri Lalithambigai Medical College & Hospital, Dr.MGR Educational and Research Institute, Chennai, India.

Corresponding Author: Dr.Stephy Sebastian,

Assistant Professor, Department of Physiology, ACS Medical College & Hospital, Dr.MGRERI, Chennai, Tamilnadu, India, Contact no - 91-8157073830, Email- drstephy06@gmail.com, Orcid id-

<https://orcid.org/0000-0002-3293-3919>

Abstract

Background: Healthcare professionals are required to possess appropriate technical skills, medical knowledge and expertise, while also demonstrating empathy, compassion, and trustworthiness. Based on the Competency Based Medical Education (CBME), AETCOM -Attitude, Ethics, and Communication session has been introduced for undergraduate medical students starting from their first year, aiming to equip them with these essential skills. Fewer researches have delved into evaluating Phase I medical students' comprehension of the revised AETCOM curriculum. This study aims to underscore the importance of empathy and communication skills in healthcare among Phase I medical students.

Methods: This was an observational cross-sectional study done for a period of three months among Phase-I Medical students who joined in 2023. The twelve hours of Physiology AETCOM sessions were well planned and evenly spread for three months. At the end, the students were requested to fill out a structured questionnaire and the results were analysed.

Results: Majority of the students (>88%) showed a higher existence of favorable attitude about AETCOM as a subject in medical curriculum. Around 82% of the students felt that the AETCOM session kindled their interest. Nearly, 86% of students acknowledged that the knowledge obtained will help them in their future roles.

Conclusion: The AETCOM training in the first year would help the students acquire the essential knowledge about empathy and communication skills, and practice these skills during the clinical visit in Phase II. This definitely would go a long way in creating an ideal 'Indian Medical Graduate'.

Keywords: AETCOM, Attitude, Perception, Communication skills

***Author for correspondence: Email:** drstephy06@gmail.com

Received 20/11/2024, Acceptance 27/11/2024

DOI: <https://doi.org/10.53555/AJBR.v27i4S.4171>

© 2024 The Author(s).

This article has been published under the terms of Creative Commons Attribution-Noncommercial 4.0 International License (CC BY-NC 4.0), which permits noncommercial unrestricted use, distribution, and reproduction in any medium, provided that the following statement is provided. "This article has been published in the African Journal of Biomedical Research"

Introduction

India plays a substantial role in global healthcare, supplying a significant portion of the world's medical professionals. In recent times, India is a developing medical epicentre offering the globe more advanced and affordable treatment alternatives ⁽¹⁾. To address this, we require physicians with the necessary training and expertise. Across the country at present there are more and more concerns around doctor's conflict of interest with patients and family. There is an increasing trend of aggressive conduct towards medical professionals. Also, a physician's capacity for diagnosis is substantially increased when they can interact with patients and their families in an efficient manner, which reduces frustration for both parties. Traditionally, students have been taught the components of Attitude, Ethics, and Communication (AETCOM) informally and in an unstructured way throughout their clinical rotations and internships ⁽²⁾. Students were allowed to gather this vital knowledge on their own, frequently looking to their professors, seniors, or peers as role models. It has been aptly stated that "Medicine is an art whose magic and creative ability have long been recognized as residing in the interpersonal aspects of patient-physician relationship". Realizing the critical role that good interpersonal communication plays in clinical practice, Medical Education Board has comprehended that professionalism must be taught and assessed as a formal concept.

So, The Graduate Medical Education Regulations of 1997 have been updated and redesigned by the Council, with a focus on curriculum changes. For undergraduate medical students, the National Medical Council (NMC) implemented, Competency Based Medical Education (CBME) in 2019 ⁽³⁾. Based on it, the overall goal of the undergraduate medical education program is to produce "Indian Medical Graduates" (IMGs) with the necessary knowledge, skills, attitudes, values, and responsiveness to function appropriately and effectively as community physicians while remaining globally relevant. IMGs must be able to carry out their roles in an ethical, appropriate, and responsive manner. In order to help undergraduate medical students develop the necessary abilities, the new competency-based medical curriculum includes Attitude, Ethics, and Communication (AETCOM) modules as early as their first year. The basic notion behind the AETCOM module is that a person's behaviour may be altered through changes in their attitude ⁽⁴⁾. This training module is a continuous curriculum that is offered throughout the undergraduate medical degree ⁽⁵⁾. This AETCOM serves as a foundation for aspiring doctors to create the Doctor-patient relationship by understanding patient's needs, perceptions, and expectations resulting in fewer errors and higher patient and doctor satisfaction levels.

This curriculum was again revised in the year 2023. In the revised curriculum, The National Medical Council (NMC) has put up new ideas for education, such as a structured, multi-year curriculum on communication, ethics, and attitude. Fewer studies prevail regarding the revised AETCOM curriculum among Phase I Medical students. Hence, this study was designed to evaluate the value of empathy and communication skills in health care among Phase I Medical students.

Methods

Design and Setting - This Cross-Sectional Observational study was done after obtaining approval from Institutional Ethical Committee. It was done for a period of three months (March- May). Purpose of the study was explained to the students and informed written consent was obtained.

Participants and sampling - The study was conducted among Phase I Medical undergraduate students of a private Medical College in Tamilnadu who joined in the year 2023-2024. The study population was 248.

Tools/Instruments - A structured questionnaire about knowledge, attitude, and perception of empathy and the doctor-patient relationship was developed. There were four sections in the Questionnaire. Section A dealt with informed consent of the participants. Section B evaluated the theoretical knowledge of the students regarding Physiology AETCOM sessions through objective Multiple-Choice Questions (MCQ). Section C analysed student's attitude to the above mentioned AETCOM sessions using questions from part of Communication Skill Attitude Scale (CSAS) and Jefferson's Empathy Scale (JES) ^(6,7). Finally, Section D analysed student's perception to AETCOM session using the early part of Kirkpatrick Evaluation Model ⁽⁸⁾. A validated questionnaire was constructed with valuable inputs from Committee members of Medical Education Department of our college with additional input from a statistician.

Data Collection - We planned 12 hours of Physiology AETCOM module, stretched over two months from January to February 2024, on the topic of Empathy and Doctor-Patient Relationships through Effective Communication. The first four hours were spent on in-depth lectures on communication skills and empathy. The next two hours were used for video demonstrations on how to and how not to approach a patient. Later, two hours were spent for case-based discussion and the following week our students were encouraged to performed role plays on how they would react in different scenarios. The entire sessions were very interactive. Students were later instructed to do reflective writing on the Physiology AETCOM sessions. Finally, the Study Questionnaire was disseminated through electronic media to all students.

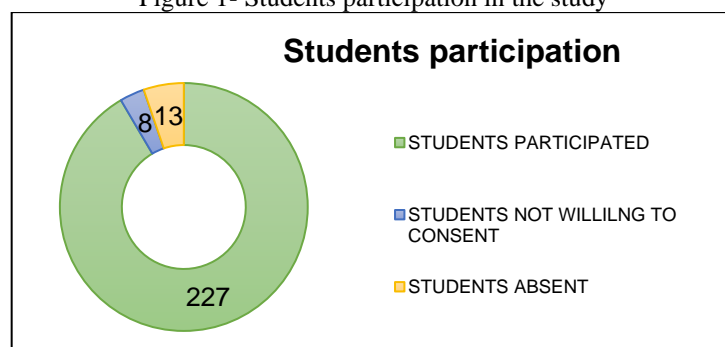
Data analysis -The information collected from the study participants were recorded in a master chart. Results were subjected to Descriptive analysis in Microsoft Excel.

Results

Among the study population of 248 students' of 2023 batch, 13 of them were absent for the AETCOM sessions, 8 of them were not willing to participate in the

study and 227 gave consent to participate in the study amounting to response rate of 91.5% (Figure-1). The student's attitude to the AETCOM sessions were analysed using Likert scale. Majority of the students as shown in Figure 3, showed a predominance (>88%) of favorable attitude about empathy & communication skills as a subject in medical students. More than 82% of the students felt that the AETCOM session kindled their interest.

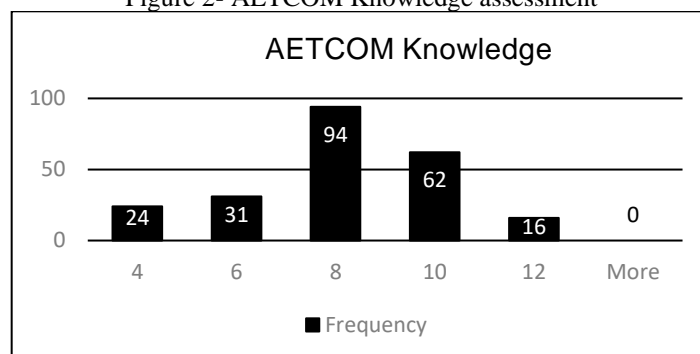
Figure 1- Students participation in the study



In AETCOM Knowledge assessment, the students were assessed for a total score of 13. Knowledge on better Doctor-patient relationship have been stressed on the sessions and results revealed that over three quarters

(75.7%) of the study participants received a score higher than 8 out of 13 (Figure-2). Also, 86% of students acknowledged that the knowledge obtained in these sessions will help in their future clinical practice.

Figure 2- AETCOM Knowledge assessment



The student's attitude to the AETCOM sessions were analysed using Likert scale. Majority of the students as shown in Figure 3, showed a predominance (>88%) of favorable attitude about empathy & communication

skills as a subject in medical students. More than 82% of the students felt that the AETCOM session kindled their interest.

Figure -3 AETCOM attitude assessment

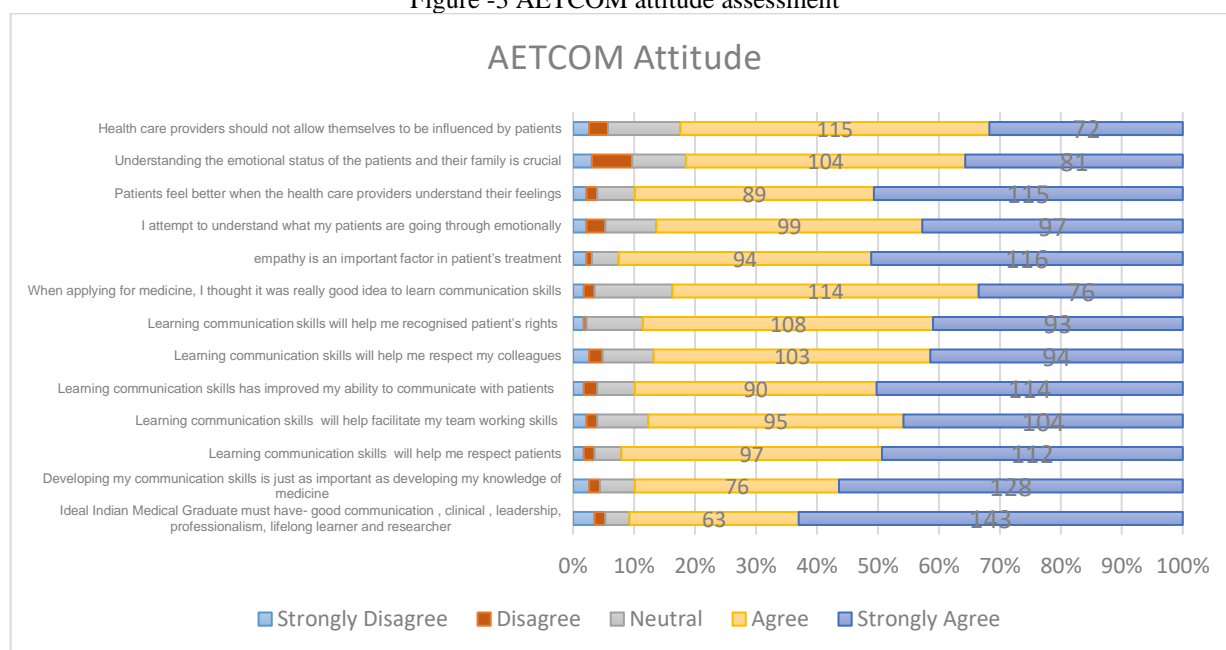
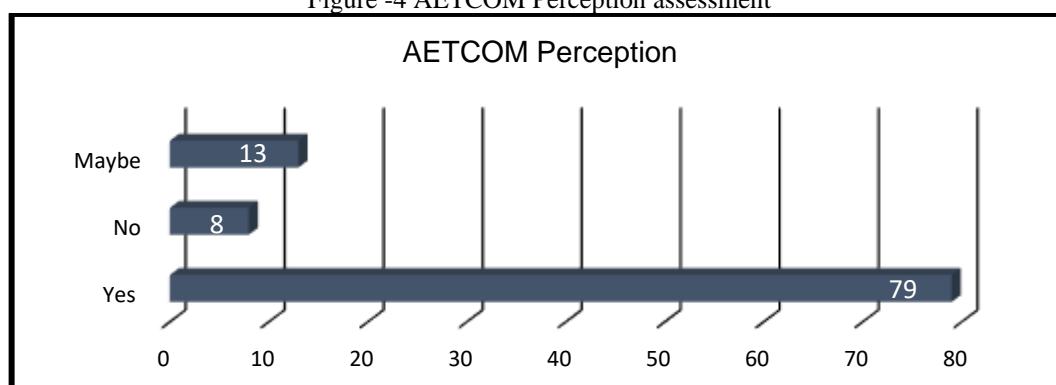


Figure -4 AETCOM Perception assessment



The student's perception to empathy & communication skills were analysed and the results (Figure-4) showed a higher presence of positive perception about empathy and communication skills as a subject in medical students. Nearly 90% of students agreed that developing communications skills is equally important as medical skill.

Discussion

Currently in India there is a surge in number of medical colleges. The purpose of this is to achieve the target doctor-population ratio of 1:1000 by 2031 as per the Medical Council of India (MCI) guidelines ⁽⁹⁾. Ensuring academic quality concurrently with the increase in medical practitioner's numbers is a critical requirement to guarantee the desired result, which is a skilled physician who is dedicated to excellence, responsive, and accountable to patients, the community, and the profession. Up until now, medical education and training programs have focused on three key domains: affective(heart), cognitive(brain), and psychomotor(hand) ⁽¹⁰⁾. Among them, Indian medical school focuses a lot on the head followed by hand and almost completely ignores the heart. Consequently, physicians developed a lack in empathy and an inability

to fully comprehend the preventive, curative, and palliative aspects of comprehensive healthcare. To improve this in medical schools throughout India, the new CBME curriculum was gradually introduced as of 2019. The Graduate Medical Education Regulations define 35 competences in total for the five roles - clinician, communicator, leader, professional, and lifelong learner that are expected of an Indian medical graduate ⁽¹¹⁾. AETCOM is one such competency introduced as early as the first year of medical curriculum.

Varma J et al in 2018, showed higher unfavorable attitude prevalence before AETCOM curriculum introduction ⁽¹²⁾. But in this study, majority of students (91%) had positive opinions towards the AETCOM-based CBME curriculum. They reflected that the module had improved their knowledge of patients' rights (88.5%), their ability to communicate with patients, and their development of the professional responsibilities. Similar results have been found by Verma et al and Patil et al ^(1,13). The study also demonstrated the willingness of the students to learn more about medical ethics and their eagerness to apply what they had learned to their future practice. Nearly, 95.5% of the students felt that these sessions kindled their interest more to know about the

AETCOM module. This is in consistent with the research findings of Bidikar et al, Shetty et al, Rose A et al and Anshu ⁽¹⁴⁻¹⁷⁾. Around 97.8% of the students were satisfied with the teaching methodology for these sessions. Around 97% agreed that these sessions will help them in their future clinical practice.

"The ability to understand the patient's situation, perspective, and feelings and to be able to communicate that understanding to the patient" is how Coulehan et al. described Empathy ⁽¹⁸⁾. Even while empathy is clearly important, a sizable portion of health professionals appear to find it challenging to incorporate an empathic communication model into their daily work ⁽¹⁹⁾. A study done by Moudatsou et al had demonstrated that health workers with high levels of empathy perform their roles more effectively in eliciting therapeutic changes ⁽¹⁹⁾. The large number of patients that professionals must examine, the lack of sufficient time, the emphasis on therapy in the current academic culture, and the absence of empathy education are some of the reasons that adversely affect the development of empathy. The CBME curriculum has made an attempt to fill the education lacunae by introducing the AETCOM sessions. In this study, the importance in understanding the emotions of patients and their families was well acknowledged by 82% of students. Nearly 92.5% (210) of the students in this study agreed that empathy makes an important factor in patient treatment.

Effective communication between a doctor and patient reduces errors, improves patient and physician satisfaction, and facilitates a better understanding of the needs, perceptions, and expectations of the patient. Majority (89.9%) of the students accepted that communication skill development is equally important to that of medical knowledge development. Similar findings have been established by Varma et al ⁽¹²⁾. But in the studies done by Marambe et al one fourth of the student and in Widyahening et al half of the student felt that medical knowledge is more important ^(20,21). Around 87.6 % students agreed that communication skills will improve their team work. Also, 86.8 % students felt that language act as barrier in effective communication.

The analysis of Reflective writing done by the students after sessions, also confirmed about the positive attitude and perception of students with regard to the AETCOM module.

By organizing AETCOM modules into competencies and strategically placing them within the curriculum design, educators can guarantee that learners will acquire the necessary communicative and altruistic skills, as well as proper orientation regarding ethics, professionalism, leadership, and the attribute that will instil in them the essence of lifelong learning. This study aimed to gauge the level of student comprehension during the sessions and gather their frank opinions about these sessions. The feedback provided by the students would enable us to deliver an improved AETCOM sessions in long term outcome.

A detailed evaluation of the AETCOM modules, empathy and communication skill will be done individually and a follow up study of the students

regarding the sessions impact on their behaviour will be made in the upcoming years.

Conclusion

The AETCOM training in the first year would help the students acquire the essential knowledge about empathy and communication skills, and practice these skills during the clinical visit in Phase II. Empathetic behaviour among healthcare professionals will contribute to better patient outcomes. This would definitely produce an ideal Indian Medical Graduate with an enormous potential to cater to global needs.

Ethical considerations: Prior to commencement, Ethical approval has been granted from the Institutional Review Board for research involving Human subjects (No.1147/2024/IEC/ACSMCH Dt.20.02.2024). All participants received detailed information regarding the study's objectives and significance, and they joined the research voluntarily after providing both written and oral consent. Full confidentiality of research data was assured.

Artificial intelligence utilization for article writing: No

Acknowledgements: The authors are thankful to the undergraduate medical students for their valuable participation. The authors also extend their gratitude for the invaluable support provided by Department of Medical Education Unit members for guiding in all aspects of the study.

Conflict of interest: The authors declare that there are no conflicts of interest related to this study. No financial support or other relationships have influenced the design, conduct, or reporting of this research

Author contributions: All the authors participated in the process of the initial writing of the manuscript, its revision, presentation of the idea and initial design, and collection and analysis of data. Moreover, all authors accept the responsibility for the accuracy and correctness of the contents of the present manuscript and approve the final version of the manuscript.

Data availability statement: All information is available in the article.

Supporting resources: Not Applicable

References

1. Verma A, Shete S. Perceptions of 1st-year MBBS students and 1st-year medical faculties toward AETCOM-based medical curriculum. *Natl J Physiol Pharm Pharmacol.* (2024), [cited March 14, 2024]; 14(3): 592-596.
2. Thorat K, Gujaria I, Kumar V, Prajapati K. Assessment of Empathy Training In Medical Education: Students' Perspectives On The AETCOM Module. *Educational Administration: Theory and Practice.* 2024 Apr 23;30(4):5605-8.

3. Fathima F, Shankar N, Lakshmi T. Teaching and learning of attitudes, ethics and communication using the AETCOM module in India. *South-East Asian Journal of Medical Education*. 2022 Dec 30;16(2).
4. Udgiri, R., Ganganahalli, P. Evaluation of the Feedback on the Attitude, Ethics, and Communication Module by First-Year Faculty Members in Medical Colleges. *Strides in Development of Medical Education*, 2024; 21(1): 36-40. doi: 10.22062/sdme.2024.199005.1281
5. Amarantha DR, Noor T, Swanand SP. Effect of Education in AETCOM Competencies in Shaping the Professional Attitudes of Medical Students. *South-East Asian Journal of Medical Education*. 2022 Dec 30;16(2).
6. Yakhforosha A, Shirazi M, Yousefzadeh N, Ghanbarnejad A, Cheraghi M, Mojtahedzadeh R, Mahmoodi-Bakhtiari B, Emami SAH. Psychometric properties of the communication skills attitude scale (CSAS) measure in a sample of Iranian medical students. *J Adv Med Educ Prof*. 2018 Jan;6(1):14-21. PMID: 29344525; PMCID: PMC5757152.
7. Hojat M, DeSantis J, Shannon SC, Mortensen LH, Speicher MR, Bragan L, LaNoue M, Calabrese LH. The Jefferson Scale of Empathy: a nationwide study of measurement properties, underlying components, latent variable structure, and national norms in medical students. *Adv Health Sci Educ Theory Pract*. 2018 Dec;23(5):899-920. doi: 10.1007/s10459-018-9839-9. Epub 2018 Jul 2. PMID: 29968006; PMCID: PMC6245107.
8. Kirkpatrick, James D, and Wendy Kayser Kirkpatrick. Kirkpatrick's Four Levels of Training Evaluation. Association for Talent Development, 1 Oct.2016.
9. Mitra, Jayasri; Saha, Indranil. Attitude and Communication Module in Medical Curriculum: Rationality and Challenges. *Indian Journal of Public Health* 60(2):p 95-98, Apr-Jun 2016. | DOI: 10.4103/0019-557X.184537.
10. Dash S. Why it's Important to Educate a Doctor's Heart. Available from <http://www.dailyo.in/lifestyle/medicinesuicide-mental-health-affective-domain-emotions stress education-doctors-psychology/story/1/7309.html>. [Last accessed on 2016 May 31].
11. Singh T, Saiyad S, Virk A, Kalra J, Mahajan R. Assessment toolbox for Indian medical graduate competencies. *J Postgrad Med*. 2021 Apr-Jun;67(2):80-90. doi: 10.4103/jpgm.JPGM_1260_20. PMID: 33942772; PMCID: PMC8253322.
12. Varma J, Prabhakaran A, Singh S. Perceived need and attitudes towards communication skill training in recently admitted undergraduate medical students. *Indian J Med Ethics*. 2018 Jul-Sep;3(3):196-200. doi: 10.20529/IJME.2018.049. Epub 2018 Jun 22. PMID: 29981235.
13. Patil, Jyoti S.; Latha, S.; Patil, Vijaya1; Hugar, Leela. Competency-Based Medical Education: Perception and Challenges among Students. *Journal of DattaMeghe Institute of Medical Sciences University* 18(1):p 63-69, Jan-Mar 2023.DOI: 10.4103/jdmimsu.jdmimsu_551_22.
14. Bidikar MP, Deshmane S, Chandan L. Perception of Students to Aetcom Module on Empathy for First Mbbs Students. *IJMBS [Internet]*. 2021Feb.2 [cited 2024Jun.18];4(12).
15. K Shetty A, S G. Perception on medical ethics in teaching among medical students in India. *Bioinformation*. 2022 Jul 31;18(7):613-616. doi: 10.6026/97320630018613. PMID: 37313056; PMCID: PMC10259224.
16. Anshu Indian J Med Ethics. 2011;8:135.
17. Rose A, et al. Indian journal of medical ethics. 2014;11:25.
18. Eby D. Empathy in general practice: its meaning for patients and doctors. *Br J Gen Pract*. 2018 Sep;68(674):412-413. doi: 10.3399/bjgp18X698453. PMID: 30166373; PMCID: PMC6104888.
19. Moudatsou M, Stavropoulou A, Philalithis A, Koukouli S. The Role of Empathy in Health and Social Care Professionals. *Healthcare (Basel)*. 2020 Jan 30;8(1):26. doi:10.3390/healthcare8010026.PMID: 32019104; PMCID: PMC7151200.
20. Marambe KN, Edussuriya DH, Dayaratne KM. Attitudes of Sri Lankan medical students toward learning communication skills. *Educ Health (Abingdon)*. 2012 Sep-Dec;25(3):165-71.
21. Widyahening IS. Negative attitudes of first year medical students of University of Indonesia towards communication skills learning. *Proceedings of the 8th Asia Pacific Medical Education Conference*; 2011 Jan 26-30; Singapore.