

## ORIGINAL ARTICLE

# Perception of Malaysian Undergraduate Medical Students Regarding Soft Skills: A Qualitative Study

Seow Jiin Terng<sup>1</sup>, Azel Azam Nair<sup>1</sup>, Nisa Adini Binti Mohd Jafri<sup>1</sup>, Sonali Pillai<sup>1</sup>, Ravindu Kularatne<sup>1</sup>, M Ganesh Kamath<sup>2</sup>, Shashikiran Umakanth<sup>3</sup>

<sup>1</sup> Faculty of Medicine, Manipal University College Malaysia (MUCM), Bukit Baru, 75150, Melaka, Malaysia

<sup>2</sup> Department of Physiology, Faculty of Medicine, Manipal University College Malaysia (MUCM), Bukit Baru, 75150, Melaka, Malaysia

<sup>3</sup> Department of Medicine, Dr TMA Pai Hospital (Udupi), Manipal Academy of Higher Education (MAHE), Manipal, Karnataka, India

## ABSTRACT

**Introduction:** The cognitive and psychomotor abilities needed by physicians are widely addressed in the undergraduate medical curriculum; however, the attitude (affective domain) is rarely addressed. Soft skills refer to a person's ability to communicate efficiently, collaborate, and have various personality traits that define people's interactions. This study aimed to determine the perception of undergraduate medical students on soft skills. **Methods:** A total of twenty-four undergraduate medical students from our institution participated in this study. The students attended a one-hour lecture session about soft skills conducted by a clinician. Within a week of the lecture, we held four focus group discussions (FGDs). Each focus group consisted of six students. This qualitative study's sample selection process was by the convenience sampling technique until participant numbers reached data saturation. Thematic analysis was used to interpret the transcripts of the FGDs. **Results:** Thirteen (54.1%) students had prior knowledge limited to some attributes of soft skills during high school and via community service. Introduction to soft skills specifically occurred to 18 (75.0%) students after joining the medical college. Ten (41.6%) students opined that empathy is the most essential, whereas nine (37.5%), four (16.6%), one (4.1%) mentioned that communication skills, teamwork, and time management, respectively, are essential soft skills for physicians. **Conclusion:** All undergraduate medical students (100%) enrolled in this study mentioned that soft skills are essential for physicians. Therefore, soft skills training must become an integral part of the undergraduate medical curriculum rather than merely a component of the hidden curriculum.

**Keywords:** Altruism, Focus groups, Medical students, Professionalism, Social skills

## Corresponding Author:

M Ganesh Kamath, PhD

Email: kamath18@gmail.com

Tel: +60147969020

## INTRODUCTION

Soft skills or social skills refer to a person's ability to communicate efficiently, collaborate, and have various personality traits that define people's interactions (1, 2). For example, the person should be trustworthy, have strong communication skills, work as part of a team, be a leader, be selfless, empathise, manage time efficiently, respect others, exhibit patience, self-control, and accept feedback (2, 3). A physician must have qualities in the cognitive (knowledge), psychomotor (skills), and affective (attitude) domains (3). The affective domain is paramount for physicians since it helps the doctor-patient relationship to evolve (3). From the physician's perspective, the doctor-patient relationship is critical for effective diagnosis and treatment of the patient, while from the patient's perspective, it fosters trust (4).

Studies conducted worldwide have included soft skills attributes to the undergraduate medical curriculum and observed that it enhances the students' curricular outcome and social skills (5-10). However, few studies have obtained undergraduate medical students' viewpoints through qualitative analysis and have mentioned the importance of soft skills in the undergraduate curriculum (11, 12). In today's time as a physician, it is important to follow evidence-based practices, including research findings, maintain interprofessional collaborations, and understand how to deal with patients who are self-confident and aware of disease conditions based on online information (13). Thus, undergraduate medical students must learn and develop essential competencies such as communication skills, professionalism, leadership, and how to be an efficient team member (13).

Our institute's (MUCM- formerly 'Melaka Manipal Medical College') curriculum consists of personal and professional development (PPD) sessions, mentored-student projects, small group teaching-learning

activities, and outreach programs to the community (14-17). We wanted to determine how these undergraduates perceive these learnings from these modules and if they influenced the students' minds for the future. Thus, this qualitative study aimed to determine the perceptions of undergraduate medical students about soft skills.

## MATERIALS AND METHODS

In this qualitative study, we included undergraduate medical students from Semester 5 (first semester of clinical phase) of our institution. A senior clinician delivered a one-hour end-of-semester didactic lecture on soft skills to the entire batch ( $n = 88$  students). We included the lecture to help students understand the topic before participating in the focus group discussion (FGD). This lecture also ensured that the students learned about soft skills and why they are essential for medical graduates and physicians. The FGDs were conducted within a week following the lecture. We included undergraduate medical students enrolled in the clinical phase (with a minimum of two years in our medical college). The exclusion criteria were undergraduate medical students who did not attend the lecture on soft skills or students who did not wish to participate in this study.

We obtained written consent from the students before the FGD. The same investigator conducted the FGDs, and questions asked during the FGD were as per the discussion guide. The discussion guide was validated by two external faculties consisted of an opening question, key questions, and a closing question (as mentioned below):

**Opening question:** Have you heard about soft skills? How did you get to know about soft skills?

**Key questions:** 1. Do you feel soft skills are essential for physicians?, 2. How do you think soft skills will benefit the physician?, 3. In your opinion, what are the soft skills which physicians should possess?, 4. What could benefit a patient if the physician has undergone soft skills training?, 5. Could you please give some examples of soft skills training as a medical student?, 6. Has the soft skills training benefited you in any way?, 7. Do you feel that the effective practice of soft skills has changed over time?, 8. Have you heard about artificial intelligence?, 8a. In the future, physicians will probably be replaced by artificial intelligence as technology advances. Do you still think the development of soft skills matters?

**Closing question:** Any other information on soft skills you would like to share?

This qualitative study's sample selection process was by the convenience sampling technique until participant numbers reached data saturation (18, 19). One of our research questions was understanding if the institution's curricular and hidden curricular methods enhanced

our undergraduate medical students' knowledge of soft skills. We assumed that a homogeneous group was required to answer this research question, and hence convenience sampling was utilised.

Four FGDs included  $n=24$  (27.2%) students (each FGD consisted of 6 students), from the total number ( $n=88$ ) of students, resulting in data saturation. The FGDs were audio-recorded and recorded in written form by a scribe (co-investigator of this study) to perform thematic analysis of the data obtained. We conducted the FGD session for a minimum of one hour. At the end of each FGD, we did a debriefing to check our understanding of the students. We also did this to ensure that we accurately represent what was mentioned by the students. The students' opinions were transcribed, coded (PA1 to PA24), grouped. We reached a consensus regarding the themes with three investigators of this study.

We obtained the Institutional Ethics Committee approval (IEC: 455/2019), which was in agreement with the Declaration of Helsinki (i.e., October 2008 revision) before starting this qualitative study.

## RESULTS

We thematically analysed the results of the FGDs. The FGDs brought 5 important themes (Figure 1). The themes identified through focus groups, along with representative quotes, are listed below:

### Prior knowledge about soft skills

Among the twenty-four students, thirteen (54.1%) students had prior knowledge limited to some attributes of soft skills during their schooling years, primarily through their teachers, seminars, or motivational camps. They admitted they did not know the term "soft skills" but could relate to it when they reflect on it. One (4.1%) student said working in an NGO helped understand the people's care and concern. Four (16.6%) students mentioned that they self-understood few social skills attributes such as empathy, altruism, and respecting others during their childhood (self-understanding).

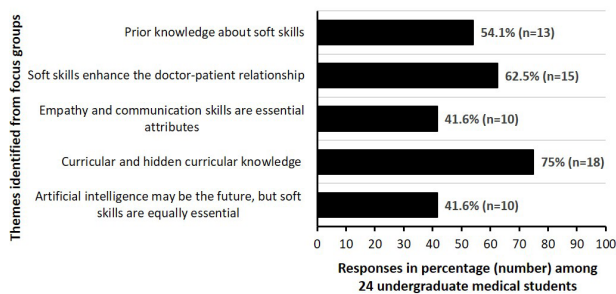
We present four reactions that express the thoughts of the students who participated in the FGD:

*"I was the class representative in secondary school. It helped me understand leadership" (PA3).*

*"In school, the teachers instilled it in us, especially about how to manage stress, be a good person and a good leader" (PA17).*

*"Understood about soft skills by self-learning and by observing people" (PA12).*

*"I learned to be a good human being from my childhood and care about others" (PA22).*



**Figure 1: Themes identified through focus groups and responses from students**

### Soft skills enhance the doctor-patient relationship

Fifteen (62.5%) of the twenty-four students of the FGDs mentioned that if a physician has acquired the essential soft skills (like active listening & empathising), the patient would be more comfortable opening up and trusting the physician. The students also mentioned that the physician's reassurance matters the most as this helps to comfort and builds trust in the patients. The discussion mainly brought about the enhancement of the doctor-patient relationship for better diagnosis and treatment of disease. Here are four thoughts expressed by the students:

*"Proper communication builds trust and makes the patient comfortable, which will help in better clinical history taking to prevent misdiagnosis by the physician"* (PA2).

*"Facts and information about the disease and its treatment are available, but the reassurance is what the patient wants, so they look up to the physician for appropriate diagnosis and treatment"* (PA7).

*"A physician has to give total care through appropriate communication and teamwork, which will benefit the patients by making them feel comfortable and not stressed. Hence improves the safety and quality of treatment, which may help in early recovery from the disease"* (PA15).

### Empathy and communication skills are essential attributes for physicians

Ten (41.6%) amongst the twenty-four students opined that empathy is the most essential among the soft skill, whereas nine (37.5%), four (16.6%), one (4.1%) said that communication skills, teamwork, and time management respectively, are essential soft skills for physicians. Six (25%) students stated that physicians should have a patient-centred approach rather than merely career-based and monetary benefits. They said professionalism, confidentiality, and teamwork would help build a reputation among peers and the community and benefit physicians. The students expressed these views as they had either visited doctors for their treatment or their loved ones. We present feelings expressed about essential attributes for physicians by the students:

*"Soft skills are essential. The (clinical) examination should be more patient-centred instead of just examination-based for career development"* (PA6).

*"Most important is communication with the patient. For example - A physician should know how to reveal the disease condition to the patient, especially when breaking bad news"* (PA7).

*"A doctor should understand what the person is going through and empathize with the patient, which will enhance better care to the patient."* (PA23).

### Curricular and hidden curricular knowledge about soft skills

Curricular: Eighteen (75.0%) of the twenty-four students said they understood soft skills during their MBBS (curriculum). Eleven (45.8%) students stated that they learned about the affective domain, especially in the PPD sessions held during their first and second year of MBBS. The students mentioned that PPD lectures on time management, communication skills, and empathy made them understand more about the affective domain. Three (12.5%) students said they understood the effective Doctor-Patient Communication (DPC) during the Pharmacology practical sessions in their second year of MBBS, medical humanities lecture, and during clinical postings (example: Psychiatry hospital ward postings). They emphasised that clinical postings helped understand DPC. It enabled them to observe how the senior doctors communicated and assess the condition of patients. Two (8.3%) of the twenty-four students stated hands-on experience during the problem-based learning (PBL) sessions and the mentored student project. During these sessions, they also learned about teamwork and the importance of communication skills. Two (8.3%) students mentioned that the rules regarding attendance at the medical college helped in time management.

*"I understood about soft skills during our first year PPD classes, specifically about humanity"* (PA2).

*"In the Pharmacology practical class, I learned about DPC"* (PA5).

*"Clinical postings helped me to understand how to converse with patients"* (PA23).

Hidden curricular activities: Thirteen (54.1%) among the 24 students said that the visit to the nearby slum through the 'Reach out club' (student body that helps the local community) was an 'eye-opener' and helped understand empathy and respecting people of all ages. They emphasised that community service helped them understand the people's emotions and should be part of the curriculum. Two (8.3%) students said they learned more about leadership and teamwork after participating in the inter-batch cultural competitions held annually at our institution.

*"I volunteered to go to the slums, through the reach out club. Got essentials for the kids. It made me understand about empathy and respect"* (PA12).

*"Extracurricular activities, especially the inter-batch dance competitions, helped me learn about cooperation and teamwork"* (PA20).

### **Artificial intelligence may be the future, but soft skills are equally essential for patient care**

Ten (41.6%) of the twenty-four students had heard about artificial intelligence (AI). In addition, eight (33.3%) of the twenty-four students agreed that AI would aid in skilled medical and surgical procedures, but the physician would determine the emotional component. The remaining two (8.3%) of the twenty-four students stated that patients would not expect empathy as long as the therapy technique relieved them of their ailment.

*"The human emotions showed by the physician cannot substitute by AI per se. If AI helps in diagnosis and treatment. If the pain can be treated easily by AI, then soft skills may not be required."* (PA1).

*"Artificial intelligence has no soft skills per se. For example - cancer patients require emotional support"* (PA22).

## **DISCUSSION**

Our study results indicate that undergraduate medical students had prior exposure to soft skills during their schooling years and medical college (curricular and through the hidden curriculum). Exposure to soft skills occurred through community service as well. As a result, the undergraduate medical students had clear viewpoints about soft skills which physicians should possess and their future implications. According to studies, Malaysian schools and universities have incorporated soft skills into their curricula during the last decade (2, 20, 21). Our findings indicate that inclusion of soft skills in the curriculum helped students comprehend the relevance of soft skills for individuals in the medical profession (2, 21). Soft skills training may not teach all soft skills to students; nonetheless, they mentioned that they self-understood as a student through life experiences (12). As a result, it emphasises the significance of incorporating soft skills into the medical curriculum and discussing their value regularly (22, 23).

Introducing the doctor-patient relationship and its importance in clinical practice is essential during the undergraduate medical schooling years (24). When the doctor-patient connection improves, largely via better communication, trust between doctors and patients has psychological advantages, enhances satisfaction, decreases grievances, promotes faith, particularly in patients (24, 25, 26, 27). A better doctor-patient relationship will improve clinical outcomes, ensuring

quality and safety (24). These aspects were mentioned during the FGDs by the students in the current study, validating the importance of teaching, patient safety in the undergraduate medical curriculum (27).

Our FGDs also highlighted the need for empathy and communication skills. Articles on these characteristics demonstrate the necessity of empathy and proper communication in physicians' general practice and patient care (28, 29, 30). Compassion is a fundamental attribute of soft skills and was indicated as one of the crucial requirements for physicians, as mentioned by the students during the FGDs.

Previous research from our institute has also demonstrated that by including specific modules during their preclinical and clinical years, undergraduate medical students improved their reflecting, critical thinking, cooperation, and communication abilities (14 - 16, 31). Studies have shown that volunteering in community outreach efforts, research projects, cultural activities/intercollegiate contests, and interaction with peers can help enhance soft skills. Our study's findings revealed comparable results. (15, 32, 33).

The themes that emerged from the FGDs in this study are well documented in the literature (4, 9, 10, 17, 21, 28, 32). However, when the students brought these specific points up via their personal experiences, it enriched and reaffirmed the relevance of these modules in the curriculum and hidden curriculum. This study indicates that soft skills learning occurred during PPD sessions, community outreach programs, community-based student research projects. Our results also show that soft skills were self-taught in some of these undergraduates, as also described by Lucs (34). Thus, the present study has shown that undergraduate medical students understand soft skills attributes through the hidden curriculum. Bringing the hidden curricular activities into the institutional curricular forefront for undergraduate medical students may also bring about self-taught soft skills, which would help these young students become competent physicians of the future. This curricular change will help them amalgamate the knowledge, skills, and attitude for better patient care and safety (3, 34, 35). Role modelling by the medical faculty members is essential since it is a part of the hidden curriculum and teaches the best techniques for developing the doctor-patient relationship, especially in a clinical setting (4). Our study findings revealed that undergraduate medical students had similar points of view.

Though not explicitly stated by the students per se, our question about AI elicited their thoughts on the topic. They stated that even if AI becomes prevalent, soft skills will be necessary for patient care. According to recent research, AI and technological advancement may explain why the affective domain takes a back seat (36, 37). As a result, while incorporating AI into medical

education is critical, it is also essential to instil soft skills (36-38). To maintain a balance in the curriculum, medical education should include ethics, soft skills (for example, collaboration, teamwork) and modern technological advancements so that teaching-learning occurs through a patient-centred approach (39).

The limitation of our study is that we only included undergraduate medical students from a particular institution. A more diverse student population could have provided a more in-depth understanding of undergraduate medical students' perceptions of soft skills.

For future recommendation, the affective domain should be a significant part of the medical curriculum, not just an afterthought, to ensure that future physicians develop essential soft skills.

## CONCLUSION

All undergraduate medical students (n=24; 100%) enrolled in this study mentioned that soft skills are essential for physicians. Therefore, soft skills training must be sustained and become an integral part of the undergraduate medical curriculum rather than merely a component of the hidden curriculum.

## ACKNOWLEDGEMENTS

We would like to express our gratitude to Dr. Reem Rachel Abraham and Dr. Vinod Pallath for validating the FGD discussion guide. Thank you, Dr. Amol Dongre, for guiding us through the qualitative analysis. We would like to thank Ms. Karishma Kamath for proofreading this article.

## REFERENCES

1. Cimatti B. Definition, development, assessment of soft skills and their role for the quality of organizations and enterprises. *International Journal for quality research*. 2016;10(1): 97–130.
2. Shakir, R. Soft skills at the Malaysian institutes of higher learning. *Asia Pacific Educ Rev*. 2009;10(3):309-315.
3. Ariyananda PL. Soft skills for physicians: Have we addressed it enough?. *Journal of the Ceylon College of Physicians*. 2013; 44:32-5.
4. Egnew TR, Wilson HJ. Role modeling the doctor-patient relationship in the clinical curriculum. *Fam Med*. 2011;43(2): 99-105.
5. Gade S, Chari S. Case-based learning in endocrine physiology: an approach toward self-directed learning and the development of soft skills in medical students. *Advances in physiology education*. 2013;37(4):356-360.
6. Joubert PM, Krüger C, Bergh AM, Pickworth GE, Van Staden CW, Roos JL, et al. Medical students on the value of role models for developing 'soft skills'- That's the way you do it. *African Journal of Psychiatry*. 2006;9(1):28-32.
7. Van Staden CW, Joubert PM, Pickworth GE, Roos JL, Bergh AM, Krüger C, et al. The conceptualisation of " soft skills" among medical students before and after curriculum reform. *African Journal of Psychiatry*. 2006;9(1):33-37.
8. Krüger C, Schurink WJ, Bergh AM, Joubert PM, Roos JL, Van Staden CW, et al. Training undergraduate medical students in 'soft skills'—a qualitative research project at the University of Pretoria. *S Afr Psychiatry Rev*. 2006; 9:12-14
9. Choudhary A, Gupta V. Teaching communications skills to medical students: Introducing the fine art of medical practice. *Int J Appl Basic Med Res*. 2015;5 (Suppl 1): S41-S44. doi: 10.4103/2229-516X.162273.
10. Imwattana K, Dangprapai Y, Ngamskulrunroj P. Active Learning Classes in a Preclinical Year May Help Improving Some Soft Skills of Medical Students. *Siriraj Medical Journal*. 2020; 72(5), 415-423.
11. Schurink WJ, Krüger C, Bergh AM, Van Staden CW, Roos JL, Pickworth GE, et al. Medical students' perceptions of their development of 'soft skills' Part I: A qualitative research methodology. *SA Fam Pract*. 2006;48(8):14.
12. Bergh AM, Van Staden CW, Joubert PM, Krüger C, Pickworth GE, Roos JL, et al. Medical students' perceptions of their development of 'soft skills' Part II: The development of 'soft skills' through 'guiding and growing'. *SA Fam Pract*. 2006;48(8):15-15d.
13. Van Tartwijk J, Driessen EW. Portfolios for assessment and learning: AMEE Guide no. 45. *Medical teacher*. 2009;31(9):790-801.
14. Komattil R, Hande SH, Mohammed CA, Subramaniam B. Evaluation of a personal and professional development module in an undergraduate medical curriculum in India. *Korean J Med Educ*. 2016;28(1):117-121.
15. Devi V, Abraham RR, Adiga A, Ramnarayan K, Kamath A. Fostering research skills in undergraduate medical students through Mentored Student Projects: Example from an Indian medical school. *Kathmandu Univ Med J*. 2010;8(3):294-298.
16. Devi V, Abraham RR, Kamath U. Teaching and assessing reflecting skills among undergraduate medical students experiencing research. *J Clin Diagn Res*. 2017;11(1): JC01–JC05.
17. Komattil R, Hande S. Innovative practices in international partnership: medical undergraduate program in twin campuses of India and Malaysia. *J Educ Eval Health Prof*. 2015;12:4.
18. Etikan I, Musa SA, Alkassim RS. Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*. 2016;5(1):1-4.

19. Hennink MM, Kaiser BN, Weber MB. What influences saturation? Estimating sample sizes in focus group research. *Qualitative health research*. 2019;29(10):1483-1496.
20. Devadason ES, Subramaniam T, Daniel EG. Final year undergraduates' perceptions of the integration of soft skills in the formal curriculum: a survey of Malaysian public universities. *Asia Pacific Education Review*. 2010;11(3):321-348.
21. Nikitina L, Furuoka F. Sharp focus on soft skills: a case study of Malaysian university students' educational expectations. *Educ Res Policy Prac*. 2012; 11:207-224.
22. Llenares II, Deocarlis CC. Volunteerism is Associated with Improved Soft Skills of Marine Engineering Students in the Philippines. *Journal of Interdisciplinary Studies in Education*. 2019;8(2):57-73.
23. Williams SJ, Sugumaran MA. Learning and self: An analysis of ESL student reflections from a social outreach project with a refugee community in Malaysia. *Journal of Interdisciplinary Research in Education*. 2015;5(1): 91–107.
24. Egniew TR, Wilson HJ. Faculty and medical students' perceptions of teaching and learning about the doctor–patient relationship. *Patient education and counseling*. 2010;79(2):199-206.
25. Cecil DW, Killeen I. Control, compliance and satisfaction in the family practice encounter. *Fam Med* 1997;29(9):653–657
26. Lichtstein DM, Materson BJ, Spicer DW. Reducing the risk of malpractice claims. *Hospital Practice*. 1999;34(7):69-79.
27. Halbach JL, Sullivan LL. Teaching medical students about medical errors and patient safety: evaluation of a required curriculum. *Academic medicine*. 2005;80(6):600-606.
28. Derksen F, Bensing J, Lagro-Janssen A. Effectiveness of empathy in general practice: a systematic review. *British Journal of General Practice*. 2013;63(606): e76-84.
29. Smajdor A, Stuckl A, Salter C. The limits of empathy: problems in medical education and practice. *J Med Ethics*. 2011;37(6):380-383.
30. Ratka A. Empathy and the development of affective skills. *American Journal of Pharmaceutical Education*. 2018 ;82(10): 1140-1143.
31. Sahoo S, Mohammed CA. Fostering critical thinking and collaborative learning skills among medical students through a research protocol writing activity in the curriculum. *Korean J Med Educ*. 2018 ;30(2): 109–118.
32. Kommalage M. Hidden and informal curricula in medical schools: impact on the medical profession in Sri Lanka. *Ceylon Medical Journal*. 2011;56 (1): 29-30.
33. Simeon-Fayomi BC, Cheatan BS, Oludeyi OS. Soft Skills for Young Adults: Circuit in The Formal, Non-Formal and Informal Models. *Issues and Ideas in Education*. 2018;6(1):99-112.
34. Lucs A. Self-taught soft skills. *Nature*. 2014;506(7487):257.
35. Holden J. Role models in primary care education: inescapable but forgotten? *Education for Primary Care*. 2013 Jan 1;24(5):308-11.
36. Mustika R, Soemantri D. Unveiling the Hurdles in Cultivating Humanistic Physicians in the Clinical Setting: An Exploratory Study. *Malays J Med Sci*. 2020;27(3):117-124.
37. Ceriani Cernadas JM. Loss of humanism and ethics in the medical profession: is it a utopia to restore them? *Arch Argent Pediatr*. 2017;115(6):522-523.
38. Masters K. Artificial intelligence in medical education. *Medical Teacher*. 2019;41(9):976-980.
39. Millenson ML. When “patient centred” is no longer enough: the challenge of collaborative health: an essay by Michael L Millenson. *BMJ*. 2017;358:j3048.