OPEN ACCESS ORIGINAL ARTICLE

UNVEILING THE TERRAIN: A COMPREHENSIVE EXPLORATION OF AFFECTIVE DOMAIN COMPETENCIES FOR MEDICAL EDUCATORS.

Kainat Javed[1], Umair Bin Nasir[2], Saman Ansari[3], Umer Saeed[4], Jamil Ahmed[5], Syeda Tehseen Fatima[6]

ABSTRACT

OBJECTIVE: To explore the attitudes of teachers and students in medical colleges regarding effective education. **METHODOLOGY:** Medical teachers and students from two private and two public sector medical colleges in the Punjab province were surveyed using a standard questionnaire. A cross-sectional study was used to evaluate various aspects of teaching in the affective domain. The data was analyzed using descriptive statistics to examine affective education's challenges and the variables influencing its success. **RESULTS:** The data was collected from 116 medical teachers, and 326 medical students from public and private medical colleges in Punjab were surveyed. T-test was applied, which showed (t=3.15, p =0.002) that senior and junior students have different needs regarding various components of affective teaching and learning, and medical professors incorporating affective learning struggle due to lack of experience in their teaching methods. **CONCLUSIONS:** The study results revealed that it is essential to reinforce the organizational structure of medical colleges, offer teachers assurances and developments tailored to the needs of instructors of various age groups, and thoroughly enhance teachers' affective literacy. Additionally, the study findings emphasize the need to create affective education goals and systems that are explicit and progressive, and to build an affective education evaluation system using the practical approach.

KEYWORDS: Affective domain, medical, teachers, students, health professions, education

1. Assistant Professor, Department of Medical Education, University College of Medicine and Dentistry, Lahore
2. Department of Public Health, The University of Lahore
3. Associate Professor, Department of Physiology, Rashid Latif Medical College, Lahore
4. Associate Professor, Department of Biochemistry, Rashid Latif Khan University Medical College, Lahore
5. Professor, Department of Community Medicine, Rashid Latif Khan University Medical College, Lahore
6. Biostatistician, University College of Medicine and Dentistry, Lahore

Corresponding Author: Dr Kainat Javed, Assistant Professor, Department of Medical College, University College of Medicine and Dentistry Email: Kainat.javed@ucm.uol.edu.pk Cell # 0323-5103473

How To Cite This Article: Javed K[1], Umair Bin Nasir[2], Ansari S[3], Saeed U [4], Ahmed J[5], Fatima ST[6] **UNVEILING THE TERRAIN: A COMPREHENSIVE EXPLORATION OF AFFECTIVE DOMAIN COMPETENCIES FOR MEDICAL EDUCATORS.** JPUMHS;2023:13:04,73-78. http://doi.org/10.46536/jpumhs/2023/13.04.474

Received September 01.2023, Accepted On 15 December 2023, Published On 31 December 2023.

INTRODUCTION

According to Bloom's[1] Taxonomy, educational goals are divided into three domains: knowledge, skill, and attitude. One of these is the affective domain, which focuses on internal emotions and the level of acceptance and rejection, with whom people pay more focus[2]. It is associated with changes in feeling, motivation, appreciation, value, interest, or attitude caused by a learning experience[3].

Higher education modernization must uphold the essential principle of being student-centered, comprehensively improve education quality, and support individuals' full development and sustainable societal

development amid major social and global challenges. Medical educators are responsible for instilling ethics, integrity, and humanity in medical students as well as conveying knowledge and skills. They also seek the finest methods for developing doctors who are well-rounded individuals. The importance of the attitude in training well-rounded doctors cannot be overstated[4]. Medical educators must emphasize the importance of attitude (affective domain) in training facilitators and coaching medical students to build positive behavior, principles, and values without their conscious knowledge[5]. The COVID-19 epidemic has had an impact on the educational system, particularly medical education[6]. Furthermore, with the transition to online learning, it is more vital than ever to explicitly educate medical students on the affective domain in order to help them acquire empathy skills and become competent doctors[7].

METHODOLOGY

A Cross-sectional study conducted in September - December 2022. The participants for this study were teachers and students from two public (Ameer-u-din Medical College, Lahore, and Sargodha Medical College, Sargodha) and two private sector medical schools (University College of Medicine and Dentistry, Lahore, and Sheikh Zayed Medical College Rahim Yar Khan) in Punjab. The University College of Medicine and Dentistry Ethics Review Committee approved the current study (Ref: ERC/01/23/01). Undergraduate Medical Students enrolled in the MBBS Program and having at least one year of experience learning/education were included in the study. Meanwhile, newly enrolled medical students and those unwilling to participate were excluded from the current study. Purposive sampling was done, and samples were collected from teachers and undergraduate students via Google Forms. All of the participants were sent a questionnaire via Google Forms on their WhatsApp groups, and they were informed that submitting it would also count as giving their informed consent. The survey collected a total of 116 teacher questionnaires and 326 student questionnaires after eliminating the questionnaires that were incomplete submissions.

The four stages of the curriculum are primarily referenced in the general structure of the teacher and student questionnaires: selecting teaching content, determining educational objectives, arranging learning experiences, and evaluating results. There are twenty items in questionnaires to assess the Affective Education Implementation Scale, which covers the following five dimensions: (1) Attitude, (2) education strategies, (3) evaluation, (4) cognition, (5) Infrastructure of the institute. Likert scale (from 1 to 5 points from complete non-compliance to full compliance) is used to score.

RESULTS

Overall, we collected data from 116 teachers and 326 students. We stratified data by sector, public and private sectors, and gender composition. Table 1 shows student and teacher data according to gender and sector.

Table -I: Students & Teachers data according to gender and work sector

Students' data N=326 students		
Sector	**Male students**	**Females' students**
From Public Sector	104 (32%)	63(19%)
From Private Sector	68(21%)	91(28%)
Teachers'data N=116 students		
Sector	**Male Teachers**	**Females Teachers**
From Public Sector	41 (36%)	23(19%)
From Private Sector	25(21%)	27(24%)

This study explored the teaching methods used and efficacy of them. Students and teachers

filled this survey, and the study results demonstrate the teaching methods commonly used by teachers and students, revealing that scenario simulation, affective communication, and role-playing are less frequently employed as instructional methods. However, students learned the most through teaching, skill performance, and other methods, while teachers used affective communication, group work, and role-playing the least among all instructional methods. The top three techniques teachers use are practice on patients, discussion, and lecturing.

Less frequently used teaching techniques include scenario formation (case-based learning), role-playing, and communication sessions. However, students have acquired the most instruction through teaching, discussion, skill performance, and other methods. Role-playing, small group learning, and affective communication sessions are the three teaching techniques that teachers utilize least frequently. The top methods teachers use are lecturing, discussion, and skill practice, as shown in figure-1.

The findings suggest that there are challenges in the field of affective education for medical students, including issues with teachers' basic training in affective education, reliance on teacher-centered instruction, limited use of experience-based learning, and a lack of training for teachers in techniques and strategies for implementing affective education in the medical field. Basic faculty training programs offered by medical universities suffer from issues like ‘‘miscellaneous information, unstable structure, and a lack of benefits’’.

Learning experiences in the cognitive and affective domains can take place in actual clinical settings or simulated environments. The mean values of the items mentioned in Table 2 correlate with mean scores for five distinct dimensions (D1–D5) linked to various areas of education, as evaluated by both teachers and students. This analysis aims to look at potential perception differences between these two groups and establish the statistical significance of these differences.

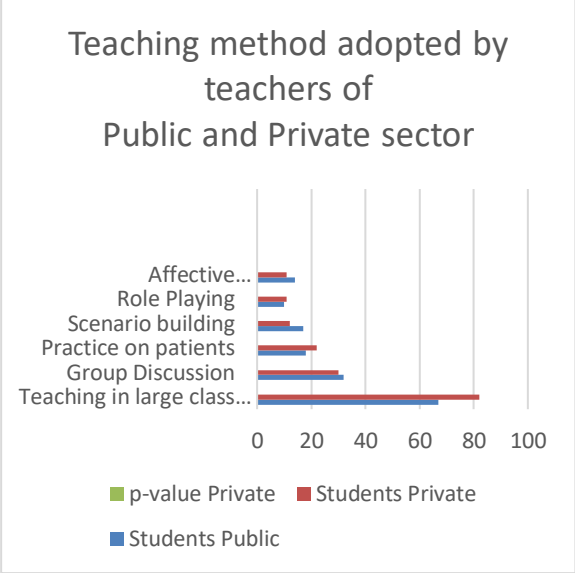

Figure-I - Comparison of students of public and private with teaching methods adopted by teachers

Table-3 compares means for five different dimensions (D1, D2, D3, D4, and D5) based on responses categorized into five levels: "Strongly Disagree," "Disagree," "Neutral," "Agree," and "Strongly Agree." The table also includes the estimated means for each dimension as well as the corresponding p-values, which reflect the statistical significance of the mean differences.

T-test analysis was applied to compare the mean scores between the two groups, "Teachers" and "Students" The study investigated the mean and standard deviation (SD) for each group to determine if there were any significant differences in how each group responded to the measure. The analysis shows a t value of 3.15 and p value of 0.002 mentioned in Table 4.

Overall, the findings of this study suggest that there are challenges in the field of affective education, including issues with teachers' skills, a reliance on student-centered instruction, limited use of experience-based learning, and a lack of training for facilitators in implementing affective education in undergraduate studies.

Table-2- Teacher and student Scale mean and SD values

Dimensions	Teacher N=116 Mean±SD	Students N=326 Mean±SD	p-value
D1- Attitude	3.61±0.926	3.61±0.92	0.05
D2- Education Strategies	3.15±0.824	3.57 ± 0.14	0.06
D3- Evaluation	3.43±0.348	3.54±0.18	0.103
D4- Cognition	3.43±0.971	3.51±0.13	0.012
D5-Institute's Infrastructure	3.09±0.782	3.19 ± 0.52	0.001

Table-3 : Mean of all Dimensions

Dimensions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	P value
D1	3(0.7%)	14(3.2%)	34(7.7%)	39(8.8%)	26(5.9%)	3.61	0.00
D2	13(2.9%)	17(3.8%)	41(9.3%)	29(6.6%)	16(3.6%)	3.15	0.00
D3	3(0.7%)	21(4.8%)	36(8.1%)	35(7.9%)	21(4.8%)	3.43	0.00
D4	3(0.7%)	21(4.8%)	36(8.1%)	35(7.9%)	21(4.8%)	3.43	0.00
D5	8(1.8%)	29(6.6%)	37(8.4%)	28(6.3%)	14(3.2%)	3.09	0.00

Table 4: Results of the T-Test Analysis

	N	Mean	SD	t-value	P Value
Teacher	326	3.59	0.68	3.15	0.002 (0.07-0.32)
Students	116	3.39	0.26		

DISCUSSION

This study focuses on how affective education is being implemented, which involves encouraging emotional and attitudinal growth in addition to cognitive learning. The results show that education's emotional domain is not adequately addressed in the teaching and learning processes due to a perceived lack of appropriate strategies or methodologies. A study by Hasan et al., mentioned that increasing teachers' overall affective competence promotes the development of their affective attitude, cognition, approach, and assessment[8]. As contrast to teachers' ethics, affective literacy is directly related to instructors' individual experiences, attitudes, knowledge, and learning. The foundation of a teacher's success is their affective accomplishment, which results from their affective competence [9.10]. The characteristics of a profession must align with the attitudes and values implied in the curriculum, and the best way to do this is for educators to be transparent about the learning outcomes they expect from their students, and to appropriately reward those who meet those expectations. Similar findings were reported in another study by Naguyen Q.[11] It was observed that the majority of teachers in medical colleges continue to emphasize old teaching methods and lack in practicing new teaching methods and strategies, which frequently results in a lack

of significant affective instruction. Students believe that teacher attitude (14.1%), practical exercises (11.9%), Group work (9.6%), scenario formation (7.4%), role-playing (6.8%), connection, and support (6%), among other factors, are the most useful to their sentiments, attitudes, and values. Students rated the task-oriented strategy (1.8%) and the adaptive demonstration method (2.3%) as the least beneficial. Compared to the most common instructional approach, which comprised only 4.4% of all teaching activities, these findings are similar to the study conducted by Katawazai in 2021[12], student-centered teaching is better for students' attitudes and values. Therefore, to achieve the learning and growth, result of self-perception and self-inspiration, the teaching in the affective domain should pay special attention; teachers may adopt a multidimensional and reflective experience teaching strategy[13, 14]. For instance, to seek and achieve affective outcomes, educational activities including discussion, open debate, peer engagement, role-playing, problem-based learning, participation in role models, simulations, and games are implemented as suggested by Kooshki in his study[15].To give students chances for practice and integration with neighborhood organizations, employ community-based medical education techniques including role modeling and mentorship[16, 17]. The introduction of affective education at medical colleges at undergraduate level has implications beyond the education[18]. It is essential to look at these implications from the perspective of medical college administration. A logical and reasonable incentive mechanism should be established in institutions, as Hojat et al. suggested in his study[19].

CONCLUSION

Considering the above findings, it concluded that the teaching strategies that students are exposed to the most do not match the ones that are most effective in fostering positive affective attitudes and values in them. According to the survey's findings, both professors and students feel that current affective education teaching goals are unclear, that the affective teaching technique is largely unique, and that inquiry - based learning is the most effective way to teach affective education. According to the findings of this study, both facilitators and students feel that universities' current affective education teaching objectives are unclear, the affective
teaching technique is largely unique, and inqui ry based learning is the most effective way to teach affective education. The assessment of affective education is critical, and due to the limited teaching methods available, it is a weak link in practice.This study also discovered variations i n affective teaching and learning between students from the public and private sectors and facilitators with various teaching experiences. Overall, the study suggests that there is a need for ongoing efforts to improve affective education in medical colleges to ensure that medical students are better prepared to provide effective patient care that includes not only cognitive knowledge and technical skills but also emotional intelligence and empathy. These efforts may include providing targeted training programs, encouraging the use of experience-based learning and relevant teaching techniques, and promoting a more balanced approach between teacher-centered and student-centered instruction.

Funding: The study expenses are met by the authors' contribution.**Disclosure**: No Any.
Conflicts of Interest: The author declares no conflict of Interest.**Acknowledgment:** The author acknowledges the study participant.

REFERENCES:

1. Ganguly B, D'Souza R, Nunes R. Challenges in the Teaching–Learning Process of the Newly Implemented Module on Bioethics in the Undergraduate Medical Curriculum in India. Asian Bioeth Rev [Internet]. 2022;(0123456789). Available from: https://doi.org/10.1007/s41649-022-00225-2
2. Aleem S Bin, Imam KA, Hammad M. students' opinion on effectiveness of cblinarmy medical college, Rawalpindi, Pakistan. 2014;64(4):564–8.
3. 3.Scager K, Akkerman SF, Pilot A, Wubbels T. Teacher dilemmas in challenging students in higher education. Teach High Educ [Internet]. 2017;22(3):318–35. https://doi.org/10.1080/13562517.2016.1248392

4. Zhang Z, Hu Q, Xu C, Zhou J, Li J. Medical teachers' affective domain teaching dilemma and path exploration: a cross-sectional study. BMC Med Educ. 2022;22(1):883. DOI https://doi.org/10.1186/s12909-022-03870-1
5. Javed K, Rafique S, Azhar T. Impact of Gamification on Education Prime Time. Pakistan J Med Heal Sci. 2022;16(3):18–9. DOI:https://doi.org/10.53350/pjmhs2216318
6. Alqahtani AY. education sciences E-Learning Critical Success Factors during the COVID-19 Pandemic : A Comprehensive Analysis of E-Learning Managerial Perspectives. 2020;
7. Fatima A, Rafique S, Aslam R. A Win-Win for all? A Qualitative students' perspective about online Case-based Learning in clerkship Gynaecology and Obstetrics. Heal Prof Educ J [Internet]. 2021;4. Available from: https://hpej .net /journals /medical educator / article/view/1260. doi: https://doi.org/10.53708/hpej.v4i2.1260
8. Hassan M, Aijaz A. Perceptions of students about the educational environment in Gomal Medical College Dera Ismail Khan. HPEJ. Vol 5 No 2 (2022. **DOI** https: //doi .org /10. 53 708 / hpej.v5i2.1278
9. Goodman BE, Barker MK, Cooke JE. Best practices in active and student-centered learning in physiology classes. 2022;(38):417–23.
10. Qutab M, Mohammad Joya S. Correlation between Emotional Intelligence and Burnout amongst medical teachers of a Public Medical School in Lahore. 2022;5:14–8. Available from: https://doi.org/10.53708/hpej.v5i1.1253
11. Nguyen Q, Rienties B, Whitelock D. Informing learning design in online education using learning analytics of student engagement. Open World Learn Res Innov Challenges High-Quality Educ. 2021;(January):189–207.
12. Katawazai R. Implementing outcome-based education and student-centered learning in Afghan public universities: the current practices and challenges. Heliyon [Internet]. 2021;7(5):e07076. Available from:https://doi.org/10.1016/j.heliyon.2021.e07076
13. El-Khodary B, Alshawamreh S, Salah MA, Hamada A, Alhendawi B, Alhabil M, et al. The relationship between stress, trait emotional intelligence and mental health amongst Gaza's basic-year medical students during the COVID-19 outbreak. Middle East Curr Psychiatry. 2021;28(1). https://doi.org/10.1186/s43045-021-00146-0
14. Rahim S. Does high achievement in preclinical years predicts similar achievement in clinical year in medical students? A correlational study. HPEJ [Health Professions Educator Journal]. 25Oct.2021 [cited 23Jan.2023];4(2):32-6. Availablefrom:https://hpej.net/journals/medicaleducator/article/view/1225
15. Feiz P, Hooman HA, kooshki S. Assessing the Motivated Strategies for Learning Questionnaire (MSLQ) in Iranian Students: Construct Validity and Reliability. Procedia - Soc Behav Sci [Internet]. 2013;84(4):1820–5. Available from: http: //dx .doi. org /10. 1016/j.sbspro.2013.07.041
16. Naseer S, Mussarat R, Malik F, Malik F. Personality Traits and Academic Achievements of Undergraduate Students: The Mediating Role of Emotional Intelligence. Pakistan J Psychol Res. 2022;37(1):13548. https://doi.org/10.33824/PJPR.2022.37.1.09
17. Hojat M, Shannon SC, Desantis J, Speicher MR, Bragan L, Calabrese LH. Does Empathy Decline in the Clinical Phase of Medical Education? A Nationwide, Multi-Institutional, Cross-Sectional Study of Students at DO-Granting Medical Schools. Acad Med. 2020;95(6):911–8. DOI: 10.1097/ACM.0000000000003175.
18. Farooq F, Mahboob U, Ashraf R, Arshad S. Measuring Adaptive Expertise in Radiology Residents: A Multicenter Study. HPEJ [Health Professions Educator Journal]. 31Dec.2022 [cited 23Jan.2023];5(2):9-4. Available from: https:// www.hpej .net/ journals /medical educator/article/view/2103. **DOI:** https://doi.org/10.53708/hpej.v3i2
19. Nazir a, Malik z. Stress and coping skills among undergraduate medical students-a cross sectional study. Pakistan postgraduate medical journal. 2023 May 27;34(02):73-6. DOI:https://doi.org/10.51642/ppmj.v34i01.488