

REVIEW ARTICLE

Academic culture of Pakistani medical colleges

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ABSTRACT

Background: There is a discrepancy between theory and practice in the academic culture in medical colleges in Pakistan. The overall academic culture and educational armamentarium in Pakistani medical colleges is outdated and is administration centric. There is a need to identify the issues that exist in various medical colleges to curb these problems.

Aim: This scoping review was done to highlight the discrepancies between theory and practice observed in the academic culture of Pakistani medical colleges and shed light on problems faced in the academic culture of medical colleges while conferring the positive aspects.

Methods: Out of the 98 studies identified relevant to the topic, 34 studies were included in this scoping review. These studies were obtained from PubMed, ERIC, and Google Scholar. This review was supported by the framework proposed by Arksey and O'Malley.

Results: The scoping review highlighted that the students responded well to clear study objectives, practical application of knowledge over memorization, interactive nature of the teachers, and a comfortable and adequately equipped learning environment. The absence of mentioned amenities and facilities enabled poor results, high stress in students, and medical colleges' overall low academic performances. A lack of formal training of teachers and students' passive participation in research opportunities was also displayed.

Conclusion: The academic culture in Pakistan's medical and dental colleges display a lack of modern and innovative learning and teaching facilities, which hampers student performance and growth. With active participation from all stakeholders involved, a collaborative approach can curb a lot of these problems, given proper funding and good leadership.

Keywords: academic culture in Pakistan, academic environment, academic integrity, academic outlook, academic ethics.

Introduction: Academic culture refers to the interaction between different educational groups at the university level. Defined as a system of beliefs, attitudes, values, and cultural actions held by universities, academic culture influences the development of knowledge creation. It is considered a determinant of university policies (Sarmadi et al., 2017). It focuses on exploring the objective truth and new knowledge and techniques to help students enhance their ability to mold themselves and reform the world. Academic culture mainly includes the academic environment, academic outlook, academic spirit, and academic ethics of a university. Academic outlook refers to points of view about academic activities, further divided into academic ontology, attitude, purpose, methodology, development, and academic evaluation. Academic ethics relates to the norms and regulations to be followed, such as academic research and

academic evaluation norms. Strategies to enhance academic culture must be developed, which help the university follow its mission, boost cultural confidence and consciousness, integrate culture into talent cultivation and promote innovation (Shen & Tian, 2012).

Medical education is considered a taxing and demanding field due to its extensive curriculum, frequent examinations, and its nature of high stakes. Most medical colleges in Pakistan offer a five-year-long MBBS degree program divided into two preclinical years followed by three clinical years. These colleges use the traditional, discipline-based, didactic teaching methods that are teacher-centered, consisting of long lectures, practicals, and tutorials. Assessment is done throughout the year in the form of written, oral, and practical exams; this is followed by the professional examinations at the end of the year, held by the affiliated university. There is a strong dissociation between theory and practice and between education, patient care, and research. A passing grade is necessary to be promoted to the next year (Waqas et al., 2015). It is worth mentioning that some medical colleges in Pakistan have adopted more innovative, self-learning processes such as integrating the curriculum. These methods facilitate critical thinking and creativity in students,

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thereby enhancing their intellectual growth (Zhautikova et al., 2014). This scoping review aims to shed light on medical colleges' academic culture in Pakistan, focusing on both the positive and negative aspects.

Methods: Search strategy: A scoping review on this topic has been done as extensive studies are not available regarding the academic culture of medical colleges in Pakistan. This scoping review was done to map the literature regarding this topic, identify the key concepts, and identify the gaps in the literature. The process started by identifying a problem, formulation of a research question, and developing a systematic search strategy. Databases PubMed and ERIC were used along with the search engine Google Scholar for grey literature. The Arksey and O'Malley model was used as a framework for this review; the steps that were taken were;

1. Identifying the research questions
2. Identifying relevant studies
3. Narrowing down and selecting studies
4. Charting the results
5. Collecting, summarizing, and reporting results (Arksey & O'Malley, 2005).

Research question: What is the academic culture in medical colleges in Pakistan?

Key terms used: Following keywords and phrases were used: academic culture, academic culture in medical education, academic culture in Pakistani medical colleges, academic environment in Pakistani medical colleges, academic ethics, stress among Pakistani medical students, academic integrity, assessment in Pakistani medical colleges, academic outlook, academic spirits and medical education in Pakistan. The Boolean operators 'AND' and 'OR' were used to increase the relevance of the search. The search terms chosen were based on preliminary searches on the methodological literature.

Studies selected: A total of 98 relevant studies was identified, out of which 34 were used for this scoping review. Checks were made to ensure that studies were not double-counted by inclusion.

Inclusion criteria- Full-text journals, literature and systematic reviews, AMEE guides, original article, and articles in the English language consisting of keywords and relevant topics were used in this scoping review.

Exclusion criteria- Abstracts only, articles in other languages, citations only, assignment papers, articles before the year 2010 were excluded from this review.

Data Analysis: Data was analyzed by breaking down the broad definition of academic culture into four themes; environment, outlook, spirits, and ethics. The term academic outlook encompasses viewpoints about various academic activities; academic spirit refers to the involvement in academics, and academic ethics describes the norms and regulations to be followed, such as academic research and norms of academic evaluation.

Results: Learning outcomes and expectations from students

A high-quality teaching environment depends upon constructive alignment where the expected learning outcomes are explicitly stated, are appropriate and clear to the students, and clarity in assessment methods so that students can achieve the desired knowledge and skills (Haarala-Muhonen et al., 2011). In a study done by Rehman et al., it was seen that students in a Pakistani medical college gave positive responses to being given clear learning objectives, well-focused teaching, and encouragement to participate in class. The scores also showed that students perceived teachers as possessing adequate knowledge, being well prepared for class, and demonstrate patience with their students. However, it was suggested that even though faculty received training for providing feedback, there is still room for improvement in providing feedback and constructive criticism by teachers. Students in this study felt they were being well prepared for their profession. Still, they did not vote in favor of memorization as they believed that there needs to be a focus on applying knowledge rather than memorization (Rehman et al., 2016).

Lack of formal teacher training: In another study, it was revealed that most of the teachers had received no formal educational training, even though being experts in their respective fields, which leads to an inadequate number of trained teachers (Nasim, 2011). In another study, only 36% teachers had all-around flexible and adaptable teaching strategies (Naz et al., 2014).

Learning environment: A comparison of five medical colleges in Pakistan, namely, DMCD, NID, LMDC, FMH, and MIHS, showed low DREEM scores than those reported from Europe and Australia. Amongst these, the public sector institutes recorded the lowest scores. On the other hand, the private sector institutes showed better scores, the highest shown by MIHS, which also had the highest pass percentage in university examination. DREEM scores in this study were seen to correlate with the overall performance on the medical college directly. It was suggested that to compete with private medical colleges, government medical and dental colleges must come up with significant reforms, including administrative and financial autonomy and better incentives for faculty members (Ali et al., 2012). A survey done at Dow University of Health Sciences

showed the highest DREEM scores in students' academic self-perception and lowest in learning perception (Askari et al., 2018). In another medical college in Karachi, the mean DREEM score regarding the learning environment was 116, which was more positive than negative; similar scores are seen in national and international studies (Sarwar & Tarique, 2016), (Shahid et al., 2017).

There is a documented association between the learning environment and academic performance and satisfaction of medical students. Comparing three medical colleges of DUHS, SMC students seemed to be more satisfied with their learning, while DMC students were more competitive and stressed. Students' academic self-perception was given the highest score in the five domains studied, and students' perception of learning was given the lowest score, which raises a point of concern for the faculty (Jawaid et al., 2013). A survey done at SZMC showed considerably low DREEM scores, indicating serious problems needing immediate attention. Teaching and the academic learning environment were viewed negatively. Students were burdened with an overload of information, academic elitism was observed, the environment was threatening and stressful, and an excessive number of unstructured formative tests were taken (Anwar et al., 2015). In comparison, another study revealing DREEM scores for medical schools in Sri Lanka, Nepal, Nigeria, Saudi Arabia, UK, Kuwait, Sweden, and Jamaica also indicated 'more positive than negative', suggesting that the environment was conducive to learning (Bakhshialiabad et al., 2015).

Teaching strategies/styles: Regarding teaching strategies, a study showed that students found teachers to be more authoritative than friendly; they were not satisfied with the teaching style as it was mostly conventional and old fashioned due to lack of teacher training and faculty enhancement workshops. In this medical college, the mean DREEM score was more negative than positive. Students also found the administration harsh in class timings, dress code, and several other issues. However, co-curricular activities were a regular part of the program (Ahmed et al., 2019).

Academic spirit: A study done in a medical college revealed that 66% of its students had chosen the medical profession out of their own will. In comparison, 29% of students admitted choosing it because their parents wished so, and 5% chose it on relatives' or friends' advice. Most of them knew they would have to put in a lot of effort, but a few did not have a fair idea. In the same study, 60% of students said they felt this was the right decision, while 40% of students felt choosing this field was a wrong career choice and said they would pursue a different career if given an option (Shahab et al., 2013). Similarly, another study showed negative perceptions of general practice and primary health care

by entrant medical students. In this study, only 7.8% of students were interested in being primary care practitioners, 85.5% wanted to become subspecialty consultants, and 72.3% said they would prefer a foreign country for postgraduate training (Attaur-Rasool et al., 2015).

Stress and academic dishonesty: Stress and anxiety were commonly seen in undergraduate medical students. A study disclosed that stress was more prevalent in the second year and final year MBBS students; 33% of students admitted to having sleeping problems, while 36% said they had experienced tachycardia, and 24% of students said they were using anti-depressants (Ans et al., 2012). Many students (55%) also admitted that they had cheated at least once, 87% said they marked proxy for a friend, and 44.2% said they wrote fake histories of patients (Hafeez et al., 2013). Additionally, some students reported suicidal ideation; however, these cases were underreported in Pakistan because of the public stigma (Waqas et al., 2015).

Lack of research training: Research has a pivotal role in medical education, and there has been an emphasis to inculcate it within the medical community. Medical students in Pakistan mentioned that they had participated in research projects but mostly as data collectors or for computer work. Research culture was welcomed in a few medical colleges that were mainly influenced by their faculty interest. Most of the senior physicians had no formal research training regardless of their other degrees but are compelled to research because of promotion criteria set by the PMDC and HEC. Students were also found to have inadequate research knowledge and moderate interest in research, even in the best medical colleges (Ejaz et al., 2011).

Academic ethics: A matter of concern was the students' perception of cheating. Students were mostly neutral about cheating being a problem and did not deter from engaging themselves in academic misconduct (Rehman et al., 2016). A high level of plagiarism was also observed among Pakistani medical students, which may be due to a lack of awareness and consequences (Javaeed et al., 2019).

Discussion: As mentioned above, medical college's academic culture includes academic environment, academic outlook, academic spirits, and academic ethics. The learning environment consists of the curriculum, social perspectives, and psychological context of an institute; it plays a crucial role in regulating student learning and program evaluation. It aids in effective curricular management and affects student behavior, and predicts achievement (Khan & Tabasum, 2011). A positive learning environment promotes learning based on understanding, development of expertise, and applying that knowledge when required (Haarala-Muhonen et al., 2011), (Khan et al., 2018). It also allows faculty members to work in a

team, appreciate mutual contributions from different disciplines, and socially bond for students' benefit (Sarfraz et al., 2019).

The academic learning environment depends on the physical factors and faculty members' role, enthusiasm, and teaching style (Ahmed & Mubeen, 2013). However, this also comes with its challenges such as inadequate time, teaching in the middle of clinical work, conflict of interest, keeping up to date with the latest teaching strategies, and demands from students and management. Female teachers are more likely to use interactive teaching methods, whereas males use lectures. Students feel more satisfied with teaching methods that encourage discussions and are keener to learn by generating group discussions (Naz et al., 2014). Explicitly stating learning objectives has also been seen to improve student outcomes when students are also engaged with them and provide a roadmap for evaluating students (Austin, 2020).

There has been criticism regarding the education system in Pakistan on having an emphasis on obtaining good grades by students, irrespective of their quality of learning. Assessment mostly focuses on the reproduction of information instead of applying knowledge. Conventional teaching strategies are used, such as lectures, limiting interaction between the teachers and students, and students are passive recipients of the information. Rote memorization is commonly seen. Hence, students use their notes and study guides to prepare for exams (Ullah et al., 2016). This leads to surface learning instead of an in-depth understanding of concepts and underlying principles (Getha-Eby et al., 2014).

A rapid increase in the number of medical colleges in Pakistan has come with its challenges in the last few decades. Inadequate planning and premature opening of medical colleges in remote areas result in low education quality due to lack of adequate infrastructure and competent teachers. A lack of trained faculty hampers the collaboration between teachers, clinicians, and researchers in providing quality education to students. Very few medical colleges have proper medical education departments that offer faculty development programs, and the ones that do, fail to help teachers transfer information in an integrated manner. Teachers' lack of adequate communication skills and flexibility in adapting to changing learning needs has been observed in Pakistan. Teachers are not motivated enough due to the paucity of incentives for quality performance by medical colleges (Nasim, 2011).

Many students of Pakistani medical schools have reported high levels of stress and anxiety in their daily lives; the common factor among six medical colleges has been their heavy workload (Ullah et al., 2016). Other factors include pressures of academics with an obligation to succeed, difficulty in coping up

with the organizational culture, unsuitable teaching methods, threatening learning environment, fear of failure in exams, frequency of exams, socio-economic problems, high parental expectations, and a lack of leisure time (Shah et al., 2010; Sohail, 2013). Stress and anxiety leave little opportunity for students to relax and recuperate; this can lead to sleep deprivation, impaired judgment, increased anxiety, low self-esteem, and in some cases, it can lead to depression. Coping strategies include indulging in games, prayers, and sleeping (Afridi et al., 2015). Medical colleges can play a proactive role by providing adequate resources throughout the course to support students mentally and academically (Rehman et al., 2016).

Results also disclosed that medical students often indulge in academic dishonesty. This practice can be overcome by inquiring about why students cheat, good role modeling by the faculty members, and encouragement of academic integrity, and a zero-tolerance policy regarding cheating. This will help develop professionalism among medical students who are more aware of the concept of academic ethics (Rehman et al., 2016). There has been an emphasis on formal ethics education in the health professions in many countries, where ethics courses are taught by faculty members and then later evaluated. (Carlin et al., 2011).

A high percentage of students were found to have regrets about their career choice. This can be overcome by arranging career counseling sessions and seminars to create awareness about the field and options of specialization and to help students choose sub specialty fields such as public health. A critical review is required by the policy makers and stakeholders to strengthen the fields which are often overlooked by students (Shahab et al., 2013).

Conclusion: Medical education aims at providing students with the desired knowledge, skills and attitude in order to competently manage health problems. It is a dynamic and demanding profession that can sometimes take a toll on medical students. This scoping review described the academic culture of Pakistani medical schools, by exploring their practices, focusing on the academic outlooks, academic environment and academic ethics. Literature revealed the perceptions of students and faculty both, regarding the issues they face with respect to the academic culture in medical colleges of Pakistan. A strong academic visionary leadership, active involvement of stakeholders and collaboration with other medical colleges of the country can help curb many of the problems.

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- Dr. Shahmain Shahzad – Conception, Literature Search & Review, Writeup of Manuscript

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Declaration of interest

None.

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