STAKEHOLDER'S PERSPECTIVE ON THE CHALLENGES FACED DURING THE IMPLEMENTATION OF THE INTEGRATED CURRICULUM AT MEDICAL COLLEGES OF KHYBER PAKHTUNKHWA

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https://doi.org/10.37762/jgmds.11-1.580

ABSTRACT
OBJECTIVES
To explore and identify the challenges stakeholders face in implementing and sustaining the integrated curriculum in undergraduate medical colleges of Khyber Pakhtunkhwa
METHODOLOGY
The study design was qualitative exploratory. A total of 15 participants (student, faculty member, and educationist from each institute, two public sector and three private sector medical colleges in Peshawar. The participants meeting the inclusion criteria were enrolled through a purposive sampling technique. An interview guide was developed based on the literature review, and experts' validation was done and used to conduct semi-structured interviews with nine participants. A Focused group discussion (FGD) comprised six participants to complement the data from individual interviews. Audio recordings of interviews and FGD were transcribed verbatim manually. The ten transcripts were fragmented and searched for primary codes. A total of 166 codes in vivo codes were generated. The second cycle of 44 descriptive codes was defined. The secondary codes were merged into 17 subthemes and six themes.
RESULTS
A total of six themes were derived from the data. The themes were that planning curriculum integration is like planning an uphill drive, dream versus ground reality, moving up and down the ladder, teamwork is the heart of the paradigm shift, the challenges, and the road to success. Participants views on the difficulty of implementing an integrated curriculum varied widely, and these differences were attributable to the participants' unique perspectives and contextual factors of the institutes.
CONCLUSION
Implementing an integrated curriculum is not a journey on the road; it faces many challenges. Teamwork is the hallmark of successful implementation.
KEYWORDS: *Integrated Curriculum, Qualitative Study, Perception*

INTRODUCTION

Many medical schools worldwide have recently transitioned from traditional discipline-based to integrated curricula.[1] This significantly shifted from the traditional discipline-based curriculum to an integrated approach to providing a more holistic, patient-centered education.[1,2,3] One of the prime challenges students have faced with the integrated curriculum is the need for a higher level of self-directed learning. This approach requires students to take greater responsibility for their learning and develop the skills needed to integrate different aspects of medical knowledge. Another challenge is the increased workload, as the integrated curriculum covers a wider range of topics and requires students to develop a deeper understanding of the connections between different areas of medicine.[4,5,6] Faculty members must adapt their teaching methods to the integrated curriculum, which requires a significant shift in their teaching approach. Faculty members also face challenges due to the limited resources and training required for effective implementation. They require ongoing training and support to develop the necessary skills and knowledge to implement the integrated curriculum effectively.[7,8,9] Medical educationists face challenges in designing and implementing integrated curricula. There is a need to ensure that the curriculum is effectively evaluated and continuously improved. Medical educationists also need to ensure that the curriculum is aligned with the changing needs of the healthcare sector and that it provides students with the skills and knowledge they need to be influential healthcare professionals.[10] The post-integrated curriculum requires compliance with regulatory authorities, such as the Pakistan Medical and Dental Council (PMDC). Compliance with regulatory

authorities requires adopting standards, guidelines, and policies, which may be challenging for some medical colleges. These challenges require adopting appropriate strategies and policies to ensure the effective implementation of the post-integrated curriculum. The stakeholders should collaborate and work towards addressing these challenges to ensure that medical graduates have the necessary skills and competencies for modern healthcare practices. One of the significant challenges stakeholders face in medical colleges of Khyber Pakhtunkhwa (KPK) after the completion of five years since 2017 is the shortage of trained and skilled faculty members. This shortage of qualified faculty members has led to a decline in the quality of education and training provided to medical students.[11,12] Improving and strengthening the integration of the curriculum always remains a challenge due to certain factors like resistance to change, lack of understanding, limited resources, difficulties in assessment and evaluation, collaboration and coordination and ensuring the sustainability of the integration.[13] The barriers and challenges identified through this study will serve as a scaffold to improve the learner's experience. Recognizing the challenges and adopting the right implementation strategies can ensure the promise of education. This research aimed to learn how medical school faculty members felt about the degree of integration and the steps institutes took to get there. The study's secondary objective was to shed light on the difficulties of adopting an integrated undergraduate medical curriculum at a given institution.

METHODOLOGY

This qualitative exploratory study was carried out on 15 of two public sector and three private sector medical colleges. The study was performed at the Institute of Health Professions Education and Research (IHPER) Khyber Medical University, Peshawar, from March to October 2023. Ethical approval was obtained (Ref No;1-11/IHPER/MHPE/KMU/23-44). Administrative approval for data collection was sought from the sampled medical colleges. Participants were selected based on the maximum variation purposive sampling technique, selected for in-depth interviews and focused group discussion. As per inclusion criteria, the participants were selected from students, faculty members, and educationists as they are the stakeholders in the curriculum development and implementation process as per World Federation for Medical Education guidelines. All participants were informed about the study using a participant information sheet, and if agreed upon, informed written consent was obtained. The primary researcher conducted Structured individual interviews with the participants, and data saturation was reached with the ninth participant. To complement the individual interviews with commonly held views by participants of different medical colleges, a Focus Group Discussion (FGD) was also conducted. The six participants in FGD were not part of the data collected by individual interviews. The FGD was conducted in the university on a date and time agreeable to all the six selected participants. Data confidentiality and anonymity were ensured by assigning an individual code to each participant and each medical college, as shown in Table 1. The interviews and FGD were audio recorded, and manual notetaking was used to ensure effective transcription. Audio recordings of interviews were transcribed verbatim immediately after the session. Data were analyzed using Braun and Clarke's framework for thematic analysis. The ten transcripts were fragmented and searched for primary codes. A total of 166 in vivo codes were generated. The second cycle of 44 descriptive codes was defined. The secondary codes were merged into 17 subthemes, and six themes emerged from the data.

RESULTS

All 15 participants were involved in designing and implementing an integrated curriculum at some stage. The individual details of participants are given in (table 1). The ten transcripts were fragmented and searched for primary codes. A total of 166 in vivo codes were generated. The second cycle of 44 descriptive codes was generated from the data. The secondary codes merged six overarching themes. The six themes with subthemes and representative quotes (table 2) were as follows.
1. Planning curriculum integration is like planning an uphill drive),
2. Dream versus ground reality
3. Moving up and down the ladder
4. Teamwork is the heart and soul of the paradigm shift.
5. The challenges
6. The road to success

Table 1: Demographic Data of Study Participants

S/No	Respondent ID	Gender	Designation	Qualification	Role in Curriculum Committee
1	001*PS-1	F	Student	Student, Final Year	Designing
2	002 PS-1	F	Associate Professor	M.Phil., Ph.D.	Designing and implementation
3	003 PS-1	M	Educationist, DME	MHPE	Designing and implementation
4	001 PS-2	F	Student	Student, Final Year	Designing
5	002 PS-2	M	Professor Anatomy	M. Phil, Ph.D.MHPE	Designing and implementation
6	003 PS-2	F	Educationist, DME	Physiology, MHPE	Designing and implementation
7	001#Pvt-1	M	Student	Student, Final Year	Designing
8	002 Pvt-1	M	Professor Anatomy	M.Phil.	Designing and implementation
9	003 Pvt-1	F	Educationist, DME	Physiology, MHPE	Designing and implementation
10	001Pvt-2	M	Student	Student, Final Year	Designing
11	002 Pvt-2	M	Assistant Professor Community medicine	M Phil, MPH	Designing and implementation
12	003Pvt-2	F	Educationist, DME	Physiology, MHPE	Designing and implementation
13	001Pvt-3	M	Student	Student, Final Year MBBS	Designing
14	002 Pvt-3	M	Assistant Professor Biochemistry	M.Phil., Ph. D	Designing and implementation
15	003 Pvt-3	M	Educationist, DME	MHPE	Designing and implementation

Footnote - *PS-public sector, #Pvt-private sector

Table 2: Themes, Subthemes, and Representative quotes

Themes	Subthemes	Representative Participants' quotes
1. Planning curriculum integration is like planning an uphill drive.	• Different schools of thoughts • Ambiguous minds • Faculties perception setting the goals. • Dealing with the content	• "People were worried about the future, e.g. the pupils, the teachers, and the higher-ups. Our administration, however, had a vision that called for a shift from the old to the new curriculum". (001PS-2) • There was another shortcoming I'd point out, as our stakeholders were not entirely crystallized at that point. (003Pvt-3) • According to international needs, our stakeholders believed that it should be adjusted, and the precise level of integration was not defined at that time. 002(PS-1)
2. Dream versus reality	• Looking back on the things • Faculty's perception	• Aim for Harden level 10 or 11 for best results. To the best of our ability. The higher, the better; there is no fixed goal. Integration at a deeper level is beneficial for us. (002Pvt-3) • We had level 9 of this new curriculum when we first introduced it, but that has since been lowered to level 7. (002PS-2) • We hoped to reach level 11 in our dreams. After the curriculum was implemented for two or three years, it was rolled back, and the main reason was that the faculty was not ready, especially the senior professors. They had no drive at all. (003PS-3) • in terms of design, we might have occasionally reached level 8—not entirely, but in certain respects. Then we went backwards and came forward again. According to the assessment, this is either a Level 5 or Level 6 implementation. (001Pvt-1)
3. Moving up and down the integrated curriculum	• Lack of uniformity in the level of integration • Clerkship: lower level of integration	• There is no integration for basic sciences during clerkships or the final year. (PS-3) • Horizontal002 integration exists, but the final year will focus on vertical integration, which will occur from the bottom up. I don't think there are many of them around right now. (001Pvt-3) • At clerkships, we also must give discipline-based education, so we're at level 9 in bits and pieces, but most locations are still at level 6 or 7. (001PS-1)
4. Teamwork is the heart and soul of paradigm shift	• Faculty on board • Stepwise module development • implementation	• All parties involved must be on the same page and maintain an optimistic outlook. Departmental meetings, learning objective formulation, faculty buy-in, navigating administrative hurdles, incremental module creation, and frequent curriculum committee meetings were necessary for a medical school to attain its goal. (002Pvt-2)
5. The challenges	• The infrastructure • Faculty is hard to manage. • students under pressure • Assessment is a big challenge.	• Administrative issues may be due to limited financial resources. • The teachers took everything on themselves, and consequently, they weren't enthusiastic or prepared. (001PS-1) • Some of the most senior members of our faculty were staunchly opposed to implementing this new policy.... (002Pvt-3) • it was challenging to narrow the topic and demand less from the students, such as focusing on only the clinically relevant material. (002PS-2) • The content is so dense that it is a challenge. The pupil cannot possibly acquire everything thoroughly, not even the most fundamental concepts. (003PS-3)
6. Road to Success	• Working with stakeholders • Resource as the fuel • Evaluation	• Much effort was needed to bring them on board and counsel them about this student-led programme, but most individuals agreed to participate. (001Pvt-2) • And at this point, things are operating as intended. However, occasionally, we must confront the issues. (003PS-1)

DISCUSSION

Curricular integration is not a simple hierarchy of topics but rather a complex ecosystem of interdependent parts that must work together systematically to yield valuable outcomes. The people witnessing this transformation in medical education in Pakistan have their perspectives because of their direct participation in the process.[14,15] There are typically two stages to curriculum integration. Both the planning and execution stages must be completed. Curriculum planning serves as the bedrock upon which lessons are built. Regarding the nature of integrating different fields of study, ideas, skills, and potential obstacles, most institutes are more concerned with the planning activities than the underlying principles. It's not easy to design and implement an interdisciplinary programme. Redesigning a course is a recognized phenomenon in academic literature, and Curriculum development can be broken down into three stages, as outlined by Allen and Tanner et al. 2018. Redesigning the curriculum was necessary before implementing the new integrated curriculum. However, the planning stage was characterized by uncertainty, anxiety, and rigidity by the administration and the teaching staff.[15] One possible cause is a general lack of knowledge about recent developments in medical training. The results show that better outcomes will not be attained unless authorities and faculty are made aware of the benefits and scope of the integrated curriculum. This can be a very taxing process for the relevant medical education division. The study's participants were all experts in medical education, but many were wary of the degree of integration that was ultimately achieved.[16] Research suggests it is important to determine the scope and depth of integration before designing an integrated curriculum. The more integrated a society is, the better, so goes the common belief. However, the success of any integrated curriculum initiative rests on the infrastructure, philosophy, and personnel of the institutions involved. The identical thing occurred at all three of the educational establishments. Although the maximum possible level of integration was initially envisioned, throughout the implementation phase, lower levels of integration were necessary for various reasons. Perhaps one could have anticipated these events.[17] Different curricular stages may be located at various rungs along the ladder of integration therefore following it is not like climbing a staircase. The body of medical knowledge has grown so large that it is now challenging to read in a straightforward form. Nothing can be unified under a single or even numerous themes. Since merely combining concepts does not guarantee integration but rather approximation of diverse fields, the literature argues that knowledge from the basic sciences should be actively applied to the clinical side.[16] Harden argues that the lowest level of his ladder can be justified by simply approximating the disciplines together. The degree of integration across the entire curriculum, or even within the same module, cannot be achieved.[18] The change to a new paradigm calls for concerted, well-organized teamwork. Educational changes need multidisciplinary faculty cooperation, strong organizational support and infrastructure. First and foremost, you'll need to assemble a team with the expertise and leadership abilities to steer the organization through the transition.[19,20,21] There is a pressing demand for an interdisciplinary curriculum. The office responsible for medical training should take the initiative. A paradigm change is a significant problem for one division or a small group of people to handle alone. Building the expertise and self-assurance of both teachers and students is crucial. The academic staff's ability to teach, evaluate students, and deal with administrative and management concerns can all be improved by participation in faculty development programmes. The institutes' most valuable resource is their faculty; investing in their professional development is crucial to successfully delivering the curriculum's various components. In addition to meticulous curriculum planning, we recommend forming "curriculum development groups" that incorporate fundamental science faculty representation in establishing integrated clerkships. The institution's resources are analogous to its fuel; thus, they must be improved. The integrated system necessitates ongoing integrated assessments, necessitating those assessments to be connected with instructional strategies.

LIMITATIONS

Some limitations of this study include medical colleges located in one city, which may not represent the entire region's diversity in terms of resources, faculty, and administrative support. Therefore, the findings may not be readily generalizable to all regional medical colleges. Educational systems are dynamic and continuously evolving. The study's findings may become outdated relatively quickly. Despite these limitations, this study can provide valuable insights into the challenges faced in implementing and sustaining integrated curricula in undergraduate medical colleges in Khyber Pakhtunkhwa.

CONCLUSIONS

This study explored and identified the challenges faced by stakeholders in implementing and sustaining an integrated curriculum in undergraduate medical colleges in Peshawar, Khyber Pakhtunkhwa. The

comprehensive investigation revealed many obstacles, opportunities, and strategies for advancing medical education in the region. The findings underscore the complexity of transitioning to and maintaining an integrated curriculum, a transformative medical education approach requiring concerted efforts and collective engagement.

CONFLICT OF INTEREST: None

FUNDING SOURCES: None

REFERENCES

1. Chan KS, Zary N. Applications and challenges of implementing artificial intelligence in medical education: integrative review. JMIR medical education. 2019 Jun 14;5(1):e13930.
2. Khan AW, Sethi A, Wajid G, Yasmeen R. Challenges towards quality assurance of Basic Medical Education in Pakistan. Pakistan journal of medical sciences. 2020 Jan;36(2):4.
3. Sarwar H, Akhtar H, Naeem MM, Khan JA, Waraich K, Shabbir S, Hasan A, Khurshid Z. Self-reported effectiveness of e-Learning classes during COVID-19 pandemic: A nation-wide survey of Pakistani undergraduate dentistry students. European journal of dentistry. 2020 Oct 1;14:S34-43.
4. Naz A, Khan W, Daraz U, Hussain M, Khan T. An analytical study of patients' health problems in public hospitals of Khyber Pakhtunkhwa Pakistan. International Journal of Business and Social Science. 2012 Mar 12;3(5).
5. Murad N, Naz F, Naz S, Rahat T, Naz S, Bashir F. Quality Assurance in Assessment System of Medical Colleges in Pakistan: Faculty Perspective" A Qualitative Study". Future of Medical Education Journal. 2021 Apr 1;11(2).
6. Mahsood N, Khan NA, Ahsan A, Aziz S, Ali I. Medical student's feedback on foundation module of integrated curriculum at public sector medical college: A pilot study. Journal of Medical Sciences. 2019 Jun 26;27(2):90-7.
7. Gaur U, Majumder MA, Sa B, Sarkar S, Williams A, Singh K. Challenges and opportunities of preclinical medical education: COVID-19 crisis and beyond. SN comprehensive clinical medicine. 2020 Nov;2(11):1992-7.
8. Abbas S, Zakar R, Fischer F. Qualitative study of socio-cultural challenges in the nursing profession in Pakistan. BMC nursing. 2020 Dec;19(1):1-7.
9. Taha MH, Abdalla ME, Wadi M, Khalafalla H. Curriculum delivery in Medical Education during an emergency: A guide based on the responses to the COVID-19 pandemic. MedEdPublish. 2020 Apr 16;9(69):69.
10. Khiyali Z, Aliyan F, Kashfi SH, Mansourian M, Jeihooni AK. Educational intervention on breast self-examination behavior in women referred to health centers: Application of Health Belief Model. Asian Pacific journal of cancer prevention: APJCP. 2017;18(10):2833.
11. Hafeez A, Jamil B, Khan AF. Roadblocks to Integration; Faculty's perspective on transition from Traditional to Integrated Medical Curriculum. Pakistan Journal of Medical Sciences. 2021 May;37(3):788.
12. Bland CJ, Starnaman S, Wersal L, Moorhead-Rosenberg L, Zonia S, Henry R. Curricular change in medical schools: how to succeed. Academic medicine. 2000 Jun 1;75(6):575-94.
13. Didion L, Toste JR, Filderman MJ. Teacher professional development and student reading achievement: A meta-analytic review of the effects. Journal of Research on Educational Effectiveness. 2020 Jan 2;13(1):29-66.
14. Vescio V, Ross D, Adams A. A review of research on the impact of professional learning communities on teaching practice and student learning. Teaching and teacher education. 2008 Jan 1;24(1):80-91.
15. Quintero GA, Vergel J, Arredondo M, Ariza MC, Gómez P, Pinzon-Barrios AM. Integrated medical curriculum: advantages and disadvantages. Journal of medical education and curricular development. 2016 Jan;3:JMECD-S18920.
16. Mahfouz J, Barkauskas NJ, Sausner EB, Kornhaber ML. Leadership roles of administration under the Common Core reform. Education and Urban Society. 2018 Dec;50(9):793-817.
17. Hargreaves A, Fullan M. Professional capital: Transformng teaching in every school. Teachers College Press; 2015 Apr 24.
18. Sá MJ, Serpa S. The COVID-19 pandemic as an opportunity to foster the sustainable development of teaching in higher education. Sustainability. 2020 Oct 15;12(20):8525.
19. Lubis MS, Fatmawati E, Pratiwi EY, Sabtohadi J, Damayanto A. Understanding curriculum transformation towards educational innovation in the era of all-digital technology. Nazhruna: Jurnal Pendidikan Islam. 2022 May 18;5(2):526-42.
20. Didion L, Toste JR, Filderman MJ. Teacher professional development and student reading achievement: A meta-analytic review of the effects. Journal of Research on Educational Effectiveness. 2020 Jan 2;13(1):29-66.
21. Watts DS, Richardson JW. Leveraging professional development to build professional capital in international schools in Asia. Journal of Professional Capital and Community. 2020 May 20;5(2):167-82.

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