

Perception of medical students on implementation of Clerkship model in Community medicine

Shamaila Mohsin¹, Ayesha Javed², Memoona Ajmal³, Aayesha Bint Abdur Rauf⁴, Mohammad Awais Sadiq⁵, Ibrahim Aamir⁶

Abstract

Objective: To explore the learning perspective and experience of fourth year medical students in the clerkship programme, and to identify the key challenges faced by them.

Method: The qualitative, phenomenological study was conducted at the Army Medical College, Rawalpindi, Pakistan, from June to September 2024, and comprised fourth year students of either gender who completed their six-week clerkship rotation in Community Medicine within the specified timeframe. Data was collected through in-depth interviews till data saturation was achieved. The interviews were audio-recorded, and transcribed using an artificial intelligence tool. The data was subjected to thematic analysis using the Ritchie and Spencer framework.

Results: Of the 15 students, 8(54%) were males and 7(46%) were females. The overall age ranged 21-22 years, and 10(66.6%) had an urban background. Data analysis led to four key themes: innovative learning, including curriculum synergy, scaffolding in learning, and reflective engagement; conduct of clerkship, including pre-visit briefings, instructor-led visits, and theme-based content; personal skill and growth, including cultural familiarity, confidence building, and communication skill enhancement; and structural limitation, including time management, burden of multitasking, and large batch size. While overall satisfaction with the module was high, students highlighted areas of structural limitations.

Conclusion: There was a high level of overall satisfaction with the clerkship module, but the students highlighting some structural limitations that need to be addressed to optimise the learning experience.

Key Words: Medical education, Medical clerkship, Students' perception, Clinical, Teaching and learning.

(JPMA 76: 365; 2026) DOI: <https://doi.org/10.47391/JPMA.22426>

Introduction

Medical schools around the world are implementing innovative approaches to design their curricula.^{1,2} Their goal is to enhance student education while also producing a skilled healthcare workforce capable of meeting the needs of society.³ The clerkship model is one approach that fosters integration of structured clinical rotations and community interactions to empower medical students with multi-faceted skills and holistic patient care.⁴ The medical clerkship provides an institutional, professional and social framework, which enhances student learning.⁵ Evidence indicates that the core learning processes of observing, rehearsing and contributing to authentic clinical activities takes place within triadic relationships between students, patients and practitioners.⁶

Longitudinal integrated clerkships (LICs) are

.....
^{1,2}Department of Community Medicine and Public Health, Army Medical College, NUMS, Rawalpindi, Pakistan. ³⁻⁶4th Year MBBS Student, Army Medical College, Rawalpindi, Pakistan.

Correspondence: Ayesha Javed. **Email:** drayeshajaved3@gmail.com

ORCID ID: 0009-0003-4884-1204

Submission complete: 16-10-2024 **First Revision received:** 21-02-2025

Acceptance: 18-10-2025

Last Revision received: 17-10-2025

internationally recognised as effective and innovative alternatives to traditional block rotations (TBRs) in undergraduate medical education.⁷ Evidence suggests that medical students from the University of North Carolina School of Medicine exposed to a LIC (Longitudinal integrated clerkships) curriculum in a community setting outperformed their peers who completed a TBR (traditional block rotations) curriculum at the school's academic medical centre.⁸ Contemporary evidence supports that clerkships provide students with clinical skills refreshers, clarification of roles and expectations, demystification of healthcare hierarchy and assessment processes, and student-to-student handovers.⁹

The primary goal of clerkship model in Community Medicine is to bridge the gap between theoretical knowledge and real-world application, fostering a comprehensive understanding of healthcare within the community context.¹⁰ Research on fourth-year medical students at a Lahore-based public-sector medical college in Pakistan demonstrated that a two-week Community Medicine clerkship significantly enhanced analytical, problem-solving skills, and essential competencies.¹¹ Similarly, a study conducted by the Aga Khan University in Pakistan introduced an Emergency Medicine clerkship at

the undergraduate level.¹² This initiative aimed at teaching students to identify life-threatening emergencies, prioritise patient care, and apply resuscitation principles, emphasising the need for a curriculum that adheres to international standards while addressing local needs.¹³ A similar initiative has been undertaken at the Department of Community Medicine at the Army Medical College (AMC) in Rawalpindi, comprising a six-week clerkship module and encompassing community engagement with relevant field visits along with reflection writing, health education and awareness sessions. The programme also covers disease surveillance exercises, participation in national health and immunisation campaigns, observational learning in maternal and child health clinics, small group discussions (SGDs), case-based learning (CBL) and student-led presentations.

While existing literature cited above has predominantly concentrated on clinical clerkships, the current study was planned to explore the lived experiences of students in the clerkship rotation of Community Medicine, focussing on the learning perspective and experience the students, and to identify the key challenges faced by them.

Subjects and Methods

The qualitative, phenomenological study was conducted at AMC, Rawalpindi, Pakistan, from June to September 2024, and comprised fourth year students of either gender who completed their six-week clerkship rotation in Community Medicine within the specified timeframe. Approval for the study was obtained from the institutional ethics review committee (ERC/ID/406). The sample was raised using non-randomised maximum variation purposive sampling technique. Medical students were approached and enrolled through the "opt-in" approach to ensure maximum variation concerning gender, age and socioeconomic background.^{14,15} All the participants provided voluntary informed consent.

The interview guide was developed based on a comprehensive review of international literature¹⁶⁻²⁰ in line with recommendations to ensure that key experiential domains were covered, and to facilitate deeper understanding of students' perspectives on the clerkship model.^{21,22} The interview guide was refined through an interdisciplinary meeting involving three experts from medical education and public health backgrounds,²² and was further validated through a pilot study. Based on the pilot interviews conducted with three participants, the interview guide was revised by adding an introductory theme to improve flow, refining

overlapping questions on clerkship experience, expanding the scope of facilitator and peer roles, and adding evaluative probes for content clarity. These changes enhanced the robustness of data collection by ensuring thematic relevance, reducing redundancy, and facilitating deeper, more structured response.

Face-to-face in-depth interviews were conducted by two researchers on campus in English language with individual participants. An anonymised code was assigned to each transcript to maintain confidentiality, and each interview lasted 20-25 minutes, depending on the level of engagement and the depth of responses provided. Each interview was audio-recorded, transcribed using an artificial intelligence (AI) tool, Otter.ai (Otter.ai, Los Altos, CA, USA; Available at <https://otter.ai/>), which served solely as a transcription tool. The transcriptions were supplemented with field notes. No participants withdrew or discontinued the interview once it began. Data collection was stopped when no new categories emerged from additional interviews, indicating that theoretical saturation had been reached.⁵

Data was subjected to thematic analysis done manually by the research team using the Ritchie and Spencer framework²³ to identify key themes and patterns (Figure 1). No specialized software was used for the analysis. After transcribing all the interviews and becoming familiar with the data by reading the interviews multiple times, the researchers developed an initial thematic framework based on emerging issues. Two researchers independently indexed the transcripts, and any discrepancies were resolved through discussion to ensure consistency. The data was then charted into a framework matrix to allow comparison across participants. Through mapping and interpretation, main themes and corresponding subthemes were identified. To ensure credibility, inter-coder agreement was established, and member-checking was carried out with selected participants to validate the findings.

Results

Of the 15 students, 8(54%) were males and 7(46%) were females. The overall age ranged 21-22 years, and 10(66.6%) had an urban background (Table 1).

Data analysis led to four key themes, with each theme having three subthemes (Figure 2).

Innovative learning

The first theme was innovative learning, and it had the following subthemes:

Curriculum Synergy: A key subtheme that emerged

Table-1: Socio-demographic characteristics of the participants (n=15).

Participant ID	Gender	Age	Back ground	Interview time(min)
R1	Female	21	Urban	25
R2	Female	21	Urban	20
R3	Female	22	Rural	20
R4	Female	21	Urban	22
R5	Female	21	Rural	20
R6	Female	22	Urban	21
R7	Female	21	Urban	24
R8	Male	22	Rural	20
R9	Male	21	Urban	21
R10	Male	21	Rural	25
R11	Male	22	Urban	22
R12	Male	22	Rural	24
R13	Male	21	Urban	20
R14	Male	22	Urban	23
R15	Male	21	Urban	21

from the analysis was the synergy of curriculum with community visits.

"It (Clerkship) helped me connect what we learned in lectures to real-life situations. It was not just theory anymore, I could actually see how public health works in the field. It felt like everything started to make sense

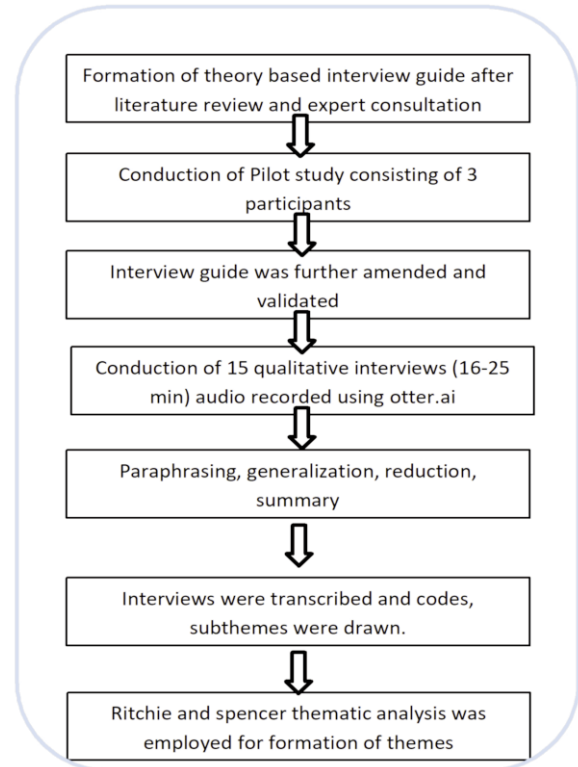


Figure-1: The study flowchart.

together." (R5)

Scaffolding in Learning: Several participants explained that receiving focussed lectures before their visits

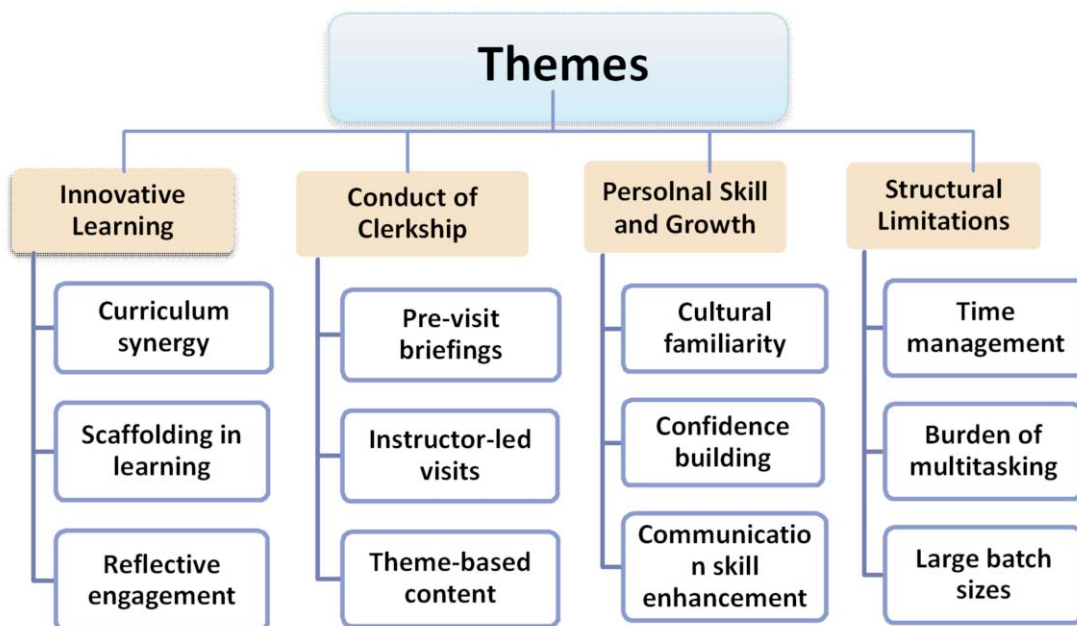


Figure-2: Thematic map illustrating the four main themes and their associated subthemes that were identified through thematic analysis..

enabled them to enter the field with a clear understanding of what to observe and why it mattered. This scaffolding approach made them feel better prepared and more confident.

"We visited the TB control centre at the end of that week, and we were given lectures on communicable diseases, their prevention, their treatment, people affected with global burden of the disease, and the programmes in Pakistan that are addressing that. This background really helped us during the visit as we had a foresight into what will we be seeing and what aspects needed to be focused on." (R5)

Reflective Engagement: In addition to gaining knowledge, the participants reflected on the broader academic and personal growth fostered by the programme. Reflective writing assignments played a key role in encouraging students to think critically about their experiences, identify areas for improvement, and recognise the real-world implications of their actions.

"Basically, after each visit, we were made to write about what we had witnessed. I think reflection is really important . . . it let me think more about the vaccination and its practical problems and how it is done at the primary healthcare level, and also what it (clerkship) taught me..." (R12)

Conduct of Clerkship

The second theme emerging from the participants' narratives was the conduct of the clerkship module, which facilitated deeper learning. The following subthemes collectively shaped their positive experiences:

Pre-visit Briefings: Some students emphasised the value of the detailed briefings conducted before each visit. These sessions, whether led by faculty or external facilitators, helped them grasp the scope of upcoming fieldwork and prompted critical reflection beforehand.

"Before going on activities for the clerkship module, we were delivered lectures on a daily basis and we were given a complete briefing on what will be the proceedings and how we have to deal with that. So this made things easy." (R10)

Instructor-led Visits: The role of facilitators in the field was frequently cited as pivotal. Their presence and mentorship during community engagement activities served as a model for students' professional behaviour, especially when engaging directly with community members. The integration of live demonstrations and hands-on guidance from these instructors reinforced classroom knowledge, making abstract concepts more tangible.

"... we were quite blind when we entered this programme, and going to alien places, but all the demonstrators gave introductory lectures before all the visits. So that helped a lot. They explained all the working, the structure, places going to be visited, and then when we watched it practically and engaged with it; it was very easy to comprehend..." (R13)

Theme-based Content: In addition to structured interactions, the students found the weekly theme-based approach particularly effective. Themes, such as disease surveillance or reproductive health, were introduced through lectures at the start of the week, and reinforced through site visits to relevant institutions, such as family planning centres.

"We had six weeks with six themes. We had two lectures on Monday and Tuesday, and on Wednesday we went on a visit related to that theme or that lecture . . . like we had visits to the family planning centre and we did exercise on the Mec wheel. We were given assignments, and we used the Mec wheel to find the best contraceptive for a given case." (R-6)

Personal Skill and Growth

The third theme emerging from student reflections was the personal skill and growth that fostered both professional confidence and deeper cultural empathy. This personal growth was reflected in the following subthemes:

Cultural Familiarity: Students often spoke about how their interactions with diverse populations increased their awareness of cultural nuances and community health dynamics. Engaging with people in local contexts, sometimes even adopting their dialect, helped reduce barriers and fostered mutual respect.

"I feel like before this we were more focussed on just academic stuff; we were not made familiar with the community. But through this (model), we were able to engage really with the community. And we were able to connect with the community and with the people and a lot more." (R1)

Confidence-building: Alongside cultural awareness, the clerkship also offered various structured opportunities to enhance interpersonal skills. Activities like role plays, group discussions, and task-based workshops were frequently highlighted as moments of self-discovery and confidence-building.

"Regarding role plays, I would say that helps us a lot in making us confident and enhancing our creativity skills as we did the live demonstrations . . ." (R15)

Communication Skill Enhancement: Communication skills, such as verbal and non-verbal, were seen as a by-product of repeated interactions, both within peer groups and with patients during field visits. Many students described how listening to community members' concerns in basic health units (BHUs) or during health outreach programmes shaped their understanding of patient perspectives, reinforcing the human side of medicine.

"I would say that the interactions were beneficial always because they helped us in understanding how to communicate with the community, how to engage the community, how to build a network, and how to make sure that our point is being

heard in the community, and it is being acted upon" (R11)

Structural Limitations

The fourth theme centred on several structural limitations that affected the students' engagement and performance. The following subthemes were identified:

Time Management: Many participants reported that balancing the demands of the clerkship with other academic responsibilities was difficult. Weekly field visits, post-visit reflective writing, and regular presentations required a substantial time commitment, leaving the students struggling to maintain focus.

"The major challenge that I faced during our clerkship model was managing the schedule. We had a field visit every week, and we had to do reflective writing after the visit, which took hours, and we also had to prepare slides for presentation, each and everything was time consuming..." (R6)

Burden of Multitasking: These challenges were compounded by the pressure of multitasking. Students were often expected to prepare in advance for the visits, participate in fieldwork, complete post-visit tasks, and keep pace with other courses.

"I kind of felt overwhelmed because of the various tasks that were given as... we were doing reflective writing, making presentations, preparing for visits and preparing for any activity to be conducted, and it was kind of difficult for me to manage it with the rest of the subjects." (R9)

Large Batch Size: Additionally, the large batch size was frequently cited as a limiting factor for effective learning. With more than 40-50 students in a single group, personalised instruction and meaningful interaction were often compromised.

"The challenges in the clerkship model were such that it was a really huge number of people that we had in our batch; we were almost 50. So, it was really difficult to learn in such an environment." (R8)

Discussion

To our knowledge, the current study is the first to qualitatively explore students' perspectives and experiences during their Community Medicine clerkship.

In the light of the findings, the clerkship module promotes strong curriculum synergy by integrating theoretical knowledge with experiential learning components, such as health centre visits. This is consistent with the experiential learning theory²⁴, which emphasises learning through reflection on doing, and supports the idea that authentic exposure to real-world settings reinforces classroom concepts. The current results align with findings from South Africa where first-year medical students reported that visits to community clinics helped them recognise the practical value of their

theoretical knowledge, thus deepening their understanding of the subject matter.²⁵ Scaffolding through preparatory lectures enabled the current students to approach complex fieldwork with greater confidence and clarity, supporting their progression from guided learning to independent observation, which was consistent with Masava et al.²⁶ In concordance with the current findings, reflective writing further reinforced this learning, promoting critical thinking, self-awareness, and professional growth.²⁷ The current findings are consistent with the perspective of transformative learning theory,²⁸ suggesting that reflection stimulate personal and professional transformation by challenging existing assumptions. Unlike the current students who received clear reflective guidance, the public health clinical rotation students at a medical school in Puskesmas-based programme²⁷ faced challenges due to the lack of a structured reporting format. This contrast highlights the importance of structured reflective activities and clear expectations in maximising educational benefits.

A consistent finding in the current study was students' appreciation for the structured format of the clerkship, particularly the pre-visit briefings, which provided thematic orientation and clarified expectations, thereby reducing uncertainty and enhancing learning readiness. This aligns with earlier findings.²⁹ Contrary to these findings, a study in Indonesia¹⁷ found that the students expressed dissatisfaction with briefings due to inconsistencies between the provided guidance and official guidebooks. Such divergence underscores the importance of clarity, alignment and contextual relevance in instructional supports, which are part of the sociocultural theory³⁰ that stresses the role of guided interaction in bridging learners' current and potential capabilities. According to this theory, meaningful social interactions and structured support serve as mediators of cognitive development.³⁰

Moreover, the current findings acknowledge the idea that organisational framework not only created a sense of predictability and purpose, but also enhanced students' cognitive engagement, while instructor-led field visits played a critical role by offering real-time contextualisation, enabling the students to participate more confidently and actively.³¹ However, as Yastuti et al. in 2023²⁹ highlighted, structural clarity alone is insufficient; without effective communication and coordination, even well-designed programmes can face field-level challenges that undermine student satisfaction.

The development of personal and interpersonal competencies among students emerged as a significant

outcome of the clerkship module in the current study. These findings resonate with existing literature, emphasising the role of experiential and community-based learning in cultivating humanistic qualities in medical students.³² A study in 2023²⁵ argued that direct engagement with diverse communities fosters not only clinical acumen, but also empathy and ethical sensitivity, especially when students are encouraged to reflect on their encounters. From a theoretical standpoint, this aligns with the experiential learning theory²⁴, which posits that concrete experience followed by reflective observation is essential for deep learning and transformation. Additionally, the growth in empathy and adaptability observed in the current study supports the theory of transformative learning²⁸, wherein learners critically examine assumptions and reshape their understanding through experience.

The practical challenges faced by students during the clerkship, particularly in managing time and multitasking within an already demanding academic schedule, align with prior literature that characterises clerkships as intensive transitional phases that place significant cognitive and logistical demands on students.³³ The experiential learning theory²⁴ reinforces the idea that while experience-based learning is valuable, it must be balanced with appropriate structuring and timing to prevent cognitive overload. Moreover, the issue of large batch sizes was identified as a barrier to individual learning and engagement in the current study. Similarly, in a South African context, students reported adjustment difficulties due to language barriers and cultural unfamiliarity in community-based placements.³⁴ Across diverse contexts, the current findings reinforce that the success of clerkship models depends as much on manageable implementation and student readiness as on well-designed content delivery.

The current finding can be triangulated with relevant policy and curricular frameworks, such as the Pakistan Medical and Dental Council (PMDC) outlines core graduate competencies, including communication, community orientation and professionalism³⁵, and the national medical school curriculum promotes integrated, reflective and community-based learning³⁶. Mapping clerkship outcomes, like cultural competency, communication and reflective skills, against these benchmarks reinforces the clerkship module's consistency with national medical education objectives, and enhances the credibility of the current findings.

The current study's strength lies in its rigorous qualitative methodology, using in-depth interviews to capture students' perceptions of their first Community Medicine

clerkship, an underexplored area in medical education.

However, the current study has several limitations. The study was conducted in a single institutional setting with a homogenous sample, which may restrict the generalisability of the findings. Additionally, the exclusive focus on students' perspectives, without incorporating faculty viewpoints, limits the comprehensiveness of the study. Furthermore, since data collection was carried out from the same institution, there is a possibility that this insider position may have influenced participant responses and the interpretation of findings. To address this, a standardized interview guide was used, neutrality was maintained during interviews, and regular team reflections were conducted to minimise bias and enhance rigour.

Conclusion

Overall, the students expressed a high level of satisfaction with the clerkship module, appreciating its learning components along with highlighting the structural limitations. These findings underscore the need to address logistical constraints to optimise the learning experience and ensure the effective implementation of the clerkship model. Addressing these targeted concerns can further strengthen the effectiveness of the clerkship and better align it with students' learning needs.

Acknowledgement: We are grateful to the National University of Medical Sciences, which gave ethical clearance to the research, and to all the study participants for their cooperation.

Disclaimer: None.

Conflict of Interest: None.

Source of Funding: None.

References

1. Weisz G, Nannestad B. The World Health Organization and the global standardization of medical training, a history. *Glob Health* 2021;17:96. doi: 10.1186/s12992-021-00733-0.
2. Arias J, Scott KW, Zaldivar JR, Trumbull DA, Sharma B, Allen K, et al. Innovation-oriented medical school curricula: review of the literature. *Cureus* 2021;13:e18498. doi: 10.7759/cureus.18498.
3. Gupta S, Howden S. Insights into post-longitudinal integrated clerkship experience: medical students' perceptions of transition and learning. *Educ Prim Care* 2021;32:369–74. doi: 10.1080/14739879.2020.1865204.
4. Kang YJ, Lin Y, Rho J, Ihm J, Kim DH. The hidden hurdles of clinical clerkship: unraveling professionalism dilemmas among South Korean medical students. *BMC Med Educ* 2024;24:5115-9. doi: 10.1186/s12909-024-05115-9.
5. Mayring P. Qualitative Inhaltsanalyse. In: Flick U, eds. *Qualitative Forschung: Ein Handbuch*, 11th ed. Reinbek, Germany: Rowohlt Taschenbuch Verlag; 2015.
6. Gottschalk M, Albert C, Werwick K, Spura A, Braun-Dullaeus RC,

- Stieger P. Students' perception and learning experience in the first medical clerkship. *BMC Med Educ* 2022;22:694. doi: 10.1186/s12909-022-03754-4.
7. Gilligan C, Powell M, Lynagh MC, Ward BM, Lonsdale C, Harvey P, et al. Interventions for improving medical students' interpersonal communication in medical consultations. *Cochrane Database Syst Rev* 2021;CD012418. doi: 10.1002/14651858.CD012418.pub2.
 8. Richards E, Elliott L, Jackson B, Panesar A. Longitudinal integrated clerkship evaluations in UK medical schools: a narrative literature review. *Educ Prim Care* 2022;33:325–32. doi: 10.1080/14739879.2021.2021809.
 9. Latessa R, Beatty N, Royal K, Colvin G, Pathman DE, Heck J. Academic outcomes of a community-based longitudinal integrated clerkships program. *Med Teach* 2015;37:654–8. doi: 10.3109/0142159X.2015.1009020.
 10. Ackah RL, Wang TN, Oppenheimer-Velez M, Harzman A, Cochran A, Traugott A, et al. A needs assessment for clerkship students' learning and practice of health systems science. *Glob Surg Educ J Assoc Surg Educ* 2024;1:327–35. doi: 10.1007/s44186-024-00327-5.
 11. Gasim MS, Ibrahim MH, Abushama WA, Hamed IM, Ali IA. Medical students' perceptions towards implementing case-based learning in the clinical teaching and clerkship training. *BMC Med Educ* 2024;24:5183. doi: 10.1186/s12909-024-05183-x.
 12. Humayun A, Khan HA, Anwar MI, Omair A, Mahmud TH, Ehsan N, Sheikh NH. Impact of structured training on medical students' performance in objectively structured performance evaluation in community medicine clerkship. *J Contemp Med Edu* 2014;2:27–31. doi: 10.5455/jcme.20140625073700.
 13. Lin JY, Ahmed S, Brander C. Breadth of emergency medical training in Pakistan. *Prehosp Disaster Med* 2013;28:67–72. doi: 10.1017/S1049023X12001859.
 14. Guest G, Bunce A, Johnson L. How many interviews are enough? *Field Methods* 2006;18:59–82. doi: 10.1177/1525822X05279903.
 15. Vasileiou K, Barnett J, Thorpe S, Young T. Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over 15 years. *BMC Med Res Methodol* 2018;18:148. doi: 10.1186/s12874-018-0594-7.
 16. Kato D, Wakabayashi H, Takamura A, Takemura YC. Identifying the learning objectives of clinical clerkship in community health in Japan: focus group. *J Gen Fam Med* 2020;21:223–228. doi: 10.1002/jgf2.289.
 17. Tyastuti D, Faisal HP, Ariany D, Tjakradidjaja FA. Community Medicine Clerkship Implementation in a COVID-19 Pandemic Era: students' perceptions. *Malays J Med Health Sci* 2022;18:10–7. doi: 10.18552/ijpbhlsc.v11i1.760.
 18. Poncelet A, Bokser S, Calton B, Hauer KE, Kirsch H, Jones T, et al. Development of a longitudinal integrated clerkship at an academic medical center. *Med Educ Online* 2011;16:5939. doi: 10.3402/meo.v16i0.5939.
 19. Chou CL, Teherani A, Masters DE, Vener M, Wamsley M, Poncelet A. Workplace learning through peer groups in medical school clerkships. *Med Educ Online* 2014;19:25809. doi: 10.3402/meo.v19.25809.
 20. Steven K, Wenger E, Boshuizen H, Scherpbier A, Dornan T. How clerkship students learn from real patients in practice settings. *Acad Med* 2014;89:469–76. doi: 10.1097/ACM.000000000000129.
 21. Reimann S. Die medizinische Sozialisation. Wiesbaden, Germany: Springer Fachmedien; 2013.
 22. Steinke I. Gütekriterien qualitativer Forschung. In: Flick U, eds. *Qualitative Forschung: Ein Handbuch*, 11th ed. Reinbek, Germany: Rowohlt Taschenbuch Verlag; 2015.
 23. Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In: Bryman A, Burgess RG, eds. *Analyzing Qualitative Data*. London, UK: Routledge, 1994; pp 173–94.
 24. Wijnen-Meijer M, Brandhuber T, Schneider A, Berberat PO. Implementing Kolb's experiential learning cycle. *J Med Educ Curric Dev* 2022;9:23821205221091511. doi: 10.1177/23821205221091511.
 25. Mabuza LH, Moshabela M. What do medical students and preceptors understand by primary health care in South Africa? *BMC Med Educ* 2023;23:4751. doi: 10.1186/s12909-023-04751-x.
 26. Masava B, Nyoni CN, Botma Y. Scaffolding in health sciences education programmes: an integrative review. *Med Sci Educ* 2023;33:463–72. doi: 10.1007/s40670-022-01691-x.
 27. Ghazali PL, Soleman SR. Evaluation of the public health clinical rotation in medical school: a qualitative case study. *Korean J Med Educ* 2023;35:252–60. doi: 10.3946/kjme.2023.252.
 28. Mezirow J. Transformative learning: theory to practice. *New Dir Adult Contin Educ* 1997;1997:15–21.
 29. Tyastuti D, Risahmawati R, Fadhillah M, Ekayanti F, Kunarisasi S, Azwar A. Community medicine clerkship amidst the COVID-19 pandemic: redesigning, implementation, and evaluation. *Int J Pract Based Learn Health Soc Care* 2023;11:760. doi: 10.18552/ijpbhlsc.v11i1.760.
 30. Vygotsky LS. *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press; 1978.
 31. Kamal Z, Aziz N, Afzal HS, Jamil AZ, Waseem M, Iqbal MJ. OSPE: perception of faculty and students at a public sector medical college in Pakistan. *Prof Med J* 2021;28:6040. doi: 10.29309/TPMJ/2021.28.10.6040.
 32. Adefuye A, Benedict M, Bezuidenhout J, Busari JO. Students' perspectives of a community-based medical education programme in a rural district hospital. *J Med Educ Curric Dev* 2019;6:2382120519886849. doi: 10.1177/2382120519886849.
 33. Sellberg M, Palmgren PJ, Möller R. Balancing acting and adapting: experiences of early clinical placement. *BMC Med Educ* 2022;22:3714. doi: 10.1186/s12909-022-03714-y.
 34. Pratiwi W, Octavira T, Permana OR. Self-perceived competence and learning barriers in family & community medicine clerkship during COVID-19 pandemic. In: *Int Conf Med Educ* 2021;2021:05. doi: 10.2991/assehr.k.210930.05.
 35. Pakistan Medical and Dental Council (PMDC). Curriculum of MBBS. Islamabad, Pakistan: PMDC; 2021. [Online] 2021 [Cited 2025 June 11]. Available from URL: <https://pmdc.pk/Curriculum>
 36. Higher Education Commission (HEC), Pakistan Medical and Dental Council (PMDC). National Curriculum for MBBS (Revised 2022). Islamabad, Pakistan: HEC & PMDC; 2022. [Online] 2022 [Cited 2025

AUTHOR'S CONTRIBUTION:

SM: Concept, design, drafting, revision, final approval and agreement to be accountable for all aspects of the work.

AJ: Concept, design, drafting, revision and agreement to be accountable for all aspects of the work.

MA & ABAR: Research idea, literature review, introduction, interview guide formation, data collection, charting, compile

results, discussion, final review and agreement to be accountable for all aspects of the work.

MAS & IA: Research idea, literature review, interview guide formation, data collection, charting, compile results, discussion, final review and agreement to be accountable for all aspects of the work.