https://doi.org/10.35845/kmuj.2025.24090

ORIGINAL ARTICLE

Exploring the perceptions and factors affecting social accountability in dental education: a qualitative study from Abbottabad, Pakistan

Farida Naz Aamir [1,2], Brekhna Jamil [2], Nowshad Asim [2], Nadia Munir [2]

1: Department of Dentistry, Dental Section, Ayub Medical College, Abbottabad, Pakistan

2: Institute of Health Professions Education and Research, Khyber Medical University, Peshawar, Pakistan

Email: brekhnajamil@kmu.edu.pk

Contact #: +92-320-9591000

Date Submitted: July 07, 2025

Date Revised: November 15, 2025

Date Accepted: November 16, 2025

ABSTRACT

Objective: To explore perceptions and factors influencing social accountability (SA) among key stakeholders in dental institutions in Abbottabad, Pakistan.

Methods: This qualitative exploratory study was conducted at three dental colleges in Abbottabad after obtaining ethical approvals. Faculty members, administrators, and final-year Bachelor of Dental Surgery (BDS) students with relevant experience were recruited through purposive sampling. Four focus group discussions (FGDs), each comprising six participants, were conducted using a semi-structured guide to explore perceptions, barriers, curricular integration, institutional support, and perceived impact of SA. FGDs were audio-recorded, transcribed verbatim, anonymized, and analysed using inductive thematic analysis. Data collection continued until thematic saturation was achieved, and rigor was ensured through reflexive journaling, peer debriefing, and participant validation.

Results: Twenty-four participants (62.5% female) took part, representing faculty, students, and administrators. Six major themes with twenty-one subthemes emerged. Emerging themes included understanding & importance of social accountability, institutional & systemic barriers, integration into the dental curriculum, perceived impact of SA, institutional support & resources, and suggestions for improvement. Participants acknowledged the importance of SA but highlighted limited formal training, inadequate funding, lack of institutional structures, and insufficient faculty development as major barriers. Community-based education and early curricular integration were strongly recommended. SA activities were perceived to enhance students' empathy, leadership, and problem-solving skills.

Conclusion: Stakeholders recognize SA as an essential component of dental education; however, its implementation is constrained by systemic and institutional limitations. Structured curricular integration, faculty development, and strengthened institutional support are required to embed SA effectively within dental education in Pakistan.

Keywords: Health Care Reform (MeSH); Curriculum (MeSH); Curriculum reforms (Non-MeSH); Community Participation (MeSH); Education, Dental (MeSH); Decision Making, Organizational (MeSH); Health Services Administration (MeSH); Institutional support (Non-MeSH); Policy Making (MeSH); Social Accountability (MeSH); Social Responsibility (MeSH).

THIS ARTICLE MAY BE CITED AS: Aamir FN, Jamil B, Asim N, Munir N. Exploring the perceptions and factors affecting social accountability in dental education: a qualitative study from Abbottabad, Pakistan Khyber Med Univ J 2025;17(4):401-7. https://doi.org/10.35845/kmuj.2025.24090

INTRODUCTION

Global reforms in medical and dental education increasingly emphasize social accountability (SA), defined as the obligation of medical institutions to align their educational, research, and service activities with the health needs of the communities they serve.[1] This concept, strongly advocated by the World Health Organization, emphasize the responsibility of medical and dental schools to direct their resources toward addressing local health challenges.[1,2] However, in low- and middle-income countries, the operationalization of SA remains challenging due to constrained resources, outdated policies, and resistance to institutional change.[3,4]

Pakistan, particularly the Hazara region of Khyber Pakhtunkhwa, offers a distinct context for examining SA in dental education, given its socioeconomic constraints, disease burden, and disparities in healthcare access.[5] Despite growing global attention to socially accountable dental education, empirical evidence on how SA is perceived and implemented within dental institutions in Abbottabad remains limited[6] This gap is critical, as insufficient integration of SA may hinder the preparation of dental graduates to respond effectively to community health needs.

Pakistan, particularly the Hazara region of Khyber Pakhtunkhwa, offers a distinct context for exploring SA in medical education. The region faces significant socio-economic and health challenges, including a high burden of communicable and non-communicable diseases, as well as disparities in healthcare access.[5] Despite the global recognition of the importance of socially accountable dental education, empirical evidence on how SA is perceived and implemented within dental institutions in Abbottabad remains limited.[6] This gap is critical, as insufficient integration of SA may hinder the preparation of dental graduates to respond effectively to community health needs.

Although incorporation of SA into dental curricula has been widely proposed, implementation is often impeded by systemic and institutional barriers. These include lack of faculty training, inadequate curriculum structures, insufficient funding, and limited community engagement.[7,8] Against this backdrop, the present study aimed to explore the perceptions of stakeholders in dental institutes in Abbottabad regarding social accountability and identify the factors

that influence its integration into dental education. By doing so, the study aims to contribute valuable insights that can guide the development of context-specific educational reforms in regions with similar socio-economic and healthcare challenges.

METHODS

This qualitative exploratory study aimed to examine perceptions and factors influencing social accountability in dental education in Abbottabad.

Data collection commenced following approval from the Khyber Medical University Advanced Studies and Research Board (KMU-AS&RB) vide letter #: DIR/KMU-AS&RB/EP/003044 dated: 03-02-2025 and was completed over six months (December 2024 to May 2025). Focus group discussions were conducted to capture diverse perspectives from faculty members, administrators, and students across dental institutions in Abbottabad, Pakistan.

Ethical Clearance certificate was granted by the Institute of Health Professions Education and Research Ethics Board, Khyber Medical University, Peshawar, Pakistan vide reference #: I-12/IHPER/MHPE/KMU/25-8 dated: 09-04-2025. Ethical approval was also obtained from the Institutional Medical & Ethics Review Committee of Ayub Medical Teaching Institution Abbottabad vide No: Approval Code/Ref No.RC-EA-2025/010 dated 01-01-2025. Informed verbal consent was obtained from all participants, who were assured that participation was voluntary and their data would remain confidential.

The study was conducted at the three dental colleges of Abbottabad. Participants were selected through purposive sampling from the faculty, administration, and students to provide a range of perspectives on SA. Participants from faculty and administration who were actively involved in the academic activities for at least one academic year were included in the study, ensuring they had sufficient experience to provide informed views. Students of final-year BDS with ≥ 3 years of academic and clinical exposure and active involvement in social activities were included. Faculty and administration members with less than one year of direct teaching / administration experience. A total of four FGDs were conducted, each with 6 participants. In the fourth FGD, no new codes or themes / subthemes emerged, thereby it was declared by the research team and supervisor that data saturation had been achieved.[9]

Data were collected through FGDs, moderated by a trained facilitator to encourage equal participation. A semi-structured discussion guide with open-ended questions and prompts was used that covered key themes such as the understanding and importance of SA, barriers to its implementation, and suggestions for curriculum integration. The FGD guide was self-developed and piloted with an FGD of 3 participants. Transcript of the pilot FGD and their participants were not made part of the final four FGDs. The FGDs lasted between 45 and 60 minutes and were audio-recorded with participant consent. Notes were also taken to capture non-verbal cues and group dynamics. The participants relevant socio-demographic data was collected on a questionnaire. Identifiers were not used for the participants. Following the FGDs, the audio recordings were transcribed verbatim to ensure accuracy in capturing the responses of all participants. The FGD recordings and their transcripts were made anonymous and kept safe to maintain patient confidentiality. The transcripts were initially reviewed to remove any information that could lead to the identification of the participants. Data were stored on a password-protected device accessible only to the research team. No incentives were provided to participants. Thematic analysis was used to analyse the data, a widely recognized qualitative method for identifying patterns or themes within qualitative data.[10]

The thematic analysis process began with familiarization with the data by reading and rereading the transcripts. Initial coding was done inductively, where the researcher generated codes directly from the data without using predefined categories. This allowed for a comprehensive understanding of the data that reflected the participants' interpretations and experiences. A code book was developed iteratively at this stage. Relevant codes to the objectives were separately categorized and organized into themes and subthemes. Codes were then reviewed for fitness within the theme or subtheme. The extracted themes and subthemes were compared across FGDs for internal coherence. The themes, subthemes, and codes were also validated by the study participants to ensure their thoughts were accurately represented. Then, appropriate titles were made for each theme and subtheme, and relevant quotes were assigned to each subtheme. The FGDs were moderated by a trained qualitative researcher with no supervisory or evaluative relationship with the participants. The research team maintained reflexive journals throughout the study to identify and minimize personal biases. Regular peer debriefing sessions were held to enhance credibility and ensure reflexive awareness during data collection and analysis.

From the relevant socio-demographic data of the participants, participant information was calculated, where frequencies and percentages were calculated for categorical variables such as gender, institution category, and academic role. For the continuous parameters such as experience and age, mean and standard deviation (SD) were calculated.

RESULTS

Focus group participants' information: Table I outlines the gender composition of the focus group participants, highlighting that 15 (62.5%) were female and 10 (41.7%) of them were from Ayub College of Dentistry. Faculty 10 (41.7%) and Students 11 (45.8%), both are almost equally represented, highlighting a balanced view from active academics and learners. The average age is 34.58±9.85 years, whereas the average experience is 12.38±3.57 years. This demographic breakdown ensured a balanced representation of perspectives on SA across the different roles in dental education.

Thematic analysis: Our analysis identified six key themes and twenty-

Table I: Gender Distribution of Focus Group Participants (n=24)

Participant characteristics		Frequency (Percentage)
Gender	Female	15 (62.5)
	Male	9 (37.5)
Institution	Dental College of AIMI	9 (37.5)
	Ayub College of Dentistry	10 (41.7)
	FMDC	5 (20.8)
Position	Administrator	3 (12.5)
	Faculty	10 (41.7)
	Student	11 (45.8)
Continuous parameters		
-	Mean	SD
Mean Age in Years (n=24)	34.58	9.85
Experience in Years (n=13)	12.38	3.57

AIMI: Abbottabad International Medical Institute; FMDC: Frontier Medical and Dental College

one subthemes related to the perceptions and factors affecting SA in dental education from the FGDs. The main themes and Subthemes that emerged are shown in Table II. These include: (1) Understanding and Importance of SA, (2) Challenges to Implementation, (3) Integration into Dental Curriculum, (4) Perceived Impact of SA, (5) Institutional Support and Resources, and (6) Suggestions for Improvement.

Understanding and importance of social accountability: All participants acknowledged the significance of SA in dental education. Stakeholders recognized the responsibility of dental institutions to address community health needs through education, research, and service activities. Participants generally define it as a commitment by dental schools to orient their educational activities toward meeting local health priorities. However, the majority pointed out that formal training on SA was limited. Several participants, both faculty and students, pointed out that the concept was theoretically introduced in community dentistry lectures.

Institutional and systemic barriers to implementation: Participants identified several barriers to the effective implementation of SA in dental schools. The lack of adequate funding for community outreach programs, outdated policies, and insufficient faculty training were the most frequently mentioned obstacles. Many participants expressed frustration with the lack of a dedicated office or staff for SA initiatives, which contributed to a lack of coordination and support for these programs.

Integration into the dental curriculum: Social Accountability should be integrated into the dental curriculum, particularly from the early years of study. Both students and faculty emphasized the importance of incorporating SA principles into the curriculum in a structured and practical manner. Many participants advocated for the inclusion of community-based learning experiences, such as medical and dental camps and outreach programs, to provide students with real-world exposure to SA.

Perceived impact of social accountability: Participants highlighted the positive impact that SA initiatives had on students' development of empathy, leadership skills, and problem-solving abilities. Exposure to community health challenges through dental camps and outreach programs was particularly valued for fostering a sense of social responsibility among students. Both students and faculty believed that these experiences helped students better understand the broader social determinants of health and their role in addressing these issues.

Institutional support and resources: A recurring theme was the need for greater institutional support to implement social accountability initiatives effectively. Participants stressed the importance of having adequate resources, including financial support and administrative backing, to ensure the sustainability of these programs. Students and faculty alike noted that most of the community outreach activities were either self-funded or supported by external organizations, with limited institutional involvement.

Suggestions for improvement: Based on the challenges identified, participants provided several suggestions for improving the implementation of SA in dental education. These recommendations included curriculum reforms to integrate SA from the start of dental education, faculty development programs to equip educators with the skills to teach SA, and stronger community engagement through partnerships with local health organizations and government bodies.

Each of the above-mentioned themes, with its respective subthemes, supported by representative quotes from the participants are given in Table II.

DISCUSSION

This study aimed to explore the perceptions and factors influencing the implementation of SA in dental education in Abbottabad, Pakistan. The findings reveal a complex interplay between stakeholders' understanding of SA, the challenges to its integration into dental curricula, and the need for institutional and curricular reforms. The study found that the participants, including faculty, administrators, and students, broadly recognized the importance of SA in dental education. This is consistent with the global discourse on SA, where both medical and dental schools are increasingly expected to align their educational, research, and service activities with the health needs of the communities they serve.[11,12] Stakeholders acknowledged the need for dental institutions to prepare students who are not only clinically competent but also sensitive to

Table II: Table of thematic analyses

Theme	Subthemes	Participants quotations
Theme 1 Understanding and Importance of Social Accountability	• Commitment to Community Health Needs • Obligation of Medical and Dental institutions • Lack of Formal Training	"*SA is about directing the educational activities of dental schools toward addressing the community's health needs*" (***Student P7, Female***) *"Social accountability is the commitment of medical schools to address the priority health needs of the community through education, research, and service."* (***Student P18-,Male***) *"Medical schools should orient their activities toward societal health outcomes."* (***Faculty P3,Female***) "*It is our responsibility to make sure that students are not just clinically competent but also aware of the health issues affecting society.*" *(Faculty P3, Female). There is limited formal training, with SA awareness primarily arising from community dentistry lectures and outreach programs.* (***Faculty P4,Female***).
Theme 2 Institutional and Systemic Barriers to Implementation	• Lack of funding • Outdated policies • Insufficient faculty training • Lack of staff for Social Accountability Initiatives	"*There is no dedicated office or staff for SA initiatives.*" (***Student P14, Female***) *"Funding for these programs is always theoretical; the practical implementation is not possible.*" (***Faculty P5, Male***)
Theme 3 Integration into Dental Curriculum	• Need for Community-Based Education • Lack of Curriculum Emphasis on Social Accountability • Desire for early integration of Social Accountability	"*SA should be part of the curriculum from the beginning, not just theoretical but with practical assignments.*" (***Student P7, Female***) *"Community-based programs and medical camps provide practical exposure to students, helping them understand the real health needs of the community."* (***Faculty P5,Female***) "*Ethics and community engagement should be part of the foundational courses, not just added as a separate topic.*" (***Faculty P4, Male***)
Theme 4 Perceived Impact of Social Accountability	• Empathy development • Leadership skills • Problem-solving skills • Community engagement through outreach	"*Social accountability fosters leadership and problem-solving skills that are crucial for future healthcare professionals.*" (***Faculty P3, Female***) *"SA builds empathy, leadership, and problem-solving skills"* (***Student P10, Female***) "*Medical camps not only improve access to care in underserved areas but also build empathy among students.*" (***Student P9, Male***)
Theme 5 Institutional Support and Resources	• Need for financial support • Lack of institutional initiatives for SA • Importance of administrative backing	*"There's no dedicated office or staff for SA initiatives."* (***Student P14, Female***) *"Funding for outreach programs is theoretical; practical implementation is impossible."* (***Student P24,Male***) *"SA is not integrated into clinical modules. We teach diseases, not ethics."* (***Faculty P7,Female***) *"The institution should provide more backing for community outreach programs. Most of these are either self-funded or sponsored by NGOs/ drug companies.*" (***Student P7, Female***) "*We need institutional support, not just in words but in actions-funding, resources, and infrastructure are essential.*" (***Administrator P18, Male***)
Theme 6 Suggestions for Improvement	• Curriculum updates • Increased funding • Faculty training programs • Partnerships with community organizations	"*We need to update the curriculum to include more community-based learning, and practical exposure to SA should start from day one.*" (***Student P7, Female***) "*Collaboration with NGOs and government health departments can help bridge the resource gap and provide practical exposure for students.*" (***Administrator P16, Female***)

the societal health challenges that affect their communities. This is in line with the definition of SA, which emphasizes the responsibility of dental schools to orient their activities toward improving public health and addressing community

health disparities.[13,14]

The study also identified several barriers to the effective implementation of social accountability in dental schools in Abbottabad. Participants highlighted insufficient funding, outdated policies, lack of faculty training, and resistance to change as key challenges. These barriers mirror those reported globally, particularly in resource-limited settings, where limited financial support restricts community outreach and research activities. [12,15] Similar challenges have been documented in other regions, including Canada, where financial constraints and institutional resistance have hindered the integration of social accountability into dental and medical curricula.[13] Additionally, the absence of updated policies and a clear institutional framework for implementing social accountability emerged as major obstacles, reflecting a broader gap between recognition of its importance and its formal integration into dental education.[16]

Another major barrier identified was the lack of formal training for faculty members in SA. Participants emphasized that, while some exposure to the concept of SA occurred through community outreach programs and community dentistry lectures, there was no comprehensive, structured training to equip faculty members with the necessary skills to integrate SA principles into their teaching. This gap in faculty training is echoed in global literature, where many medical and dental schools have struggled to provide adequate professional development opportunities for educators to incorporate SA into their curricula.[17,18] The lack of dedicated faculty development programs for SA may result in the superficial treatment of these principles in dental education, undermining their effective integration into the curriculum.

Despite these challenges, participants emphasized the positive impact of social accountability on dental education. Faculty and students reported that community-based activities, such as dental camps and outreach programs, foster empathy, leadership, and problem-solving skills, competencies essential for future healthcare professionals in resource-limited settings. Similar benefits have been reported in the literature, where community-based learning enhances understanding of social determinants of health, communication skills, and willingness to serve underserved populations.[18,19] Integrating social accountability into dental curricula has also been associated with improved health equity by promoting a holistic appreciation of social, economic, and cultural influences on health.[11] Overall, these findings suggest that embedding social accountability principles can enrich dental education while better preparing graduates to address community health needs.

Participants strongly supported the systematic integration of social accountability into the dental curriculum, emphasizing early exposure through dedicated modules, practical assignments, and community-based learning. Such curriculum reform aligns with global trends in dental education that recognize experiential and service-learning as key strategies for developing socially responsible healthcare professionals.[11,20] Integrating social accountability from the first year of training may help embed these principles within students' professional identities, increasing the likelihood of their sustained application in future practice.

The institutional support for implementing SA also emerged as a critical theme. Participants noted the importance of administrative backing, financial support, and clear institutional policies to sustain SA initiatives. These findings underscore the need for a coordinated approach to implementing SA, where institutional leadership plays a pivotal role in creating an environment that supports SA through adequate resources and policies. Institutional commitment to SA has been identified as a key factor in the success of these initiatives in other countries, where dental schools with strong leadership in SA have been able to effectively integrate these principles into their operations.[13,16]

Based on these findings, several recommendations are proposed to strengthen the integration of social accountability in dental education in Abbottabad. Curriculum reforms should prioritize social accountability as a core component by introducing dedicated modules on social determinants of health, ethics, and community engagement, alongside structured opportunities for community-based learning. Faculty development programs should be expanded to equip educators with the skills needed to integrate social accountability principles into routine teaching. Additionally, dental institutions should establish stronger partnerships with community organizations and government health departments to enhance resources, ensure sustainability of social accountability initiatives, and provide students with meaningful, real-world learning experiences.

We have relied on qualitative data from a small sample of participants from dental colleges of the Abbottabad region only, which, while providing rich insights, may not capture all perspectives. Future research could explore the long-term impact of SA training on dental graduates' professional behaviour and health outcomes in underserved areas. Longitudinal studies tracking the careers of graduates exposed to SA training could provide valuable insights into the sustainability of these programs and their broader impact on public health.

CONCLUSION

Our findings indicate that although social accountability is widely recognized as an important component of dental education, its effective implementation remains constrained by barriers such as limited funding, outdated policies, and inadequate faculty training. Nevertheless, the study highlights the positive influence of community-based learning on students' personal and professional development. Integrating social accountability into the curriculum, supported by institutional commitment and targeted faculty development, is therefore essential to enhance the effectiveness and sustainability of social accountability initiatives.

ACKNOWLEDGMENTS

The authors sincerely thank the

research team, all study participants, and the participating dental colleges of the Hazara region of Khyber Pakhtunkhwa, Pakistan, for their cooperation and support in completing this study.

REFERENCES

1. Swed S, Alibrahim H, Bohsas H, N-asif MN, Abouainain Y, Jabban YK, et al. Assessing social accountability perspectives among Syrian medical students: a cross-sectional study. BMC Med Educ 2023;23(1):980. https://doi.org/10.1186/s12909-023-04969-9
2. Yazdani S, Heidarpoor P. C-ommunityengaged medical education is a way to develop health promoters: a comparative study. J Educ Health Promot 2023;12(1):93. https://doi.org/10.4103/jehp.jehp_383_22
3. Leaune E, Rey-Cadilhac V, Oufker S, Grot S, Strowd R, Rode G, et al. Medical students' attitudes toward and intention to work with the underserved: a systematic review and meta-analysis. BMC Med Educ 2021;21:251.https://doi.org/10.1186/s12909-021-02517-x
4. Preston R, Larkins S, Taylor J, Judd J. Building blocks for social accountability: a conceptual framework to guide medical schools. BMC Med Educ 2016;16:227.https://doi.org/10.1186/s12909-016-0741-y
5. Abdalla M, Taha M, Wadi M, Khalafalla H. What makes a medical school socially accountable? A qualitative thematic review of the evaluation of social accountability of medical schools in the Eastern Mediterranean Region. East Mediterr Health J 2022;28(9):683–91. https://doi.org/10.26719/emhj.22.016
6. Kaufman A, Scott M, Andazola J, Fitzsimmons-Pattison D, Parajón L, Ellaway R, et al. Social accountability and graduate medical education. Fam Med 2021;53(7):632-7. https://doi.org/10.22454/FamMed.2021.160888
7. Khan IA, Conway NB, Ali M, Rios C, Holder CL, Obeso VT. Providing care with cultural, racial, and ethnic humility: the framework for an additional entrustable professional activity. Med Sci Educ 2022;32(2):283-5. https://doi.org/10.1007/s40670-022-01513-0
8. Oudbier J, Boerboom T, Peerdeman S, Suurmond J. The integration of social accountability in the medical curriculum: a qualitative study of the change process as perceived by educational staff and students.ResSq2023.https://doi.org/10.21203/rs.3.rs-3567770/v1
9. Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. Field Methods 2006;18(1):59-82. https://doi.org/10.1177/1525822X05279903
10. Byrne D. A worked example of B-raun and Clarke's approach to reflexive thematic analysis. Qual Quant 2022;56(3):1391-412. https://doi.org/10.1007/s11135-021-01182-y
11. Taha MH, Abdalla ME, Wadi MM, Khalafalla HE, Akbarilakeh M. The implementation of social accountability in medical schools in the Eastern Mediterranean Region: a scoping review. J Taibah Univ Med Sci 2023;18(1):84-97. https://doi.org/10.1016/j.jtumed.2022.08.002
12. Boelen C. Social accountability: m-edical education's boldest challenge. MEDICC Rev 2008;10(4):52.
13. Wood B, Fitzgerald M, Kendall C, Cameron E. Integrating socially accountable health professional education and learning health systems to transform community health and health systems. Learn Health Syst 2021;5(3):e10277. https://doi.org/10.1002/lrh2.10277
14. Ritz SA, Beatty K, Ellaway RH. Accounting for social accountability: developing critiques of social accountability within medical education. Educ Health (Abingdon) 2014;27(2):152-7. https://doi.org/10.4103/1357-6283.143747
15. Barber C, Van der Vleuten C, Le-ppink J, Chahine S. Social accountability frameworks and their implications for medical education and program evaluation: a narrative review. Acad Med 2020;95(12):1945-54. https://doi.org/10.1097/ACM.0000000000003731
16. Shrivastava SR, Shrivastava PS, Men-dhe HG, Joshi A. Integrating social accountability into the medical curriculum: the need, implementation, and impact measurement. Asian J Soc Health Behav 2024;7(1):51-3. https://doi.org/10.4103/shb.shb_356_23
17. Koepke K, Walling E, Yeo L, Lach-ance E, Woollard R. Exploring social accountability in Canadian medical schools: broader perspectives. Med Ed Publish 2020;9:283.https://doi.org/10.15694/mep.2020.000283.1
18. Ahmed MH. Analyzing the social aspects of the integrated program of field training, research, and rural development course, Faculty of Medicine, University of Gezira, Sudan. J Educ Health Promot 2019;8:166.https://doi.org/10.4103/jehp.jehp_441_18
19. Mihan A, Muldoon L, Leider H, Te-hfe H, Fitzgerald M, Fournier K, et al. Social accountability in undergraduate medical education: a narrative review. Educ Health (Abingdon) 2022;35(1):3-8. https://doi.org/10.4103/efh.efh_305_21
20. Dash NR, Taha MH, Shorbagi S, Abdalla ME. Evaluation of the integration of social accountability values into medical education using a problem-based learning curriculum. BMC Med Educ 2022;22(1):181. https://doi.org/10.1186/s12909-022-03245-6

AUTHORS' CONTRIBUTION

The Following authors have made substantial contributions to the manuscript as under:

FNA: Conception and study design, acquisition, analysis and interpretation of data, drafting the manuscript, approval of the final version to be published

BJ: Analysis and interpretation of data, critical review, approval of the final version to be published

NA: Conception and study design, critical review, approval of the final version to be published

NM: Conception and study design, drafting the manuscript, critical review, approval of the final version to be published

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CONFLICT OF INTEREST

Authors declared no conflict of interest, whether financial or otherwise, that could influence the integrity, objectivity, or validity of their research work.

GRANT SUPPORT AND FINANCIAL DISCLOSURE

Authors declared no specific grant for this research from any funding agency in the public, commercial or non-profit sectors. However, the Publication charges for this article are fully / partially borne from the Khyber Medical University Publication Fund (vide #: DIR/ORIC/Ref/25/00134).

DATA SHARING STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request

DECLARATION

This manuscript has been extracted from the MHPE thesis of Dr. Farida Naz Aamir under the supervision of Prof. Dr. Brekhna Jamil and co-supervised by Dr. Nowshad Asim. The results of this research have not been published elsewhere.

KMUJ web address: www.kmuj.kmu.edu.pk
Email address: kmuj@kmu.edu.pk