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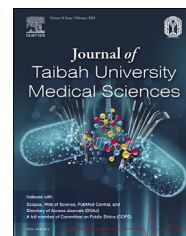
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Educational Article

The implementation of social accountability in medical schools in Eastern Mediterranean region: A scoping review



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المخلص

أهداف البحث: المحاسبة الاجتماعية هي نهج جديد نسبياً في التعليم الطبي، والمعلومات حول تنفيذه شحيحة في إقليم شرق المتوسط. كان الهدف من مراجعة هذا النطاق هو التحقيق في الأنماط والاتجاهات في الإبلاغ عن المحاسبة الاجتماعية لكليات الطب في منطقة شرق البحر الأبيض المتوسط.

طرق البحث: باستخدام نهج أركسي و أومالي، أجريت عمليات بحث في الأدب بين عامي 1995 و 2022 في قواعد البيانات التالية: "سكوبس" و "شبكة العلوم" و "سينهال" و "بابميد" و "قوغل العلمي" باستخدام مصطلحات البحث: المساءلة الاجتماعية، مدرسة الطب، كلية الطب، إقليم شرق المتوسط، منطقة المكتب الإقليمي لشرق المتوسط. باستخدام تحليل الموضوع النوعي، تم الإبلاغ عن البيانات المستخرجة والمشفرة والمحللة.

النتائج: كشف فحص قواعد البيانات المختلفة عن 164 مقالا، تم تضمين 26 مقالا أخيراً في المراجعة. المقالات الستة والعشرون المتضمنة نشأت من سبعة فقط من أصل 22 دولة في منطقة الشرق الأوسط: إيران والسودان والمملكة العربية السعودية والإمارات العربية المتحدة ومصر والمغرب وباكستان. تم تصنيف المقالات المدرجة تحت ستة محاور: تعريف المحاسبة الاجتماعية والامتثال لقيم ومفاهيم المحاسبة الاجتماعية، والاعتماد، والبرنامج التعليمي، وتصورات أعضاء هيئة التدريس والطلاب، وقبول الطلاب، وقياس المحاسبة الاجتماعية.

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الاستنتاجات: كشفت المنشورات المتعلقة بالمساءلة الاجتماعية من دول منطقة شرق المتوسط عن أوجه تشابه مع أجزاء أخرى من العالم من حيث أن مفهوم المحاسبة الاجتماعية لم يتم ترجمته بشكل فعال إلى أنشطة يومية حقيقية في كليات الطب. هناك حاجة إلى مزيد من العمل من القادة في أنظمة التعليم والصحة لفحص عوامل تمكين المحاسبة الاجتماعية وتحسين استيعاب المفهوم.

الكلمات المفتاحية: المساءلة الاجتماعية؛ منطقة المكتب الإقليمي لشرق المتوسط؛ إقليم شرق المتوسط؛ كليات الطب؛ التعليم الطبي

Abstract

Objectives: Social Accountability is a relatively new approach in medical education, Information about its implementation is scarce in the Eastern Mediterranean Region. The objective of this scoping review was to investigate the patterns and trends in reporting the social accountability (SA) of medical schools in the Eastern Mediterranean region (EMR).

Methods: Using the Arksey and O'Malley approach, we conducted literature searches between 1995 and 2022 in the following databases: Scopus, Web of Sciences, CINAHL, PubMed, and Google Scholar using the search terms social accountability, medical school, faculty of medicine, Eastern Mediterranean Region, EMRO region. Using qualitative theme analysis, the extracted, coded, and analyzed data were reported.

Results: The screening of various databases revealed 164 articles, 26 articles were finally included in the review.

The 26 included articles originated from only seven out of the 22 EMR countries: Iran, Sudan, Kingdom of Saudi Arabia (KSA), United Arab Emirates, Egypt, Morocco, and Pakistan. The articles included were categorized under six themes: defining the SA and compliance with SA values and concepts, accreditation, educational program, perceptions of faculty and students, admission of students, and measurement of social accountability.

Conclusions: The publications related to SA from the EM regions countries revealed similarities with other parts of the world in that the SA concept is not effectively translated into real day-to-day activities in medical schools. More work is needed from leaders in education and health systems to examine SA enablers and improve the uptake of the concept.

Keywords: Eastern Mediterranean region; EMRO region; Medical education; Medical schools; Social accountability

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Introduction

Social accountability (SA) constitutes a cultural change and a relatively new concept in medical education.¹ The concept was first defined by the World Health Organization (WHO) in 1995 as the obligation of medical schools to direct the education, research, and service functions to satisfy the prioritized health concerns of society, which are defined through a systemic effort with all stakeholders, including members of society.² The concept has been meant for implementation in day-to-day work in medical education since the development of the Global Consensus for Social Accountability of Medical Schools (GCSA) in 2010, which formulated the definitions of ten strategic directions for socially accountable medical schools.³ The GCSA encourages medical schools to adopt SA to satisfy the changing health needs of the communities they serve.⁴ Furthermore, the World Federation for Medical Education (WFME) incorporated SA into its revised guidelines for quality improvement in 2015.⁵ A World Summit on Social Accountability⁶ was convened in 2017 with the goal of putting this agreement into practice by promoting accreditation, leadership, and collaboration, as well as defining the competencies expected of health professional graduates. As a result, the Tunis Declaration was reached, which had the goal of ensuring institutional commitment toward SA Concepts.⁷ A variety of evaluation models have been established to assess SA in medical schools, including the WHO's social accountability grid,² Boelen and Wollard's CPU model—an acronym for “Conceptualization, Production, and Usability,” which provided a framework with key parameters to delineate the scope of commitment for a school to be recognized as socially accountable⁸—and the Training for Health Equity Network (THEnet) framework.⁹

Globally, only one systematic review from 2017 could be retrieved concerning the impact of social accountability.¹⁰ Another scoping review from 2018 linking the admission criteria to the social mission of medical schools is also available.¹¹ At the regional level, a scoping review recently published in 2022 identified seven common themes for what makes medical schools socially accountable in the Eastern Mediterranean (EM) region.¹²

The EM region comprises 22 countries with diverse cultural and economic statuses, and the medical education in the region reflects the same diversity.¹³ The medical education in the region reflects examples of the adoption of community-based education, which is considered an enabler for SA.^{3,14} As part of the SA movement, the WHO's Eastern Mediterranean Regional Office (EMRO) established SA as one of the strategic directions for medical education in 2015,¹⁵ and individual countries are also contributing to ongoing SA endeavors.¹⁶

Although there are some efforts to make SA a reality in the EM region, information in that regards is scarce so this scoping review is the first of a series that investigates the patterns and trends in reporting the SA of medical schools in the Eastern Mediterranean Region (EMR). The study used the scoping review approach to extract patterns and trends from the published studies about SA in medical schools in the 22 EMR countries and to provide guidance for areas that need further attention.

Materials and Methods

The team behind this scoping review followed the five stages proposed by Arksey and O'Malley.¹⁷ The steps involved were identifying the research questions, identifying relevant studies, studying the selections, charting the data, and collating, summarizing, and reporting the results.

Identification of the research question

The research question developed by the research team was as follows: How is social accountability being reported in medical schools in the EMR?

The review team refined the research question under the SPIDER¹⁸ elements:

Sample Phenomenon of Interest	Medical Schools in the EMR Social accountability
Design	Surveys, questionnaires, interviews, focus group discussions, observation, document analysis
Evaluation Research type	Pattern and trends of reporting Quantitative, qualitative, and mixed methods

Identification of relevant studies by search strategy in databases

Literature searches were conducted in the following databases: Scopus, Web of Sciences, CINAHL, PubMed, and Google Scholar. The search strategy for each database was

defined in consultation with a senior librarian. The search strategy was limited to the period 1995–2022, since the concept of social accountability started in 1995 in education for the health profession.² We scanned the included studies' reference lists and searched the authors' profiles to enhance the search. We then drew on the extensive networks of the review team and contacted people who were leaders in the field of SA research in the EM region to identify any missing publications.

To ensure the accuracy of the data, we further searched for the names of the countries in the EMR. We used the search string as follows:

("Social accountability") AND ("Medical School" OR "Faculty of Medicine" OR "Medical College") AND ("Eastern Mediterranean Region" OR "EMRO Region").

Additionally, the review team repeated the search using the individual names of the 22 countries of the EM region.

Study selection

The review team executed the final search, exported the results into Mendeley (v 1.19.4), and removed all the duplicate search results. We included only original articles that reported the SA of medical schools in the EMR. Before starting the screening process, a standardization exercise was conducted to ensure the reliability of the articles' selection for inclusion. This involved three reviewers (MEA, MHT, and HK) screening a random sample of 10% of the citations (three articles each by MEA, MHT, and HK). The three reviewers then individually screened the rest of the search results for inclusion using predefined criteria (medical/health profession education and EMR) for all screening levels (e.g., title, abstract, and full-text review). We resolved discrepancies by consensus or with the involvement of a fourth author (MW).

Charting the data

All authors met online to design a Google Form (accessed through the link <https://bit.ly/2J4pE7l>) for data abstraction. The document contained many variables (e.g., study title, authors, the study's aim, country, quality appraisal, and the key finding). Each author independently scanned all candidate studies for inclusion, starting with titles and abstracts and then moving on to the full texts of studies to decide eligibility. The first author then conducted the articles' initial analysis to identify reported variables, using a Google Form that was accessible by all the authors, who then reviewed the analysis for consistency and completeness.

Three reviewers drafted and tested the extracted data independently based on a random sample of three studies selected by the study team. The final appraisal form included the following general headings: (1) study characteristics (e.g., title, authors, year of publication, type of article, and study design), (2) aim of the study, (3) country, and (4) main findings. The research team members read each article independently and extracted the relevant data. Disagreements were resolved by subsequent discussion or

involvement of the fourth reviewer. The quality of the studies included in this review was appraised using the critical appraisal criteria developed by Reeve 2017 (Table 1).¹⁰ Studies were evaluated and ranked as "excellent," "good," "average," "poor," or "very poor." We excluded studies that were classified as poor or very poor.

Collating, summarizing, and reporting results

We categorized the data according to the following characteristics: the origin of the study, year of publication, study aim, source of the data, medical schools' compliance with SA, determinants of SA, assessment of faculties' and/or students' perceptions of SA, reported study limitations, research funding, and study design. We analyzed the data using a qualitative thematic approach. The results were reported in tabular and narrative forms. Finally, we reported the review following the PRISMA extension for scoping reviews (PRISMA-ScR guidelines).¹⁹

Results

Descriptive summary

An initial search in January 2021 yielded 162 articles, and five further articles were identified from other sources. Additional searches were conducted in January 2022 and May 2022, and two additional articles^{20,21} were identified during the follow-up search. Sixty-five titles and abstracts were excluded after being screened due to duplication. Fifty-one articles were excluded based on studies not being from the EM region or not relating to medical schools. Twenty-seven articles were later eliminated because they were not related to the SA of medical schools, were not original articles, or were not accessible (see Fig. 1). The remaining 26 articles were included in the final review. All the articles were published after 2010, with 10 (38.46%) published during 2012–2015 and 16 (61.54%) published during the 2016–2022 period (Table 2). Regarding the study design, 11 (40.31%) articles were qualitative studies, 12 (46.15%) were quantitative studies, and 1 (11.54%) followed a mixed-methods approach. The studies' limitations were not mentioned in 18 articles (69.23%), and only four articles (15.38%) reported the source of funding for their research. The potential use of the findings in different settings, as stated in the articles, were as follows: 11 (40.31%) of the

Table 1: Critical appraisal criteria questions.¹⁰

Are the questions/hypothesis stated clearly and relevant to the research question?
What is the study design and is it appropriate for the research question?
How were participants selected and is the population appropriate?
Has the impact on the sample population been presented?
Did the author answer the study question appropriately?
Are the studies' strengths highlighted?
Are the limitations discussed with suggested steps that may improve future results?
Did they suggest further study they will undertake?

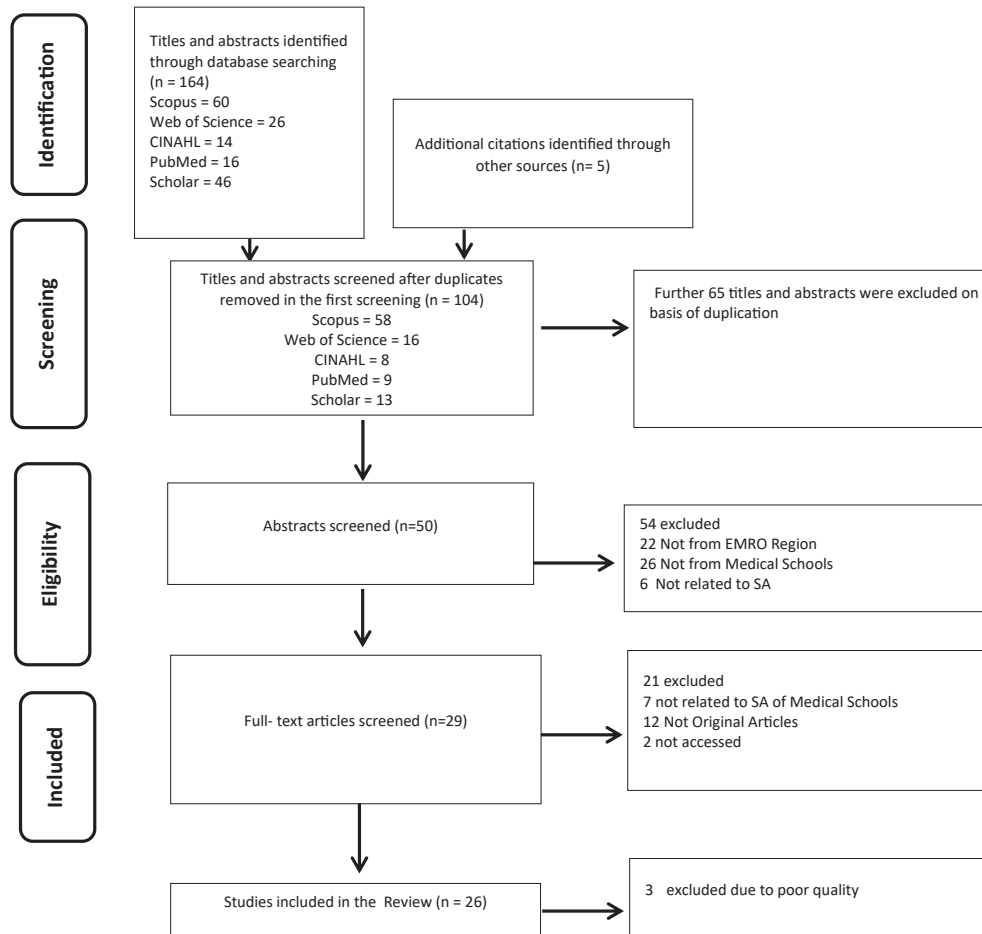


Figure 1: PRISMA flow chart of search results.

studies stated that their findings could be used at a country level, 6 (23.07%) at an institute level, 5 (19.23%) at a regional level, and 3 (11.54%) at the international level (see Table 3).

Studies per country in the EMR

The twenty-six studies included in the review were from seven countries (Iran, Sudan, KSA, United Arab Emirates,

Egypt, Morocco, and Pakistan) out of the 22 countries constituting the WHO's EM region. Seventy-three percent of the articles were published in two countries; 13 (50.00%) studies were from Iran,^{22–34} six (23.08%) were from Sudan,^{35–38,40} two were from KSA,^{21,41} two were from the United Arab Emirates,^{20,42} and the other three countries contributed one article each^{43–45} (Table 2). The thirteen studies from Iran came from five different medical schools, while the six studies from Sudan came from one medical school: the Faculty of Medicine at the University of Gezira (FMUOG).^{35–38,40}

Results of thematic analysis

The thematic analysis of the data gathered from articles reviewed yielded six main themes as follows:

Defining the SA and compliance with SA values and concept Concerning examining the concept of SA, Abdolmaleki M et al., in 2017, conducted concept analysis study to give context-based analytic definitions of SA based on the literature.²⁹

The compliance of medical schools with the concept of SA was assessed in four articles. These articles were from Sudan, Egypt, KSA, and Iran.^{26,38,41,44}

Table 2: Characteristics of articles included in the scoping review.

Characteristics	No. (%)
Study Type	
Qualitative	11 (42.31%)
Quantitative	12 (46.15%)
Mixed Methods	3 (11.54%)
Study Country	
Iran (Islamic Republic of)	13 (50.00%)
Sudan	6 (23.08%)
KSA	2 (7.69%)
United Arab Emirates	2 (7.69%)
Egypt	1 (3.85%)
Pakistan	1 (3.85%)
Morocco	1 (3.85%)

Table 3: Original articles (n = 26) published in EMR related to social accountability (authors, year of publications, study aim, study design, country, and key findings).

No.	Title	Author(s)	Year of Publication	Study Aim	Study Design	Country	Key findings
1	Social accountability of medical schools: Do accreditation standards help promote the concept?	Abdalla, M.E. ³⁵	2012	SA Concept Analysis	Quantitative	Sudan	When it comes to social accountability standards, the emphasis is on education rather than the medical school's service and research functions.
2	Suggested new standards to measure social accountability of medical schools in the accreditation systems	Abdalla, M.E. ³⁶	2012	Development of Determinants/ indicators/ standards	Qualitative, based on the phenomenological type	Sudan	The significance of accreditation systems as a lever for improvement and the ability to adjust practice to meet societal expectations
3	Knowledge of Social Accountability in Medical Education among Faculty Members at Medical Sciences of Mashhad University	Moghadam, H.A. et al. ²²	2013	Assessment of Perception	Quantitative/cross sectional	Iran (Islamic Republic of)	Faculty awareness of social accountability at MUMS is limited. To improve health services, faculty members need to be informed about SA.
4	The Effects of Social Accountability in Medical Education on the Knowledge of Occupational Health Personnel working in the Cement Industry in Iran	Assadi, S.N. ²³	2014	Description of an Intervention related to SA	Quantitative/cross sectional	Iran (Islamic Republic of)	The inclusion of social accountability in medical education courses improved the expertise of cement industry occupational health personnel.
5	Is our medical school socially accountable? The Case of Faculty of Medicine, Suez Canal University	Hosny, S. et al. ⁴⁴	2015	Assessment of Compliance with SA	Qualitative/case study	Egypt	Many characteristics of the CPU model are met by FOM/SCU.
6	Impact of selection strategies on representation of underserved populations and intention to practice: international findings	Larkins, S. et al. ³⁷	2015	Assessment of students' acceptance criteria in relation to SA	Quantitative/cross sectional	Sudan	Data from 944 students revealed that students at the five schools were more likely to be of non-urban origin, lower socioeconomic status, and from underserved groups.
7		Hamed, H. J. et al. ²⁴	2015		Mixed Methods		

	Developing Social Accountability Indicators at Medical Schools			Development of Determinants/ indicators/ standards		Iran (Islamic Republic of)	The developed indicators and criteria were practical so that they could be used in the social accountability evaluation of medical schools.
8	Exploring the practical themes for medical education social accountability in Iran	Ahmady, S. & Akbari Lakeh, M. ²⁵	2015	Development of Determinants/ indicators/ standards	Qualitative study	Iran (Islamic Republic of)	Eight major themes affecting socially accountable medical education in Iran were discovered.
9	Management of Social Accountability in Medical Education at Tabriz University of Medical Sciences	Pourabbas, A. et al. ²⁶	2015	Assessment of Compliance with SA	Quantitative/cross sectional	Iran (Islamic Republic of)	Tabriz University of Medical Sciences has taken steps toward social accountability in medical education.
10	Assessment of the social accountability of the faculty of medicine at University of Gezira, Sudan	Elsanousi, S. et al. ³⁸	2016	Assessment of Compliance with SA	Qualitative/Case study	Sudan	FMUOG's program was found to be well-planned and well-implemented in most of the domains and phases of the social accountability grid.
11	An investigation on social accountability of general medicine curriculum	Emadzadeh A. et al. ²⁷	2016	Development of Determinants/ indicators/ standards	Mixed Methods	Iran (Islamic Republic of)	A curriculum should cover four important areas: clinical activities, advocacy, research, and training.
12	Exploration of Social Accountability Indicators in Medical Science Schools in Iran	Shieh, H. et al. ²⁸	2016	Development of Determinants/ indicators/ standards	Qualitative/Delphi technique	Iran (Islamic Republic of)	The establishment of national criteria for assessing social accountability is crucial.
13	Social accountable medical education: a concept analysis	Abdolmaleki, M. D. et al. ²⁹	2017	SA Concept Analysis	Concept analysis	Iran (Islamic Republic of)	An analytical definition of social accountability in the medical education system was formulated.
14	A Social Accountable Model for Medical Education System in Iran: A Grounded Theory	Abdolmaleki, M.D. et al. ³⁰	2017	Development of Determinants/ indicators/ standards	Qualitative/ Grounded-Theory	Iran (Islamic Republic of)	The analysis of interviews yielded 379 codes, 59 secondary categories, 16 subcategories, and 9 primary categories.
15	Development and Validation of	Adib, Y. et al. ³¹	2018	Development of tool/inventory	Mixed Methods	Iran (Islamic Republic of)	Aspects of the clinical medicine curriculum were

(continued on next page)

Table 3 (continued)

No.	Title	Author(s)	Year of Publication	Study Aim	Study Design	Country	Key findings
	Instruments for Evaluation of the Clinical Medicine Curriculum in Terms of Social Accountability						selected based on social accountability.
16	Development and evaluation of an online course about the social accountability of medical schools	Abdalla, M.E. et al. ¹⁶	2019	Description of training course	Qualitative	Sudan	Most participants stated that the course introduced new concepts and clarified certain misconceptions concerning social accountability in medical schools.
17	Measuring Social Accountability of Medical Universities Education Function- Design, Development, And Validation of Instrument	Yazdani, S. et al. ³²	2019	Development of tool/inventory	Quantitative/factor analysis	Iran (Islamic Republic of)	Eighty-two items were developed and validated using the Delphi technique in two rounds. According to content experts, the instrument's S-CVI of relevancy was 0.93.
18	The status of accountable education in the Surgery Department, Tabriz, Iran	Pourabbas, A. et al. ³³	2019	Development of Determinants/ indicators/ standards	Quantitative/cross sectional	Iran (Islamic Republic of)	The surgical department's average performance (mean 38.6 percent) in the ten categories of social accountability in education was moderate. The performance of Areas 1, 4, 5, 6, and 7 was moderate, whereas Area 3 had a fairly good performance average. Supervisors gave high marks to medical graduates from the three SAHPE schools for socially accountable competencies.
19	Does a socially accountable curriculum transform health professional students into competent, work-ready graduates? A cross-sectional study of three medical schools across three countries	Woolley, T. et al. ⁴⁰	2019	Assessment of Perception	Quantitative/cross sectional	Sudan	
20		Mahmood-Ur-Rahman et al. ⁴⁵	2019			Pakistan	

	Social Accountability of a Medical College in Pakistan - A Case Study			Assessment of Perception of faculty members	Qualitative/case study		The concept of social accountability is new to the faculty members. There must be a national consensus on the conceptual framework driving curricular change.
21	Commitment towards a better future for medical education in KSA: the efforts of the college of medicine at Qassim University to become socially accountable	Alrebish, S.A. et al. ⁴¹	2020	Assessment of Compliance with SA	Qualitative/case study	KSA	In all three grid domains, the COMQU demonstrates compliance with most social accountability values and principles.
22	Motivating medical students for social accountability in medical schools	Mohammadi, M. et al. ³⁴	2020	Assessment of Perception	Qualitative/ Phenomenology	Iran (Islamic Republic of)	The important components of the motivational process that led to the formation of social accountability in medical students were the social culture of medicine, the reality of medical school, the teaching and learning approach, and the development of purposeful beliefs and behaviors.
23	Development and validation of inventory tool to evaluate social accountability principles in case scenarios used in problem-based curriculum (social accountability inventory for PBL)	Abdalla, M.E. et al. ⁴²	2020	Development of tool/inventory	Quantitative/factor analysis	United Arab Emirates	This inventory has 17 close-ended statements distributed under four themes.
24	Social accountability: Attitudes and awareness among undergraduate medical students in Morocco	Sebbani, M. et al. ⁴³	2021	Assessment of Perception	Quantitative/cross sectional	Morocco	Of the respondents, 33.5% had heard of social accountability, and 79% of respondents believed that students do not play a significant role in society and that they should concentrate on their education.

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Table 3 (continued)

No.	Title	Author(s)	Year of Publication	Study Aim	Study Design	Country	Key findings
25	Evaluation of the integration of social accountability values into medical education using a problem-based learning curriculum	Dash, Nihar Ranjan et al. ²⁰	2022	Evaluation of the integration of social accountability values	Quantitative/cross sectional	United Arab Emirates	The vast majority of the case scenarios had successfully integrated social accountability values in certain areas.
26	Social Accountability in Medical Education: Students' Perspective	Masud, Nazish, et al. ²¹	2022	The perception of SA among medical students	Quantitative/cross sectional	KSA	Most medical students perceived their institutions to be socially accountable.

A study conducted at FMUOG that used the WHO grid and the Conceptualization, Production, and Usability (CPU) model reported that the program was found to be well-planned and well-implemented in most of the domains and phases of the social accountability grid, exhibiting an influence on the community and active participation in local health system development.³⁸

The second study, from KSA, conducted at the College of Medicine, Qassim University (COMQU), where the authors used the WHO grid to conduct a review of available documents with interviews with key informants,⁴¹ concluded that, in all three grid domains, COMQU demonstrated compliance with most SA values and principles. In the grid, indicators related to education show more compliance than those related to research and community service.⁴¹

The third study, from the Faculty of Medicine, Suez Canal University (FOM/SCU), Egypt, where the authors combined the CPU model as the basis for a review of documents with interviews with key informants from a particular institute,⁴⁴ reported that many characteristics of the CPU model are met by FOM/SCU; however, further work is needed.

The fourth article was from Iran, where the authors reviewed papers on SA from a medical school perspective²⁶ in this study it was concluded that Tabriz University of Medical Sciences has taken steps toward social accountability in medical education, such as determining the province's health and disease priorities, presenting health and disease training programs in local media, preparing appropriate community-based teaching fields, empowering faculty members in new teaching and assessment methods, and training students based on community health needs.²⁶

Social accountability and accreditation

Regarding social accountability and quality standards in medical education, two studies from Sudan were conducted to develop standards to measure social accountability within the accreditation systems of medical schools, with the aim to promote the principles of social accountability within the medical schools by developing standards and procedures that can be used by the existing accreditation systems.^{35,36} The two papers examined accreditation standards of the World Federation of Medical Education (WFME), the Liaison Committee on Medical Education (LCME), and the Australian Medical Council (AMC) to assess their compliance with SA principles^{35,36} and concluded that, the majority of the standards are process-related, content standards receive less attention than process standards, and only a few standards address medical school outcomes. The studies further concluded when it comes to social accountability standards, the emphasis is on education rather than the medical school's service and research functions. To foster the concept of societal accountability, standards should consider all areas of the medical school's functions. Finally one of the study developed suggested standards to measure social accountability in accreditation systems in medical education.³⁶

Social accountability and educational programs

Regarding the integration of social accountability in education programs, study conducted in Sudan as part of multi-centre study as an effort to answer the question: does a

socially-accountable curriculum transform health professional students into competent, work-ready graduates?⁴⁰ The study concluded that supervisors gave high marks to medical graduates from the three socially accountable medical schools for socially accountable competencies ('communication skills, 'teamwork,' professionalism,' work-readiness,' commitment to practice in rural communities, 'commitment to practice with underserved ethnic and cultural populations, "overall performance,' and 'overall clinical skills').

Another study from the United Arab Emirates used an inventory that measures the integration of SA values in problem-based learning scenarios.²⁰ The study concluded that most of the problem-based learning case scenarios had successfully integrated social accountability values in addressing certain areas.

A third study from Sudan reported the experiences of faculty members with online courses developed to promote the concept of social accountability in the region.¹⁶ The study reported that the course had a clear take-home message, according to all attendees. Most participants stated that the course introduced new concepts and clarified certain misconceptions concerning social accountability in medical schools.

Social accountability and students admissions/intake

Concerning social accountability and Students Admissions/intake, study conducted in Sudan in FMUOG as part of multi-center study with other medical schools concluded that selection processes included strategies that went beyond evaluating academic achievement.³⁷ This study revealed that students at the five schools were more likely to be of non-urban origin, lower socioeconomic status, and from underserved groups. Half of the students indicated an intention to start practicing in a non-urban area after graduation.

Faculty and students' perceptions of social accountability values and concepts

Assessments of faculty's perceptions of the concept of social accountability were performed in Iran and Pakistan.^{22,45} One study conducted at the Medical Sciences of Mashhad University (MUMS) in Iran identified that faculty awareness of social accountability at MUMS is limited.²² The study further reported that to improve health services, faculty members need to be informed about SA, as well as the creation of positions and conceptions related to it.

The second qualitative study, conducted in Pakistan, revealed that the concept of social accountability is new to the faculty members.⁴⁵ The study further reported that if social accountability is to be taken seriously by medical education institutions across Pakistan so that they can actively contribute to the delivery of healthcare that is equitable, relevant, cost-effective, and quality-driven, then a significant revision of the teaching and training programs is required.⁴⁵

Regarding students' perceptions of social accountability, two articles studied students' perceptions in Morocco and KSA.^{21,43}

The study conducted in Morocco concluded that 33.5% of the students had heard of social accountability; nearly 79% of respondents believed that students do not play a

significant role in society and that they should concentrate on their education. In the same study, students believed that the school employed social accountability practices.⁴³

While the second study, conducted in KSA, identified that most medical students perceived their institutions to be socially accountable, students in the preclinical year had a better understanding of SA. Final-year students were more critical than other students about the institution's SA.²¹

Evaluation of social accountability (measurement and indicators)

Regarding the development of indicators for evaluating social accountability in medical schools, seven articles focused on developing indicators and determinants of SA based on medical schools' and education experts' perspectives only.^{20,24,25,27,28,33,36} Five of these studies were from Iran,^{24,25,27,28,33} one each from Sudan³⁶ and the UAE.²⁰

Most of the studies on evaluation were from Iran. A study that was done at Tabriz University of Medical Sciences in Iran concluded that the surgery department's strategic plan was pretty well done. It included the values and criteria of SA in its mission and goals. However, the researchers suggested that comprehensive and continuous needs assessments be done for the identification and anticipation of community needs.³³ Similarly, Ahmady et al.²⁵ found that SA medical education in Iran was affected by eight main themes: organization of responsive education councils; organization of educational processes; development in field training; development of community-based courses; budget management; uniformity in educational rules and regulations; educational outcomes; educational programs in departments and groups.²⁵ Another evaluation from Iran reported, according to the results of the need analysis, for the curriculum of Mashhad University of Medical Sciences to achieve social accountability, the curriculum should focus on four primary areas: clinical activities, advocacy, research, and training.²⁷ Finally the last two studies suggested a set of criteria and indicators for evaluation of different aspects of social accountability in medical schools.^{24,28}

An evaluation in an article from Sudan developed standards to measure social accountability in accreditation systems in medical education.³⁶

As an effort to measure social accountability in day-to-day practice in curriculum delivery and measure the integration of SA values and concepts at the curriculum level, the study from the UAE used an inventory developed to evaluate the integration of social accountability values in the undergraduate medical curriculum. This inventory has 17 close-ended statements distributed under the following themes (social accountability values): relevance (10 questions), equity (5 questions), cost-effectiveness (1 question), and quality (1 question).⁴²

Discussion

This study is the first of its kind to consider articles about SA across the entire EM region. Despite the importance of SA worldwide, the publications from medical schools in the EM region originated from only 7 of the 22 countries. Moreover, they were from only eight medical schools, reflecting how the concept of SA is not well-disseminated in the region, where little is known about how SA is put into

practice, as in other parts of the world.^{14,16} The SA situation in the region was described by the WHO in 2015 as one in which insufficient action was being taken to support the medical schools' mission of commitment to satisfying community needs.¹⁵

All the articles were published after 2010, which might suggest that the GCSA³ was a significant milestone in the spread of SA. To help spread the concept further, medical schools need to define the factors that would motivate them to adopt the concept and the barriers they might face in implementing it.⁴⁶ Among the enabling factors are accreditation, leadership, a formal SA structure in medical schools, the support of champions,¹⁴ and the formation of alliances.⁴⁷ Furthermore, the studies' examination revealed that the highest number of publications came from Iran, which has the largest number of medical schools in the region.¹³ Factors that might have been crucial to the broader spread of SA in Iran include its integration of medical education into the health system and its inclusion of supervised community-related activities in medical education.⁴⁸ Additionally, collaboration and alliances between different medical schools are especially important,⁴⁷ however, the review showed that most of the articles reflected work from a single medical school and only a few were from two or more medical schools; two of the articles from Sudan were produced by a consortium of international medical schools that worked jointly on SA.³⁷

Community-based medical education is one of the factors that facilitate the adoption of SA, according to the strategic directions for SA established by the GCSA.^{3,14} Two medical schools published studies from Sudan and Egypt: FMUOG in Sudan and the Faculty of Medicine at Suez Canal University in Egypt. Both colleges have a long history of adopting community-based medical education.^{49,50} In Iran, four articles were published by Tabriz Medical School, which is known as a community-based medical school.⁵¹ Community-based education directs medical education toward specific community needs.^{52,53}

The scoping review reported that four colleges in the region evaluated their compliance with SA values and principles. In 2018, James Rourke outlined the seven themes of the ten medical schools who received the AMEE ASPIRE award of social accountability. These themes include a) the integration of SA into the mission, b) day-to-day activities, c) admissions of students from underserved areas, d) the relevance of the curriculum to the priority health needs of the school's community, e) the inclusion of clinical learning and service-learning experiences representing the school's, community's, region's, and nation's diversity in the geographic, f) social, and sociocultural contexts, g) the extensive exposure of community-based learning experience, h) research that is inspired by and responds to the school's community's, region's, and nation's priority health issues, as well as actively engaging the community in research, i) and graduates of the school and its health service partnerships having a positive effect on the health and health care of its community, region, and country, especially for vulnerable and underserved groups.⁵⁴ A newly developed inventory⁴² reported in this scoping review—showed its validity and practicality in supporting the integration of social accountability concepts into day-to-day activities in medical schools; as a result, two medical schools in Ireland and Sharjah have used this tool.^{20,55}

The incorporation of SA into the accreditation system was encouraged by two studies from the scoping review. A lack of accreditation standards was identified as a main barrier to improving social accountability in Latin America.⁵⁶ There was a global call that SA in medical education must be included in all accreditation processes at all levels.^{24,57} Even though the WFME recommends SA values in its 2015 standards, this issue still needs more work to be put into practice, and further studies are needed.

Recruitment of students from underprivileged, vulnerable, and underserved areas is important. One study from Sudan concluded that students from non-urban origins indicated an intention to start practicing in a non-urban area after graduation.³⁷ Similarly, studies from Canada showed that students and dietetic interns from the Northern Ontario School of Medicine (NOSM) influenced society and the economy; they had pursued a career in family medicine compared to other graduates, and they preferred to practice it in remote rural areas.^{8,58} Another study in the Philippines, at a medical school in Zamboanga established on the large island of Mindanao, explained that graduates would go back to the villages or small towns where they grew up, where there were few health facilities and poor health indicators. Twenty years later, the medical school estimates that it helped reduce infant mortality by 90% and retained 80% of its graduates in underserved areas, where many would have moved to the capital city or abroad. This was a success story for avoiding brain drain, which is very common in developing countries, such as EMRO countries.^{59,60} PHC financing, a shortage of trained and certified family physicians, brain drain, and migration due to the exceptional situation in EMRO are the main barriers to achieving quality PHC.⁶¹

The assessment of perceptions regarding SA is essential for understanding different stakeholders' perceptions, which is critical because there is no unified understanding of the concept among all stakeholders.⁴ The scoping review reported that in two studies in Iran and Pakistan, faculty awareness of SA was limited.^{22,45} These studies are in agreement with Moses Galukande et al.'s 2012 work in sub-Saharan countries, which showed that social accountability was not a familiar concept and had not been encountered by many of the key informants.⁶²

Limitations

One of the limitations of this study review is that it did not consider the gray literature or other published work that had not been subjected to peer review. The second limitation is that the included articles were only original research, whereas commentaries, short communications were not included in this review.

Conclusion

This scoping review of SA status in EM countries clarifies the patterns and trends in reported social accountability in the EMR. Out of the twenty-two EMR countries, the publications were only from seven countries. The articles included were categorized under six themes: accreditation, compliance with the concept, educational program, perceptions of faculty and students, admission of students, and

evaluation of social accountability. The publications from EMRO countries revealed similarities with other parts of the world in that the SA concept is not effectively translated into real day-to-day activities in medical schools. Despite the global spread of the concept, this scoping review identified that more work is needed to reflect and promote the importance of the concept of SA in the region.

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Conflict of interest

The authors have no conflicts of interest to declare.

Ethics approval

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Consent

Consent was not required, as the article is a review article.

Authors contributions

MHT: Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work. **MEA:** Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work. **MW:** Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work. **HKH:** Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work. **MA:** Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

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