

Views on Social Accountability in Medical Education

“If you can’t explain it simply, you don’t understand it well enough”

Albert Einstein

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Abstract:

Socially Accountable Medical Schools hold themselves responsible for producing outcomes aligned with health workforce, priority health, and health systems needs of their communities. Social Accountability carries the promise of social justice and better wellbeing of societies therefore it is gaining support and popularity. Nevertheless, this term is ambiguous and needs clarification.

The goal of this paper was to find some of the possible causes of ambiguity and join the ongoing discourse on Social Accountability.

This is an opinion paper. Internet search was performed to review basic concepts on Social Accountability in Medical Education.

Three interrelated areas were found as possible ambiguity factors: context difference, words used to explain it/semantics and the evolution of Medical Education in developed versus developing worlds.

To cope with local and global challenges such as COVID-19 pandemic, the values of Social Accountability are dearly needed. Currently allies are working to contextualize this concept by building up evidence and formulating reflective standards. Eventually Social Accountability will rightly be considered as a mark of excellence in ME.

Keywords: Social Accountability, Medical Education, Cultural Difference, Global consensus, THENet, TUFH

Introduction:

Previously top authorities in Sudanese Medical Education (ME) organized a very important meeting on Social Accountability (SA) in ME. Discussions were very interesting and participants were highly engaged, however, there was some degree of confusion or ambiguity regarding SA e.g. the nature of it and what represents examples of SA. This confusion was also noticed by other commentators e.g. Grant and Boulet while reviewing the curricula of four universities in Sudan (*Grant and Boulet Report, 2015*)¹ and Preston and his colleagues who recommended that the concept, its understanding and activities be critically reflected on and analyzed ⁽¹⁾.

It is common knowledge that transformation in ME follows rather predictable forces such as changes in our understanding of learning, requirements for functioning in specific health care delivery systems and most importantly changes in health care needs of societies ^(2, 3). The relationship between society and its healers have experienced fluctuating levels of satisfaction. In the past decade this relationship tended to remain on the low side as the public claimed that their health needs were not met. Many reforms were advanced but the dispute continued and it culminated in Alma Ata conference ⁽¹⁾. The conference aspired to reach the goal of “health for All by 2000” and proposed certain strategies to fulfill it e.g. Community-Oriented/Based Medical Education ⁽⁴⁾.

In 1995, the WHO conference conceptualized the relationship with the society in terms of a definition of Social Accountability of Medical Schools. In 2010, the development of the global consensus on SA was declared. It was viewed as a turning point in medical education reform’s history just like the Flexner’s report at the beginning of the twentieth century (*Global consensus 2010*)². Due to its high appeal and potential for addressing long standing health systems’ problems related

¹This was part of a WHO supported project for curriculum review in relation to human resource development towards meeting the 11 goals of the strategic agenda and the 8 associated Millennium Development Goals (Review of pre-service curricula and training methodologies: Evaluation of progress made in four pilot medical schools in Sudan, August 15th – 22nd 2015, Professor Janet Grant & Dr. Jack Boulet).

²<http://healthsocialaccountability.org> Visited 23/10/2019

to justice, equity, relevance quality and cost effectiveness⁽⁵⁾, the movement towards SA gained attractiveness both nationally and internationally. Pioneering medical schools joined forces and formed allies and associations of like-minded who adopted SA and are still working to advance it e.g. The Training for Health Equity Network (THENet) and The Network: Towards Unity for Health (TUFH).⁽⁶⁾

Moreover the direction towards SA gained additional momentum through being linked to excellence and quality assurance in ME. The World Federation of Medical Education (WFME) at its review of the Basic Standards for Medical Education in 2012 adopted this definition and decided that SA should clearly be stated and included in all accreditation processes⁽⁷⁾ and the World summit on Social Accountability – the Tunis declaration has defined relevant competences and indicators to facilitate their evaluation and verification⁽⁵⁾

While, a robust body of evidence about effective approaches to guarantee SA is not yet available⁽⁸⁾, different methods to enhance students' social responsiveness have been tried and some showed promising results e.g. learning through service provision to the community or electives spent at that level⁽⁹⁾ as well as recruiting students from rural areas and subjecting them to positive educational experiences at rural settings during undergraduate and graduate education which have played a role in enhancing retention. THENet affiliated schools have other good examples of successful implementations⁽¹⁰⁾.

All these actions made SA in ME a winning horse that everybody is betting on. And although the concept SA is relatively new it is quickly spreading in the literature worldwide⁽¹¹⁾. Hence, this universal stance calls for clarity in the understanding of what SA is. However, we need to take in consideration that SA - as a concept- carries cultural imprints and it needs to be contextualized⁽¹²⁾.

The importance of the article comes from following reasons:

1. SA is central to the current reform in ME: as discussed above, SA is currently high on the international agenda for ME and many experts around the world are equating the reform mandated by SA to that which followed Flexner's Report in 1910, hence they predict a similar global transformation in ME⁽¹³⁾. Moreover excellence in ME is being redefined

beyond the traditional notion of its scholastic contribution alone [6] to include other parameters like Social Accountability e.g. the ASPIRE project⁽¹⁴⁾.

2. SA is becoming mandatory for local and universal accreditation: Due to globalization and higher mobility of health personnel around the world there has been a general direction towards using comparable basic standards for medical education⁽¹⁵⁾. Recently universal as well as local regulatory bodies headed towards using the accreditation engine to assess and promote SA in ME⁽⁵⁾.
3. Today's global challenges e.g. COVID-19 pandemic, calls for the values of SA (presented later). In the fight against the pandemic, socially accountable medical schools can lead the preventive efforts at the community level. SA students will be more prepared to support other health system workers and provide health care services relevant to their level. With the fast spread of the virus that threatens to exceed the capacity of health systems, these activities are crucial in the fight against the disease and other health problems.

The purpose of this study is to review the concept of SA to find reasons for ambiguity and to clarify it from a context based perspective. It's hoped that this endeavor will add to the ongoing discourse around SA.

Methods:

This opinion article was triggered by the author's personal experience, which provoked a lot of reflections and questions. To review the concept of SA in ME and define its boundaries Internet search was performed. "Google Scholar and PubMed" were searched using the terms: SA in Medical Education, SA and developing countries, Medical Schools and Socially Accountable activities, THENet and SA, TUFH and SA.

The following questions were formulated to guide the review process:

1. Why are there different meanings and conceptions of SA in ME?
2. Are there universal standards for SA in ME, and should there be one reference?
3. How can SA be defined in global terms e.g. can there be a consensus about the concept? Can SA be an example for unity in diversity?

Results and Discussion:

To facilitate discussion the results and discussion sections are combined together in this article.

The quote at the beginning of the article “*If you can’t explain it simply, you don’t understand it well enough*” had popped to my mind when I came across the Arabic translation of Global Consensus of Social Accountability (GCSA) ⁽¹⁵⁾. The translation was far from clear and it didn’t present a satisfying conceptualization of the GCSA. After consulting other references to unlock the document, it appeared to me that the confusion has roots in culture and context difference.

The author is suggesting three factors as possible reasons for ambiguity of the concept of SA in ME i.e. origin of the concept and context difference, the words used to describe SA (the semantics) and the variation in ME evolution history in the developed versus the developing worlds.

Origin of the Concept and Context Difference:

The origins of the concept ‘SA’ can be traced back to the 60s with the rise of rights-based approach to development and the following change in governance to democratic type of authority; also known as the good governance. In the 80s this concept was embraced by the major financing institutions as well as the United Nations. New tools and strategies came along with this democratic culture including participation, accountability, transparency and the rule of law ⁽¹⁶⁾. This direction was furthered by the millennium declaration in 2000, which adopted global agenda to promote peace and security, development, human rights and environment. Democracy and respect for all humans’ rights were considered pivotal to sustainable development (*Human Rights and the Millennium Development Goals in Practice: A review of country strategies and reporting, 2010*). In this context where development is linked to human rights and good governance, the concept of SA flourished and appeared in the literature of the various disciplines and social sectors- each one of them gave its own definition to the term ⁽¹¹⁾. One example is the World Bank definition of SA

Social accountability: Is an approach towards building accountability that relies on civic engagement, i.e., in which it is ordinary citizens and/or civil society organizations who participate directly or indirectly in exacting

accountability. Mechanisms of social accountability can be initiated and supported by the state, citizens or both, but very often they are demand-driven and operate from the bottom-up⁽¹⁷⁾.

The WHO has defined SA of medical schools as “*the obligation of medical schools to direct their education, research and service activities towards addressing the priority health concerns of the community, the region, and/or the nation they have a mandate to serve. The priority health concerns are to be identified jointly by governments, health care organizations, health professionals and the public*”⁽¹⁸⁾; THEnet³ further defined this “public” by adding “*and especially the underserved*”⁽¹⁹⁾. In 2011, the THEnet has given SA the following definition: *Socially accountable Medical Schools hold themselves responsible for producing outcomes aligned with health workforce, priority health, and health systems needs of their communities.*

Therefore, theoretical underpinnings of Social Accountability-which originally referred to a form of state-citizen engagement to improve public service delivery⁽¹⁷⁾-are well versed in western philosophy. Consequently, comprehensible and complete translation of the concept to another context needs cultural translation as well as the linguistic one. As this was not the case, Colombians working in this area; faced difficulty in understanding SA i.e. they indicated that the term accountability was not paralleled in the Khmer language, moreover they maintained that

*“Enhancing social accountability would depend on the extent of citizens’ understanding and willingness to demand accountability from their rulers. Given the fact that the concept of social accountability remains ambiguous and complex, it is important to understand its nature in the broader social, political, cultural, and historical context of Cambodia”*⁴

Obviously this statement is discussing the SA in politics but it can easily be extended to medical education^(1, 12).

³The Training for Health Equity Network (THEnet) was established in 2008. It is a consortium of health professions schools that allied to strengthen the knowledge base and evidence related to social accountability.

⁴The Affiliated Network for Social Accountability in East Asia and the Pacific (ANSA-EAP), 2010. <https://www.ateneo.edu/sites/default/files/ANSA-EAP%20Report%202008-2011.pdf> Visited 23/10/2019

The developing world has different political and social structures that need to be considered while the concept of SA is being adapted. In this context, challenges facing ME are complex including: dichotomy between educational and health systems⁽⁷⁾, lack of medical schools' power to influence health care changes - this problem is increasing due to the underfunding of the public sector and the escalation of privatization in both systems⁽²⁰⁾ and fragmentation of efforts and limited coordination among stakeholders in health care – some are universal challenges according to Boelen et al 2019 but they are escalated in the developing world due to oppression, corruption, favoritism and lack of transparency⁽²¹⁾. Moreover, in such low-resource health systems, Primary Health Care (PHC) workers who should ideally be advocates for community service through their role and involvement with socially accountable medical school can act as negative role models for students during training. Negative experience in these settings might demotivate students to take PHC careers or work at rural levels⁽²²⁾ depriving SA from one of its highly sought after benefits i.e. influencing career choice⁽¹³⁾. So, in such conditions, how can the school realistically be socially accountable as per the typical definition? The Net and others are working hard to answer this question.

Choice of words/semantics:

Social obligation of medical schools and its levels: The obligation of medical education to society is to provide health care that will improve health of all people. As part of their brilliant efforts to advance SA, Boelen & Wollard proposed and described three levels/gradients of social obligation: social responsibility, social responsiveness and social accountability⁽²³⁾.

Social Responsibility implies implicit awareness of duties regarding society but without further commitment to verify impact on that society. Here, I agree with Boelen that the majority of medical schools are in this category⁽¹⁴⁾. **Social Responsiveness** implies engagement in a course of actions that respond to explicitly stated social needs. This relationship is seen in community-based medical schools where students interact with and respond to society. In Sudan, I think most of the States' medical schools are socially responsive – this position is decreed by their contextual factors i.e. wide gap between community health needs

and the availability of doctors.

The utmost point of the obligation gradient is *Social Accountability*. It implies active engagement of the school with all stakeholders in health at all levels of activities. Hence it ensures the impact of its product (graduate, research findings and service models) on people's health and health system performance. Medical schools will be held accountable to communities they serve^(24, 8).

In terms of verifying the state of SA through an authenticated tool in Sudan, the only school that went through the process and documented its social accountability is the Faculty of Medicine, Gezira University⁽²⁵⁾. However, the team, which evaluated the four pilot medical schools in Sudan, reported finding many socially accountable activities (*Grant & Boulet Report, 2015*). Their comments echo with a similar observation in other developing countries⁽²⁴⁾.

These gradients of social obligations as presented introduce an element of confusion. Preston et.al argued that the confusion comes from the fact that the three terms are used interchangeably⁽¹⁾, moreover, they are ambiguous and overlap with each other especially the first gradient, which I suggest changing it from "Social Responsibility" to "Social Awareness or Acknowledgment". I argue that this measure will give it boundaries and make it logical, for the following reasons:

- Boelen and Woollard used the word 'Awareness' in their description of this same first gradient (see above), which is the logical description of relationship at this level.
- The term 'Responsibility' was used as part of the definition of SA advanced by THENet; hence it is confusing to conceptualize it as a lower level.
- Cambridge dictionary defines responsibility as "*something that it is your job or duty to deal with*", which is to me a level higher than what is defined in the responsibility gradient above⁽²³⁾.
- The Arabic translation of "Responsibility" which is "*Masouliya*" refers to obligation, commitment and to some extent also accountability, so it makes it difficult to view it as the first gradient of social obligation.

Besides, there are several Arabic translations of the term Social Accountability; one also means responsibility "*Masouliya*" and another includes the term "*Muhasaba or Musa'ala* – which mean verification through some sort of higher

authority and it may imply penalty". But how can the society practice this sort of authority in our context?

To better explain the dilemma what Eraky et.al argued in their discussion about Medical Professionalism in the Arab world is referenced, they proposed a new model – the four-gates model as a lens through which medical professionalism be considered in the Arabian context. They added the new dimension of the relationship between the doctor and God and argued that in this context the doctor's obligation to the patients should be linked to this divine obligation rather than social obligation⁽²⁶⁾. Although I personally concenter this view with utmost caution, being pious is too elusive to be used for describing the desired type of doctor or how her/his relation with the community is governed. Yet, this stance reflects some deeply rooted belief in our context about to whom should doctors be accountable. Hence, translation of words should be accompanied with translation of concepts behind them or they become void and aloof.

Evolution of ME in the developed world in comparison to developing world:

The ancient history of ME tells how integrated the medical profession was with its society and how it ended up being a stranger. In the marvelous book "the Untold History of Healing" the author maintained that "*healing systems don not exist in vacuums*", rather medicine is ingrained in the context where it exists. Early healers used healing materials that exist in their natural environment, they understood their communities and knew every thing about them and they were responsible for and responsive to their communities⁽²⁷⁾.

Examining history also explains the different stances taken by medical schools in relation to their societies in the developed and developing worlds:

In the developed world, medical schools started in the 12th centaury signaling the start of professionalization of physicians; no one was allowed to practice healing without attending university education, this was not all good since it barred medicine from long practiced and tested traditions. Gradually healers got separated from their societies and to some degree they were put in ivory towers⁽²⁷⁾. Their main function of "healing the society" became distant and

abstract. Moreover, during renaissance western culture had moved towards individualism, and in relation to medicine this led to shifting the focus from populations to individuals. Besides, the business model that encroached the medical practice had widened the cleft between medical schools and their communities⁽²⁸⁾ and interfered with altruism as one of the highly valued virtues in medicine.

Flexner's report in 1910 reviewed all medical schools in the US and Canada to verify their quality and eligibility to continue offer medical programme. As a result many medical schools were closed, but the downside was that most of them were those accepting students from disadvantaged classes e.g. females, blacks and other minorities⁽²⁹⁾. This incidence and the rights-based movement mentioned earlier; raised the issue of justice and inadequate representation of some sectors of the community in the medical profession. When doctors are not representing all strata of the community especially the disadvantaged groups, this might create problems in understanding and trust in addition to poor distribution of doctors in rural areas. Other challenges like inadequate health coverage and cost effectiveness required returning to the community and pushed towards SA as a savior.

On the other side of the world, the culture is mostly collectivistic, which makes the tendency to serve the community and interact with it highly valued and expected. Serving the community is viewed as a moral obligation or a virtue⁽¹⁾; especially that the community is needy and deprived. In such context one expects that medical schools naturally collaborate with their communities and other sectors to improve health care. However, in most developing countries, ME started around the time of their independence. The nationalistic feelings of post colonial era made these medical schools aspire to have comparable educational standards of that in western medical schools, so they built modern universities and adopted hospital based education using conventional western curricula[30] not necessarily fit for their context and they also lived in ivory towers. Ironically by this time in the west, ME was heading towards student-centered and population

oriented approaches. As necessity is the mother of invention, in areas where there is huge disparities between community's health needs and health service availability; some medical schools are showing brilliant examples of SA ^(1,13) these schools e.g. Ateneo de Zamboanga school in the Philippines, might not know that what they are doing is conceptualized as "the SA", for them it is just acting responsibly by responding to the needs of their community ⁽¹⁾. Hence although the calls for SA are natural in this context, the jargon/term used might be a bit confusing and aloof.

Generally speaking accreditation guidelines are designed to act as a lever for change and reform towards the desired standards that is assumed to mark excellence in ME. Recently experts rallied to consider SA of a medical school in terms of its impact on the people's health - as a mark of excellence that is to be verified through accreditation. Boelen and his colleagues reviewed some of the international accreditation guidelines and noted that the primacy of SA was stated but there were no explicit standards that would evaluate SA beyond the educational processes ⁽³¹⁾ this fact again points to the same problem, that SA is an illusive term and it needs to be operationalized.

While, there is no doubt that the values behind SA are universal, how they can be translated into relevant ideas - to be actualized - might be context-bound. For example, acting responsibly and with integrity and being held accountable to higher authority are universal virtues, but why should one act in such a fashion or what are the actions that counts or represents this "higher authority", might also differ according to culture and context e.g. it may be appropriate to link SA to other meaningful sources of authority e.g. God for Faith-driven societies ⁽²⁷⁾. Health systems all over the world are faced with many local and universal challenges that call for the values behind SA i.e. justice, accessibility, affordability, quality and relevant people's centered health care. Medical Schools and their graduates are important stakeholders who can inflict big changes to promote health and support social change - e.g. Sudanese Medical Doctors spearheading revolutions - but they are not the sole actors in this arena. Hence, any

sustainable amelioration of health is contingent on efficient networks and strong intersectional collaboration, moreover “*success... is often influenced by the strength of mechanisms to hold key actors accountable in the development and implementation process*”⁽³¹⁾ (Boelen et. al 2019).

SA might be the chased after panacea as it implies that ME fulfill its primary purpose: The most obvious yet neglected fact is that ME exists to respond to the health needs of the society. Through SA, medical schools ensure and verify that they are indeed responding to the priority health needs of its society and improving its health⁽⁵⁾.

Conclusion:

Promises to provide answers to current challenges are the carrots of the SA paradigm. However, for this model to fulfill its awaited benefits, it has to be contextualized and operationalized. The ambiguities surrounding SA in medical education can be dissipated if we adopt a more flexible view to the concept and its attributes. Progress in this arena is linked to forming allies and networks and this direction has already produced evidence of successful experiences. In this small world everyday and every challenge we face e.g. the current COVID-19 pandemic, points out to a sole reality that we are all on the same boat. We need to join hands, minds and hearts to sail together, and to prevail let's make our unity in embracing our diversity.

References:

1. Preston R, Larkins S, Taylor J, Judd J. From personal to global: Understandings of social accountability from stakeholders at four medical schools. *Medical Teacher*. 2016 Oct 2;38(10):987-94. 1
2. Mann KV. Theoretical perspectives in medical education: past experience and future possibilities. *Medical education*. 2011 Jan;45(1):60-8. 2
3. Ebert RH, Ginzberg E. The reform of medical education. *Health Affairs*. 1988;7(suppl 2):5-38. 3
4. Hamad, 1991) Hamad, B. (1991). Community-oriented medical education : what is it? / B. Hamad. *Medical education 1991 ; 25(1) : 16*
22 <https://apps.who.int/iris/handle/10665/47007> 4
5. Boelen, Blouin, Gibbs, Woolard, 2019 Boelen C, Blouin D, Gibbs T, Woollard R. Accrediting excellence for a medical school's impact on population health. *Educ Health 2019;32:41-8*. 5

6. Boelen et. al, (2016) Charles Boelen, David Pearson, Arthur Kaufman, James Rourke, Robert Woollard, David C. Marsh & Trevor Gibbs (2016) Producing a socially accountable medical school: AMEE Guide No. 109, *Medical Teacher*, 38:11, 1078-1091, DOI:10.1080/0142159X.2016.1219029 6
7. Lindgren S, Karle H. Social accountability of medical education: aspects on global accreditation. *Medical teacher*. 2011 Aug 1;33(8):667-72. 7
8. Boelen C, Dharamsi S, Gibbs T. The social accountability of medical schools and its indicators. *Education for health*. 2012 Sep 1;25(3):180. 20
9. Littlewood S, Ypinazar V, Margolis SA, Scherpbier A, Spencer J, Dornan T. Early practical experience and the social responsiveness of clinical education: systematic review. *Bmj*. 2005 Aug 11;331(7513):387-91. 27
10. Strasser R, Neusy AJ. Context counts: training health workers in and for rural and remote areas. *Bulletin of the World Health Organization*. 2010;88:777-82. 28
11. Abdalla ME. Accreditation in medical education: concepts and practice. Faculty of Medicine-Jazan University, KSA. 2012. 8
12. Abdolmaleki M, Yazdani S, Momeni S, Momtazmanesh N. Social accountable medical education: a concept analysis. *Journal of Advances in Medical Education & Professionalism*. 2017 Jul;5(3):108.9
13. Murray, Richard B., et al. "Medical schools as agents of change: socially accountable medical education." *Medical Journal of Australia* 196.10 (2012): 653-653.
14. Boelen C. Why should social accountability be a benchmark for excellence in medical education?. *Educación Médica*. 2016 Jul 1;17(3):101-5. 10
15. <http://healthsocialaccountability.sites.olt.ubc.ca/files/2012/01/Global-Consensus-Arabic-final.pdf> 11
16. Sagasti F. A human rights approach to democratic governance and development. 2013: 125-136. 12
17. Malena, C, F. Reiner, and J. Singh. *Social Accountability An Introduction to the Concept and Emerging Practice*. Social Development Papers Participation and Civic Engagement. 2004. 13
18. Boelen C, Heck JE, World Health Organization. *Defining and measuring the social accountability of medical schools*. Geneva: World Health Organization; 1995. 14
19. Ross SJ, Preston R, Lindemann IC, Matte MC, Samson R, Tandino FD, Larkins SL, Palsdottir B, Neusy AJ. The training for health equity network evaluation framework: a pilot study at five health professional schools. *Education for Health*. 2014;27:116-26. 15
20. De Maeseneer J, Willems S, De Sutter A, Van de Geuchte I, Billings M. *Primary health care as a strategy for achieving equitable care: a literature review commissioned by the Health Systems Knowledge Network*. 16
21. Uzochukwu, Benjamin, et al. "Accountability mechanisms for implementing a health financing option: the case of the basic health care provision fund (BHCPF) in Nigeria." *International journal for equity in health* 17.1 (2018): 100.

22. Wandiraa G, Maniple E. Do Ugandan medical students intend to work in rural health facilities after training? *Health Policy and development*. 2009 Dec. 7:3. 17
23. Boelen C, Woollard R. Social accountability: the extra leap to excellence for educational institutions. *Medical teacher*. 2011 Aug 1;33(8):614-9. 18
24. Kaufman A, Powell W, Alfero C, Pacheco M, Silverblatt H, Anastasoff J, Ronquillo F, Lucero K, Corriveau E, Vanleit B, Alverson D. Health extension in New Mexico: an academic health center and the social determinants of disease. *The Annals of Family Medicine*. 2010 Jan 1;8(1):73-81. 19
25. Elsanousi S, Elsanousi M, Khalafallah O, Habour A. Assessment of the social accountability of the faculty of medicine at University of Gezira, Sudan. *EMHJ- Eastern Mediterranean Health Journal*. 2016;22(4):258-66. 21
26. Al-Eraky MM, Donkers J, Wajid G, van Merriënboer JJ. A Delphi study of medical professionalism in Arabian countries: the Four-Gates model. *Medical teacher*. 2014 Apr 1;36(sup1):S8-16. 22
27. Book: <https://lcn.loc.gov/2016048623> Storl, Wolf-Dieter, author. *Uz-Medizin. English The untold history of healing: plant lore and medicinal magic from the stone age to present / Wolf D. Storl*. Berkeley, California : North Atlantic Books, [2017]©2017334 pages : illustrations ; 23 cm R733 .S7613 2017ISBN: 9781623170936 (paperback)1623170931 (paperback) 23
28. Relman AS. Medical professionalism in a commercialized health care market. *Jama*. 2007 Dec 12;298(22):2668-70. 24
29. Harley EH. The forgotten history of defunct black medical schools in the 19th and 20th centuries and the impact of the Flexner Report. *Journal of the National Medical Association*. 2006 Sep;98(9):1425. 25
30. Al Mahdi, Tahra Al Sadig. "Overview of the Course of Undergraduate Medical Education in the Sudan." *Sudan Journal of Medical Sciences (SJMS)* (2019).
31. Boelen, Charles, et al. "Accrediting excellence for a medical school's impact on population health." *Education for Health*32.1 (2019): 41.