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Adopting WFM E Standards; Case Study of Saudi Arabia

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Abstract

The Kingdom of Saudi Arabia has witnessed a full-size boom in the number of scientific colleges over the past a long time, driven by using the growing call for healthcare services. This rapid enlargement has raised concerns approximately the exceptional and consistency of medical schooling throughout the one-of-a-kind establishments. Ensuring amazing medical training is critical, as it immediately impacts the competence and performance of future healthcare carriers. Robust high-quality guarantee mechanisms are important to maintain standards and promote continuous development. The proliferation of medical schools worldwide with questionable education quality, coupled with the increased migration of physicians, has raised international concerns about safeguarding the practice of medicine and, ultimately, the service offered to patients. This study aims to examine the potential adoption and implementation of the World Federation of Medical Education (WFME) standards in medical schools in an emerging country context using the Kingdom of Saudi Arabia as a case study. The study investigated the quality assurance systems in four medical schools using semi-structured interviews developed based on the WFME framework to identify gaps that the WFME global medical standards could address and understand the challenges faced in the implementation of quality assurance, the findings of this research will contribute to the understanding of the implementation of quality assurance frameworks in medical education, with specific insights from the Saudi Arabian context. The outcomes can inform policymakers, medical education institutions, and stakeholders in their efforts to enhance the quality and consistency of medical education in the Kingdom.

Keywords World Federation of Medical Education, Quality Education, KSA Medical Schools.

Introduction

Quality in education is an essential aspect that any educational provider and regulator would aspire to improve. In medical education mainly, there is a broader recognition that the quality of medical service delivery is a reflection of the quality of the medical education received (Bazargan, 2014); (Cantillon, 2017); (Dawka, 2013). Therefore, the quality of health care delivery could be improved by focusing on developing the quality of medical education. The close interface between medical education and health care delivery has increasingly been recognised at both national and global levels (Brauer & Ferguson, 2015); (Karle, 2006). This recognition has resulted in the increasing calls for strategic partnerships to improve the quality of medical education (Lilley & Harden, 2003). Besides, the growing trends towards the globalisation of healthcare which is reflected in the increasing number of migrating doctors and cross-border education providers (Karle, 2006) has hastened the need for an international perspective to quality implementation in medical education. However, despite the wide international adoption for quality improvement, most Gulf Cooperation Council (GCC) countries, Saudi Arabia included, have not adopted these international medical education standards (Khani & Zarghami, 2013); Smith and Abouammoh, 2013). Saudi Arabia established its independent authority responsible for determining standards and procedures for accreditation and quality assurance for post-secondary institutions and programs (NCAAA, 2018).

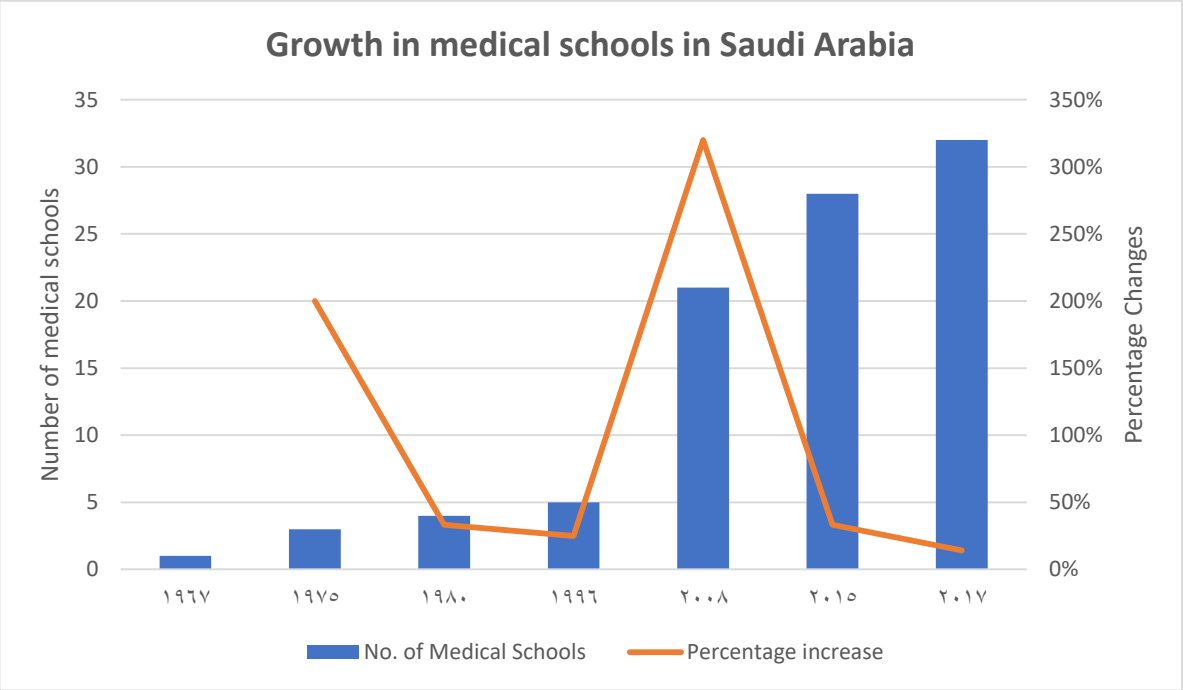
Justification of this Study

While the NCAAA standards and accreditation process has contributed to improving education quality awareness and practices in Saudi Arabia (Alrebish, Jolly, & Molloy, 2017), these standards have been criticised for being too general (Smith and Abouammoh, 2013) and therefore, not specific to the medical education requirements. (Al-Muhanna, 2009) argued that the lack of a more specific standardised structure for medical schools to base and determine the format of education and the skills required has contributed to the failure to meet the medical professional demands. (Al-Muhanna, 2009) found that most medical institutions had no clear vision, had objectives that were obscure or unknown to most staff and students had also replicated western medical curricula with little or no adaptation to the local health needs. Besides, there was no uniformity of curricula and standards of medical education across the medical colleges. Similarly, (Hamdy, et al., 2018) found that while programs, as described on paper, look

good, what needed to be evaluated is the curriculum 'in action' especially that many medical schools have challenges "related to shortages of faculty, availability of clinical training facilities, and the need for more integration with the national health care services.

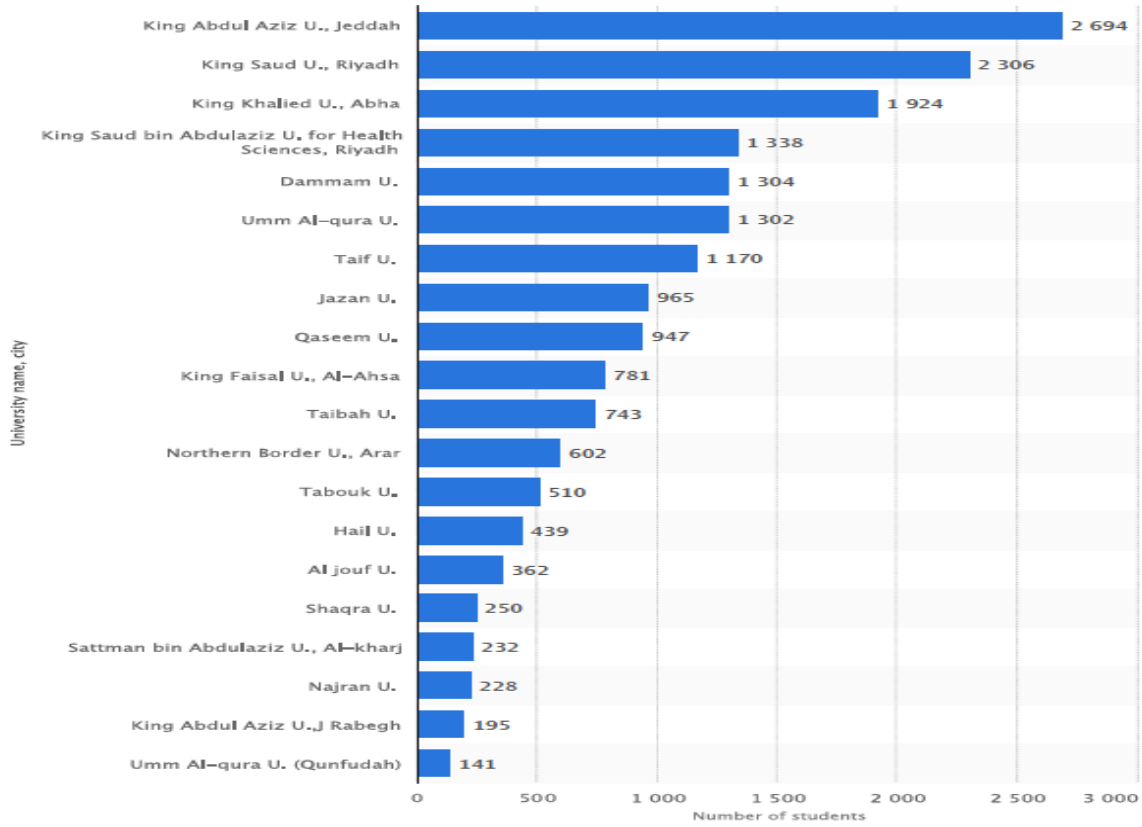
The Ministry of Higher Education, Saudi Arabia, invited the private sector to contribute and invest in higher education (Telmesani et al., 2011). With the support of the Ministry of Higher Education, the total number of medical schools increased to 21 by 2008, comprising three private and 18 governments (Hassanien, 2014), representing a 320% increase. Since 2008, 10 new medical schools have been established, bringing the total number of medical schools to 31 by 2017 (Figure 1). This essentially represents a growth of over 33% within ten years. The largest medical schools by student numbers are shown in figure 2 below.

Figure 1: Growth in medical schools in Saudi Arabia



Source: Ministry of Higher Education, KSA

Figure 2: Number of students in the top 20 medical schools in Saudi Arabia



Source: Statista, 2018

Literature Review

(Lilley & Harden, 2003) highlight that "while many nations have rigorous evaluation and accreditation procedures to help ensure the quality of the medical education provided by their medical schools and others have embryonic accreditation procedures, most have no such policies and individual schools are free to implement their criteria in terms of the students admitted, their training and their assessment." The result is a wide variety in the quality and standard of education and training worldwide. Further, given the changing global trends and the nature of medical education, as socially vital since it provides a means for improved quality of life and social mobility, the need for internationally recognisable medical education standards become even more imperative. In this vein, several attempts have been undertaken over the years to provide some standardised structure, process, or product of medical education (Al-Muhanna, F.A.; Subbaroa, V.V., 2003). Notable among these international efforts are the works of the World Health Organisation (WHO), which defined the standards of medical education in terms of the local community and produced the 'five-star doctor' model. Further, the

World Federation of Medical Education (WFME) embarked on the development of international standards in medical education aimed at providing a tool for quality improvement. The WFME, in particular, has been widely endorsed and is currently being used in many regions around the world as a basis for improving medical education through providing a template for national and regional accreditation systems (Karle, 2006). The International Standards Organisation (ISO, 2018) defines standards as: documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines or definitions, to ensure that materials, products, processes and, services are fit for their purpose

Education standards play an essential role in education quality improvement by clearly defining what knowledge and skills are to be acquired and what kind of performance is to be expected (Joshi, 2012). These standards define the knowledge and skills that students are expected to possess at the different critical points in the educational path (National Research Council, 2001). There is no universally accepted definition of standards, as several definitions have been advanced. In this respect, standards in medical education can be perceived as the "professional attitudes, ethics and statements about knowledge and clinical skills graduates should have, and be able to demonstrate" (Al-Muhanna, F.A.; Subbaroa, V.V., 2003). One of the key characteristics of a medical education standard is that it should be "definable, meaningful, appropriate, measurable and acceptable by the users" (Hosseini, Einollahi, Zand, Nazaran, Niaei, & Avarzamani, 2002).

The importance of quality assurance in medical education

The underlying aim of any medical education system is to maintain and improve the quality of health care delivered by medical professionals to patients (Abdulrahman, 2008). The introduction of quality control systems in medical education is directed at promoting the quality of the product, i.e., the medical professionals. Further, the medical education system should also be responsive to the changing needs of healthcare (WHO, 2001). Thus, several calls for the need for the medical education system to reform and innovate to address the changing social and political environment have been made in the past (Hosseini, Einollahi, Zand, Nazaran, Niaei, & Avarzamani, 2002). Social accountability, in particular, in terms of the effectiveness and quality of medical education, has constantly been the main focus (Karle, 2006); (Lilley & Harden, 2003). Social accountability refers to the "willingness and ability to respond to the needs of society, of patients and the health and health-related sectors and to contribute to the national and international development of medicine by fostering competencies in health care, medical education and medical research" (WFME, 2015, p. 17). Organisations, medical schools included, use quality standards in the quality assurance systems as a way of managing quality in a more systematic manner (Buwalda, Braspenning, van Roosmalen, Van Dijk, & Visser, 2017). The need for medical schools to have efficient and effective quality assurance systems arises from the increasingly fierce competition

for students and resources that the education industry is currently faced with (WHO, 2001). The adoption and implementation of quality standards in medical education have been recognised as essential elements in the promotion of quality of medical professionals (Biggs, 2001); (Hopkins, 2015); (Thomas, 2015). As a result, medical educational institutions need to either establish institutional quality standards or adopt already established (national or international) quality standards to assure the quality of education offered. This is important as quality assurance requires transparency and dissemination of outcomes to all the stakeholders (Joshi, 2012), which makes the reporting based on established quality standards more effective.

Several factors contribute to the increasing relevance of quality standards in medical education. Firstly, with increased globalisation, there is a growing need for a set of minimum standards for medical education that could be implemented at a global level to build confidence in the medical professionals (Lilley & Harden, 2003). This is also notably the case given that many countries have no nationally accredited quality assurance systems (Al-Muhanna, F.A.; Subbaroa, V.V., 2003). This is more prevalent in less developed countries (Khani & Zarghami, 2013). The result is a wide variety of quality and standard of education and training worldwide. This wide variety of quality practices could be addressed by having some universally accepted standards. As depicted in section 2.2, these standards could be voluntary and private, which could supplement the local mandatory or public standards where these exist. Secondly, as a result of globalisation, there has been an increased migration of medical professionals (Eckhert, 2002); Ray et al., 2006; Van Zanten et al., 2012). Without uniformity in medical education, there are concerns regarding the knowledge and skills of medical professionals, especially from developing and emerging countries. In this respect, with international accreditation, validation, and audits, there is an assurance worldwide of the knowledge and skills of immigrant medical professions. Thirdly, besides the changing global trends, the nature of medical education as contributing to the quality of healthcare provision necessitates close monitoring. Medical education contributes to the quality of healthcare, making it socially relevant. This makes it more relevant to have mandatory or public standards, stipulating minimum requirement for quality improvement, in any nation.

Factors that affect the implementation of quality standards

As quality standards contribute to the quality assurance system, the factors that affect the successful implementation of quality standards in medical schools could be easily understood from the broader perspective of the factors that affect the implementation of quality assurance systems in educational establishments. In the implementation of quality assurance systems in medical schools through quality standards, it is iimperative that 'patient safety' is seen as the ultimate priority of the quality assurance system implementation (GMC, 2015). *Several factors underlie the successful implementation of quality standards. Firstly, an educational quality assurance system requires a learning*

environment and organisational culture that is attuned to quality improvement (GMC, 2015)*;* (Sallis, 2014). *The appropriate learning environment and organisational culture would support good practice that enables the achievement of the learning outcomes required by the medical school curriculum* (GMC, 2015). *Secondly, a quality assurance system requires good governance and leadership* (Aquilani, Silvestri, Ruggieri, & Gatti, 2017); (Arunachalam & Palanichamy, 2017). The top management commitment to quality improvement should be demonstrated at the different institutional levels (i.e., operational, managerial, and strategic levels). (GMC, 2015) highlights that the "educational governance system continuously improves the quality and outcomes of education and training by measuring performance against the standards, demonstrating accountability, and responding when standards are not being met." Besides, the educational governance system helps ensure that education and training are fair and based on principles of equality and diversity.

Thirdly, for the successful implementation of quality standards, there should support to learners and educators (GMC, 2015). In this respect, educators should possess the necessary knowledge and skills for their roles and also get the appropriate support and resources needed to deliver the required education and training. This aspect is consistent with the requirement for a supportive learning environment. From this perspective, institutions should perceive employees as the most valuable contributor to quality (Slack et al., 2010). Further, with respect to learners, the medical education institution should make sure that learners get adequate educational and pastoral support in order to achieve the designed education curriculum (GMC, 2015).

Fourthly, with a supportive learning environment, medical institutions should develop and implement curricula and assessments that can impact the required knowledge and skills in the learners (GMC, 2015). This is important as the qualified medical professionals from the institutions should demonstrate the expected high level of knowledge and skills to ensure proper medical practice. The requirements and expectations of stakeholders from the medical education system should be appropriately communicated to at the different levels of the institution in order to build a sense of social responsibility and accountability and shared vision and commitment (Cruess, Cruess, & Steinert, 2016); (Karle, 2006); (Lilley & Harden, 2003). Adopting or implementing quality standards, thus, forms an important aspect of quality assurance in the education system. These *quality standards must be applied to both the public and private sector education and also be supported by a comprehensive regulatory regime (The Commonwealth, 2016). The WFME standards (arguably) provide a source of comprehensive framework/guideline for quality assurance.*

The World Federation for Medical Education Global Standards

The World Federation for Medical Education (WFME) has developed global medical education quality standards. The WFME in 1998 launched a programme on international standards in medical education aimed at improving standards that should serve as a tool for quality improvement (WHO, 2018). The first set of global standards was issued in 2001, and subsequent revisions have been made since then. The international standards in basic medical education were "designed to enable medical schools at various stages of development, and with different educational, socio-economic and cultural conditions, to use the system of standards at a level appropriate to them" (WFME, 2003, p. 5). Thus, these global standards take into consideration the variations that exist among countries in the teaching tradition, culture, socio-economic conditions, the health and disease spectrum, and different forms of health care delivery systems (WFME, 2018).

The WFME global standards are relevant as they essentially address the problems identified in section 2.5 above. As highlighted, international standards in medical education are necessary because of increased globalisation, migration of medical professionals and cross-border education providers, the proliferation of medical schools worldwide with questionable education quality and changing social needs (Karle, 2006); (Lilley & Harden, 2003); (Van Niekerk, Christensen, Karle, Lindgren, & Nystrup, 2003). Further, international standards help to "address national problems and challenges resulting from changes in the healthcare delivery service, from institutional conservatism, and from insufficient management and leadership" (Karle, 2006), p. s44). Thus, the WFME standards would provide an avenue to address problems at both the national level and institutional levels. The advantage of the WFME global standards is that they promote the education quality while recognising the uniqueness of the social, economic and political context of the nation. Diversity of educational programmes, WFME (2018) state, should be promoted in order to account for the different educational, social, economic, and cultural conditions, different patterns of disease, and to support social responsibility. The benefit of the WFME global standards is that they do provide a template, and not a universal core curriculum, for medical education institutions and agencies which "accredit them to define institutional, national and regional standards, and to act as a lever for quality improvement" (WFME, 2018). In this way, the standards still promote national and regional autonomy.

Studies on medical education quality standards Saudi Arabia and The Middle East

Few studies exist (Al-Muhanna, F.A.; Subbaroa, V.V., 2003); Hamdy et al., 2010; Telmesani et al., 2011) that have examined the quality of medical education in the Kingdom of Saudi Arabia. However, none of these studies have examined the possible application of global standards in the country. Hamdy et al. (2010), in their study of medical education in the Gulf Cooperation Council (GCC), found that older medical schools were reviewing their education curriculum while new medical schools are increasingly developing their programs following current trends in medical education

which include problem-based learning and integrated curricula. (Al-Muhanna, F.A.; Subbaroa, V.V., 2003), in their study of standards in medical education and GCC countries, argue that a "radical change in medical education is necessary" in the GCC countries, Saudi Arabia included. Further, Telmesani et al. (2011) observed an expansion of the quantity in medical education which has been associated with a drive for higher quality assurance monitoring while (Al-Muhanna, 2009) found that the lack of a standardised structure for medical schools to base and determine the format of education and the skills required, contributing to the failure to meet the medical professional demands. Besides, (Al-Muhanna, 2009) found that most medical institutions had no clear vision, had objectives that were obscure or unknown to most staff and students, and had also replicated western medical curricula with little or no adaptation to the local health needs. Besides, there was no uniformity of curricula and standards of medical education across the medical colleges.

Research Methodology

This is an exploratory and descriptive study to examine the readiness of private medical schools in KSA towards implementing the WFME global medical standards. As Easterby-Smith et al. (2002, p. 27) argues that an understanding of the philosophical issues is beneficial, The Interpretivism approach has been adopted as the study seeks to understand the subjective interpretations of the education quality of the participants from the medical schools in Saudi Arabia. According to Interpretivism, the multiple interpretations or views of a social phenomenon can only be captured through the employment of relatively less rigid data collection techniques such as those within a qualitative research approach (Saunders et al., 2012). The use of structured interviews in this context was aimed at providing an understanding and evaluation of the quality assurance systems of selected medical schools in Saudi Arabia. The interpretations and explanations ascribed to the implemented quality assurance systems in the participants' respective medical schools revolve around aspects identified by the WFME global standards as key in quality implementation and monitoring. Thus, the structured interview questions (see appendix A) were developed to assess quality in nine components of medical education which are:

1. mission and objectives,
2. educational programme,
3. assessment of students,
4. students,
5. academic staff/faculty,
6. educational resources,
7. programme evaluation,
8. governance and administration and
9. Continuous renewal (WFME, 2018).

In each component, participants were asked questions that enabled the assessment of the existence or non-existence of component characteristics that contribute to quality in medical education.

Data collection and analysis

The total number of medical schools had reached thirty-two by January 2018. The thirty-two medical schools are composed of private (nine schools) and government (23 schools). However, the focus of this study was on the privately funded medical schools. This is due to accessibility constraints and the general argument in the literature that quality of education in privately funded medical schools is expected to be a challenge due to the lower financial base (Haque, 2017); (Shehnaz, 2010). Further, strategic and policy changes are also likely to be faster in privately owned medical schools that are not characterised by bureaucracy and red tape (Haque, 2017). Further, because of some constraints, face to face interviews was not possible. Hence, an online structured interview was designed, and participants sent the online link to access the interview questions (see appendix B). Appendix D shows an example of a completed structured interview. The benefit of this approach was that it gave the participants enough time to complete the structured interviews as they could finish in parts and continue at a later date. Further, some questions were left open-ended, enabling the participants to answer as detailed as possible.

As this study was exploratory, the aim was to capture as many aspects as possible in the identified quality assurance components. The respondents have been identified by letters A, B, C, and D. The positions of the respondents in their respective medical schools and how long they have served are shown in table 1.

Table 1: Position of respondents in medical schools

Respondent	Position	Years served
A	Professor of Anatomy	10
B	Professor	7
C	Director of Quality management - Faculty of Medicine	5
D	Director of Quality and Academic Accreditation	25

In addition to the analysis of structured interviews, documentary evidence has been sought on the current voluntary and regulatory requirements regarding medical education quality assurance implementation system; this documentary analysis helps complement the analysis of primary data.

Discussion

The key themes arising from the data obtained through structured interviews relate to the aspects of quality assurance that the WFME standards emphasise. These aspects mainly cover the entire process of the medical education process. Thus, the first part of the section discusses findings with respect to institutional mission and objectives, educational programme, assessment of students, students, academic staff/faculty, educational resources, programme evaluation, governance and administration, and continuous renewal. The second section reveals the identified constraints/challenges in the implementation of quality assurance systems. In the examination of the quality assurance systems implemented by Saudi medical schools, gaps are identified, that the WFME standards could potentially address. The WFME offers a developmental perspective to the attainment of quality assurance levels within any institution. As such, these standards can be used as fundamental to quality development levels or a tool for quality assurance and development of primary medical education. A medical school could, therefore, use these standards for self-evaluation and self-improvement processes. As highlighted in section 3.5, the development of the structured questions was based on the WFME standards, which have a developmental and self-evaluation perspective.

According to the WFME standards, a medical school must clearly outline its mission and objectives to its constituency and the health sector it serves (WFME, 2018). In its mission, the medical school is expected to outline the aims and educational strategy that would result in 'competent, capable, prepared and committed' medical professionals. The mission should have been developed encompassing "the health needs of the community, the needs of the health care delivery system and other aspects of social accountability" (WFME, 2015, p. 15). The mission developed by the medical school should also cover aspects related to medical research attainment and perspectives of global health.

Some aspects are partly or not fully addressed in the mission statements relate to the social accountability of the medical schools. In this respect, a gap exists in the explicit and appropriate communication of the institutions' social responsibility and accountability. Several studies have highlighted the importance of acknowledging the wider social responsibility of medical schools in society (Cruess, Cruess, & Steinert, 2016); (Karle, 2006); (Lilley & Harden, 2003). A document review of the NCAAA also shows no explicit mention of the social accountability of the schools. Further, two of the respondents observed that their medical schools' missions did not encompass research attainment nor aspects related to global health.

Further, with respect to the participation in the formulation of the missions and educational outcomes, there were some consistencies across the four medical schools. The consistencies related to the identification of the principal stakeholders; which were identified as students, medical community, society/public, and government. Respondent C also specified the teaching hospitals affiliated with the medical school while Respondent D included the 'patients,' 'students' families' and 'medical jobs market' as

part of the principal stakeholders. The reference to hospitals and patients shows an acknowledgement of the intended impact of medical professionals on healthcare delivery (Abdulrahman, 2008). Some inconsistencies, however, related to the role or input of these stakeholders in the formulation of mission and intended educational outcomes. While not specifying the specific roles played, two out of the four participants (50%) indicated that the stakeholders have an input in the process of formulating the missions and educational outcomes.

Education programme and education outcomes

With respect to education programmes, the WFME standards require that medical schools define the overall curriculum that prepares students for life-long learning (WFME, 2018). The delivery of such a curriculum should also consider principles of equality. As a medical school, the developed education curriculum should include elements of original or advanced research that have analytical and critical thinking. The curriculum should also identify and incorporate the contributions of the biomedical sciences, behavioural and social sciences, and clinical sciences to scientific, technological, and clinical development. This should remain flexible in order to anticipate the needs of the society and the health care system. All medical schools examined showed that their curriculum and instructional/learning methods stimulate, prepare, and support students to take responsibility for their learning process. However, how this is achieved is different among the medical schools. Respondent A explained that this is achieved through "student centred learning" which essentially supports both "team based learning" and "problem based learning". Problem based learning is also the approach attributed to by Respondent C whilst respondent D refers to "active learning" as the approach utilised in order to prepare students for life-long learning.

With respect to educational curriculum delivered in accordance with principles of equality, three out of four medical schools (75%) indicated that equality is directly promoted in the curriculum. Similarly, only one respondent (25%) stated that their curriculum did not include elements of original or advanced research. Some differences in participants' responses were observed with respect to their curriculum contributing to current and anticipated needs of the society and the health care system. Respondents A and C referred to continuous research in common diseases identified in the Kingdom of Saudi Arabia. For instance, respondent C stated that "continuous and advanced research, also how to treat and reduce common diseases" was the way in which the curriculum contributed to the current and anticipated needs. Respondent B, whilst not emphasising continuous and advanced research indicated that the medical school takes steps to identify common diseases. According to the respondent B, the common diseases and condition seen in the community are addressed in the curriculum, and a list of must-see cases are prepared and announced so that each student has the opportunity to see and discuss these common cases. Some respondents, however, stated that the "problem-based learning approach" (Respondent A) and "easy and flexibility of curriculum"

(Respondent C) captures these aspects. Further, in all medical schools examined, the curriculum allows students to have early patient contact and participation in patient care. The different components of clinical skills training have also been structured according to the stages of the study programme.

With respect to intended educational outcomes, the WFME standards recommends that medical schools should define the intended educational outcomes that students should exhibit upon graduation which might be related to their future roles in the health sector, their commitment to and skills in life-long learning or even the wider health needs of the communities (WFME, 2018). All medical schools investigated revealed that these educational outcomes are made known to the public through the institutions' websites and community medicine practices. Respondent D, particularly, stated that the medical school was using "social media, local and international higher education conferences and exhibitions" in order to publicise these educational outcomes. Further, in defining these intended educational outcomes, Respondent B highlights that these outcomes are "defined with the participation of a large group of faculty members and approved by the University bodies" whilst respondent C stated that these are defined in order to "develop and identify students' standards appropriately and identical with information, knowledge, skills, attitudes, behaviour and experience". Respondent D further highlights that the learning outcomes are defined through "comprehensive learning outcomes matrix for our educational programs". As such, there are no significant gaps observed in this respect among all medical schools examined. This is observable also with respect to the specification of intended outcomes of student engagement in medical research.

Students and assessment

Similar to educational outcomes, there is some consistencies observed among the medical schools examined regarding students and their assessments. Table 3 summarises the evaluation of aspects related to students and their assessment among the 4 medical schools. The differences between the medical schools is observable with respect to the need to use external examiners. Only 25% of the medical schools encourages the use of external examiners. The WFME standards advices that medical schools should "encourage the use of external examiners" (WFME, 2015, p. 27). According to the WFME standards, it's imperative that medical schools ensure that methods and results of assessments avoid conflicts of interest and that the assessments are open to scrutiny by external expertise. Further, the WFME standards provide that medical schools should state the relationship between selection and the mission of the school, the educational programme and desired qualities of graduates. A review of the four medical schools shows that only two have specified this relationship while the other two only relate the selection to the educational programmes.

Academic staff/faculty and educational resources

The WFME standards stated that medical schools must formulate and implement a staff recruitment and selection policy which among others: "outline the type, responsibilities

and balance of the academic staff/faculty of the basic biomedical sciences, the behavioural and social sciences, and the clinical sciences required to deliver the curriculum adequately; address criteria for scientific, educational, and clinical merit, including the balance between teaching, research and service functions; and specify and monitor the responsibilities of its academic staff/faculty.." (WFME, 2015, p. 32). Further, in the formulated policy for staff recruitment and selection, medical schools need to take into account, aspects such as economic considerations and relationship to the medical school mission. Some shortcomings were observed in one medical school in this quality assurance aspect. In particular, respondent B stated that the medical had no specific school policy for staff recruitment and selection, nor does the policy take into account economic considerations or relate to significant local issues. However, medical school does consider its teacher-student ratios periodically to make sure it's relevant to the curricular components.

With respect to educational resources, respondent A stated that medical school improves its learning environment to match up with developments in educational practices through "workshops, discussions, feedback from externals and continuous education" whilst respondent B commented that "new facilities (e.g. classrooms, clinical skills labs, laboratories, etc.) are built according to the needs of the students, and the curricular changes". These comments are similar to respondent C, who stated that the medical school encourages teamwork and workshops, and does continue to upgrade existing facilities (library, laboratories, classrooms, etc.). However, the use of existing and new information and communication technology was mostly attributed to independent learning as compared to other potential applications such as accessing data, managing patients and working in health care delivery systems. The WFME standards recommend that medical schools should enable teachers and students to use existing and exploit appropriate new information and communication technology for independent learning, accessing information, managing patients and working in health care delivery systems (WFME, 2015, p. 35). Further, medical schools should "optimise student access to relevant patient data and health care information systems" (ibid). In this respect, the medical schools fall short of the standard.

Programme evaluation and governance

Programme evaluation and governance form another critical aspect of medical education. Programme evaluation is "the process of systematic gathering of information to judge the effectiveness and adequacy of the institution and its programme" (WFME, 2015, p. 38). Every medical school is expected to: have a programme of routine curriculum monitoring of processes and outcomes; establish and apply a mechanism for programme evaluation; and also ensure that relevant results of evaluation influence the curriculum (WFME, 2015). In all the medical schools examined, there is a right policy to obtain and use feedback results for programme development which is recommended by the WFME standards also. However, there are differences relating to how the schools

analyse performance of cohorts of students and graduates. Some similarities in approaches are evident in medical schools B and C. Further; respondent D explains that the medical school's periodical evaluation of its academic leadership is done through "quality committee meetings" whilst medical school C involves stakeholders utilising questionnaires. There are also differences observed regarding medical schools exercising autonomy to direct resources, including teaching staff remunerations, as a way towards achieving intended educational outcomes. For instance, respondent D indicated that the medical school has no actual autonomy in the direction of resources contrary to respondent B, who highlighted that the school determines the staff policy without external influence. Differences also exist regarding programme modification in response to opinions in the society/community with one medical school, indicating that it does not adjust its programmes in light of these. The answers regarding the adjustment to changes or developments in medical sciences and health need where through adjusting the curriculum and mission objectives (Respondent A) and through curriculum development and researching diseases prevalent in the Saudi Arabia (Respondent C).

Administration and continuous renewal

A review of the medical schools shows that they all have an internal programme for quality assurance which is subject to regular review. The four medical schools examined have either a department or committee that is in charge of quality assessment and monitoring. The institutional quality assurance management system is mainly based on the Saudi Arabia's National Commission for Academic Accreditation & Assessment (NCAAA) guidelines (see section 2.5). One of the medical schools (medical school D) examined, however, has gone beyond the NCAAA guidelines to incorporate the ISO 9000 – Quality management standards and the Saudi Commission for Health Specialties (SCFHS) framework. The SCFHS is a professional body that regulates healthcare related practices and accreditations at all levels in Saudi Arabia (SCFHS, 2018). The adoption of NCAAA guidelines, however, was done at different times (see table 5 below) with the earliest of these adopted in 2008. Each of the medical schools have indicated commitment to a review of their quality assurance systems. This is consistent with the WFME standards that state that "the medical school must as a dynamic and socially accountable institution: initiate procedures for regularly reviewing and updating the process, structure, content, outcomes/competencies, assessment and learning environment of the programme; rectify documented deficiencies; and allocate resources for continuous renewal" (WFME, 2015, p. 45). The study also sought to understand the significant constraints that undermine the implementation of quality assurance systems in medical schools. As discussed in section 2.7, several factors affect the implementation of quality assurance system in institutions which include a *learning environment and organisational culture that is tuned to quality improvement* (GMC, 2015)*;* (Sallis, 2014), *good governance and leadership* (Aquilani, Silvestri, Ruggieri, & Gatti, 2017), supporting learners and educators (GMC, 2015) and development and implementation of

curricula and assessments that are able to impact the required knowledge and skills in the learners.

An investigation into the four medical schools reveals some of these aspects are constraining the effective implementation of quality assurance systems. Lack of sufficient top management support was highlighted as one of the major challenges. Respondent A, for example stated that "Accreditation committee, Vice Dean's office" did not provide the support needed. Further, the organisational culture was highlighted as not attuned to quality improvement with observations such as "delays in reports from department administrators" (Respondent C) and "reports from the course and clerkship directors do not always come in time, and they are not shared with the faculty and departments/course directors" (Respondent B). Thus, without leadership and a supportive learning environment that promotes a quality improvement culture, the potential benefits arising from quality assurance standards would be constrained. Considering the challenges, respondents suggested changes that could enhance the institutional quality assurance system. These included establishment of an "office of quality control and accreditation" (Respondent B); provision of "assistance and support from the Dean of the school and working collectively" (Respondent C) and the need for qualified staff to work in quality unit, provision of training programs in quality, and the need for full support from top management" (Respondent D).

The identified gaps include lack of explicit and appropriate communication of the institutions' social responsibility and accountability; the lack of responsiveness of the curriculum to changing demographic and cultural context; the need to use external examiners or external scrutiny, the need to link the selection policy to the mission of the school, the educational programme and desired qualities of graduates; the importance of specific school policy for staff recruitment and selection that takes into account economic considerations or relate to significant local issues; the need for increased autonomy to direct resources, including teaching staff remunerations, as a way towards achieving intended educational outcomes; the importance of programme modifications in response to changing opinions in the society/community and the importance of continuous monitoring and review of the quality assurance system. Some challenges in the implementation of quality assurance systems were also observed such as inadequate top management support and a general environment whose culture is not attuned to quality improvement.

Conclusion, recommendations and implications.

The study utilised structured interviews, which were developed based on the WFME standards in order to capture the different aspects of quality assurance in medical education which included institutional mission and objectives, educational programme, assessment of students, students, academic staff/faculty, educational resources, programme evaluation, governance and administration and continuous renewal (WFME, 2015). Further, the documentary analysis was employed to supplement the primary data

obtained through structured interviews. This study is exploratory, which adopts interpretivist perspective. A case study approach was employed in examining four privately founded medical schools in Saudi Arabia. An examination of the four medical schools found that they all either have a department or committee that is in charge of quality assessment and monitoring. The medical schools' quality assurance management systems are mainly based on the Saudi Arabia's National Commission for Academic Accreditation & Assessment (NCAAA) guidelines (see section 4.2.6). These were adopted at different times with the earliest being 2008. Further, of the 4 medical schools examined, only 1 had gone beyond the nationally expected NCAAA guidelines to incorporate the ISO 9000 – Quality management standards and the Saudi Commission for Health Specialties (SCFHS) framework. The study has revealed that largely, there are some consistencies across the medical schools on the quality assurance aspects. This is consistent with studies (e.g. Hamdy et al., 2010) that highlight a gradual improvement in medical education process. However, there still exist some significant gaps which include: a lack of explicit and appropriate communication of the institutions' social responsibility and accountability; a lack of responsiveness of the curriculum to changing demographic and cultural context; the need to use external examiners or external scrutiny, the need to link the student's selection policy to the mission of the school, the educational programme and desired qualities of graduates; the importance of specific school policy for staff recruitment and selection that takes into account economic considerations or relate to significant local issues; the need for increased autonomy to direct resources, including teaching staff remunerations, as a way towards achieving intended educational outcomes; the importance of programme modifications in response to changing opinions in the society/community and the importance of continuous monitoring and review of the quality assurance system. These gaps support other studies (Al-Muhanna, 2009); (Al-Muhanna, F.A.; Subbaroa, V.V., 2003) that highlight the need for reforms to address inconsistencies.

The study has revealed that critical challenges or constraints are associated with the lack of sufficient top management support and an organisational culture or environment that is not attuned to quality improvement. This is reflected, for instance, in delays in submitting monitoring report and lack of training on quality. These findings are largely consistent with the literature that shows leadership, organisation culture and supportive environment as important components of quality assurance systems (Aquilani, Silvestri, Ruggieri, & Gatti, 2017); (Sallis, 2014)

Study Limitations

The study has some inherent limitations despite the rigorously attempt to make it as comprehensive as possible. Limitations, for instance, relate to the methodological approach used in employing the structured interview method. Some questions could have been misunderstood, and thus, the response also incorrect. Further, there was no opportunity to clarify or explain these aspects more. Limitations also exist concerning

respondents not getting into detail, or providing explanations for some answers. This makes the interpretations of responses limited. Another limitation of the research is concerning generalisability of the results as only four out of nine privately founded medical schools were examined. However four out of nine (i.e. 44%) is representative of the privately funded schools.

Recommendations and implications

These recommendations and implications are based on the findings of the study. Table 7 below, summarises the recommendations and implications. These combined factors raise the need for medical education standards in Saudi Arabia. The adoption of the WFME medical education standards could fill this gap of the lack of specific standards for medical education in Saudi Arabia. This research makes a contribution to the extant literature which advocates for the promotion and development of international quality assurance standards in medical education, given the changing social, political, and economic trends exacerbated by globalisation. Further, it contributes by giving an emerging country, the perspective of the Kingdom of Saudi Arabia, were such research is rare. The study also makes a contribution through highlighting the current challenges of the existing quality assurance systems, and the potential benefits that could result from international accreditations.

Table 2: Recommendations/implications of findings

Study Findings	Implications	Recommendations	Responsible office/dept
Medical schools' quality assurance management systems are mainly based on Saudi Arabia's National Commission for Academic Accreditation & Assessment (NCAAA) guidelines	This is positive for the country as it ensures uniformity in quality assurance. However, different stages of adoption imply that some medical schools would have not fully implemented the national quality guidelines	Medical schools should strengthen the institutional capacity to adopt the quality assurance standards fully.	Medical schools' top management, quality assurance committees
Some medical school adopted ISO 9000 – Quality management standards and the Saudi Commission for Health Specialties	The international quality assurance standards complement the national standards, which leads to better quality assurance systems in schools.	Encourage the institutional adoption of internationally recognised quality assurance standards	Medical schools' quality assurance departments/committees
The study has revealed that large, and there are some consistencies	The overall quality and competence of medical professionals	NCAAA should strengthen the accreditation and	NCAAA working with individual

Study Findings	Implications	Recommendations	Responsible office/dept
across the medical schools on the quality assurance aspects.	is improved across the national, which makes a contribution to the health care needs of society stronger.	monitoring process to ensure long term standards are maintained	schools
• A lack of explicit and appropriate communication of the institutions' social responsibility and accountability; • a lack of responsiveness of the curriculum to changing demographic and cultural context; • the need to use external examiners or external scrutiny, the need to link the student selection policy to the mission of the school, the educational programme and desired qualities of graduates; • the importance of specific school policy for staff recruitment and selection that takes into account economic considerations or relate to significant local issues; • the need for increased autonomy to direct resources, including teaching staff remunerations, as a way towards	• The implications of the medical schools to the broader society need to be an integral part of its operations. • This implies that medical schools' curricular should be responsive to changing health care needs of society. • Without social accountability and responsiveness, the medical schools would be distanced from the society that their graduates are meant to serve. • Without autonomy to direct resources, changes are hard to implement which could affect the effective functioning of the quality assurance systems.	Medical schools should have a broader approach and standards which give this perspective adopted. Medical schools should adopt the WFME global standards as these will help address the existing gaps and strengthen the quality assurance systems. NCAAA to review the existing guidelines in order to bridge gaps.	NCAAA to support institutional efforts to adopt WFME standards. Medical schools' top management and quality assurance department. Staff engagement and communicatio n.

Study Findings	Implications	Recommendations	Responsible office/dept	Adopting WFME Standards
achieving intended educational outcomes; • the importance of programme modifications in response to changing opinions in the society/community and the importance of continuous monitoring and review of the quality assurance system				
The study has revealed that key challenges or constraints are associated with the lack of sufficient top management support and an organisational culture or environment that is not attuned to quality improvement.	Quality assurance systems would not function fully if these constraints are not addressed. The consequences of ineffective quality assurance systems	Institutional changes need to be implemented to support quality assurance systems: - top management commitment should be sort. - There should be staff engagement and communication	Top management with quality assurance department	

Thus, while notable improvements have been made in Saudi Arabia, there is a need for the identified gaps to be filled, and institutional challenges addressed. Considering the identified gaps, adoption of the WFME standards is highly recommended, which will lead to better quality assurance system. However, this should be coupled with the strengthening of the institutional contexts to support the quality assurance systems.

Recommendations for future research

Further research could utilise other methodological approaches to gain a better understanding of the quality assurance systems. Besides, further research could consider either increasing the number of medical schools examined for generalisability or delve into specific medical schools to gain a deeper understanding of structural constraints or influencers in quality assurance. Nonetheless, this research contributes to the quality assurance literature in GCC countries. Some significant gaps still exist which include: lack of explicit and appropriate communication of the institutions' social responsibility

and accountability; the lack of responsiveness of the curriculum to changing demographic and cultural context; the need to use external examiners or external scrutiny; the need to link the selection policy to the mission of the school, the educational programme and desired qualities of graduates; the importance of specific school policy for staff recruitment and selection that takes into account economic considerations or relate to significant local issues; the need for increased autonomy to direct resources, including teaching staff remunerations, as a way towards achieving intended educational outcomes; the importance of programme modifications in response to changing opinions in the society/community and the importance of continuous monitoring and review of the quality assurance system. Some key challenges in the implementation of quality assurance systems were also observed, such as inadequate top management support and a global environment whose culture is not attuned to quality improvement. These findings have implications which include the need to consider the strengthening of the institutional context before considering the adoption of WFME standards or updating the NCAAA guidelines to cover the existing gaps.

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