Review Article

Medical social sciences

Their potential contributions to medical education reforms in Saudi Arabia

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ABSTRACT

يؤكد هذا المقال على التعريف الشمولي للصحة. كما يقدم مفهوم العلوم الاجتماعية الطبية، ومستنيراً بالخلفية التاريخية للعلوم يناقش المقال حتمية وجود العلوم الاجتماعية في مجال التعليم الطبي وبخاصة للنظم الصحية في الدول النامية بما في ذلك المملكة العربية السعودية. وقد تبع ذلك عرض تاريخي موجز للتعليم الطبي في المملكة إضافة إلى فحص بعض القضايا المهمة في العلوم الاجتماعية. وختاماً فإن هذا المقال يقدم مقترحات لكيفية تطبيق المنهج الشمولي متضمناً مدخلات للعلوم السلوكية والاجتماعية والتي يمكن دمجها في التعليم الطبي الجامعي بهدف تخريج مهنيين محترفين قادرين على الوفاء بحاجات الصحة العامة للمجتمع والوطن.

This article emphasizes a holistic definition of "health". It then introduces the concept of "Medical social sciences", and drawing from the literature, argues for the inevitability of social sciences in medical education, especially in the health systems of developing countries including the Kingdom of Saudi Arabia (KSA). This is followed by a brief history of medical education in KSA, and an examination of some important social science issues. Finally, this article suggests how a holistic approach involving inputs from the social and behavioral sciences could be incorporated into undergraduate medical education to produce medical professionals who could better meet the community and public health needs of the country.

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The purpose of this article is to highlight the potential role and relevance of social sciences in medical education. It also aims at providing a framework, based on the available literature, for inputs of social sciences to guide the curriculum of medical education for the Kingdom of Saudi Arabia (KSA). Traditionally, physicians are considered to be the key players in the field of health and healthcare.[1] The World Health Organization (WHO) extends the concept of health from physical and mental health, to add social health and well-being, and more recently, spiritual health. This extension has had 3 key outcomes: first, a need to follow the contextual definition of health; second, the birth and expansion of the domain of social medicine or medical social sciences; and third, an inquiry into the relevance of medical social sciences to developing countries in particular. Firstly, it is important to analyze the concept of holistic health. It is difficult to have a single and well-bounded definition of health.[2,3] In 1948, the WHO constitution as quoted by Corrigan[4] provides a much wider, context-driven, and open-ended definition of health, "a state of physical, mental, and social well-being, and not merely the absence of disease and infirmity". Here, it is important to note that physical and mental health states are closely linked to broader variables like poverty, malnutrition, and environmental pollution. To allow for the wider and complex nature of the state of health, Beattie[3] suggests adopting a set of multi-perspective frameworks to understand the state of health, rather than to try defining it. Secondly, any definition of the medical social sciences may also be left open-ended.[1] The medical aspects of virtually every social science may be included in the 'medical social sciences' for example, medical ethics, medical sociology, and medical anthropology. The rise of scholarly interest in the medical social sciences dates back to 1867, when the American Journal of Epidemiology was first published.[5] It has been difficult to determine any "legitimate" boundaries for the medical social sciences

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as both concepts "health" and "illness" are multi-faceted and remain challenging.[3,5] The theory and practice of epidemiology, for instance, which is the basic science of public health, have always been affected by the social, economic, political, and cultural determinants of health.[6] Thirdly, medical socials science is more relevant to the healthcare needs of the lesser-developed nations like the KSA. The ultimate goal of producing medical professionals is to fulfill the healthcare needs of a country that may not be achieved, unless the medical professionals understand not only the direct causes of diseases but also the social science determinants of these diseases. This could be possible if the medical education curricula, especially in the medical colleges would include coursework in medical social science.

Social science reform in medical education. In recent years, several initiatives have been taken across the globe, including the Middle Eastern regions to reform medical curricula and produce doctors who should meet the health needs of the communities they serve.[7-10] Due to variations in a country's socio-economic determinants of health, political reforms and demographic contexts, as well as the epidemiology of different diseases, reforms in medical education have become a global concern including KSA.[11-21] The available literature suggests that doctors should not only be trained to diagnose diseases and treat these, but should equally be equipped with the knowledge and skills to understand the socio-economic determinants of health and disease. This would assure the production of community-oriented doctors who could play a vital role in disease prevention, as much as its cure.

Medical education and social science in KSA. Since its birth in 1932, KSA has experienced advancement in its health education and healthcare.[22] The history of medical education may be studied in 2 phases.[9] The first phase spreads over 3 decades, whereby the Saudi government sent hundreds of Saudis for medical education abroad as there were no medical education institutions. However, from 1967 onwards, planning for medical colleges in KSA was initiated, and 5 medical colleges were established as a result. The curriculum taught in all the colleges was conventional, that is, teacher-centered and comprising of basic sciences and medical sciences.[10] It was designed to cater only to a clinical care setting.

In the early 2000's, owing to the changing international trends in medical education, some debates also took place on the need for community-oriented medical education in KSA. Serious concerns were raised regarding the existing system of medical education, and it was thought to be incapable of producing doctors who were able to satisfy the healthcare needs of their communities in settings other than the hospital. These critical analyses by Saudi researchers led to curriculum reforms in the country that emphasized student-centered and self-directed learning approaches.[23] The role of evidence-based medical education in matching and sustaining healthcare delivery was also highlighted.[24]

The second phase of the development of medical education in KSA was marked by an increasing investment by the private sector, and steps taken by the Ministry of Higher Education (MOHE) in establishing the National Commission for Academic Assessment and Accreditation (NCAAA). The purpose was to ensure excellence and standardization, and focus on innovative medical programs based on Problem-Based Learning (PBL) and community-oriented learning. This led to a nationwide trend to seek international accreditation and establishment of international partnerships. Recently, some of KSA's medical colleges have launched innovative and integrated curricula with a focus on PBL.[24] Others continue to follow the conventional curriculum. In spite of the efforts to attain high standards of medical education, the health sector in KSA generally displays bipolar growth patterns like those of other developing countries. On the one hand, there is a set of characteristics, such as the need for primary health care (PHC)-level approach, a focus on rural population and preventive care, while on the other side there are demands for the state-of-the-art tertiary-level care, centers of excellence, an urban/cosmopolitan focus, and curative medicine. Broader macro-policy has, thus had a determining role in defining the scope of medical education in the KSA, as reflected in the following key features:

"Urban and class" biases. It is unfortunate that in KSA, there is an unequal distribution of healthcare resources between urban and the relatively deprived rural areas.[25] The rural-urban divide is also evident in higher mortality rates and a lower life expectancy in the rural population. Also, the systematic collection of mortality and morbidity data for the rural communities is desperately lacking. The internationalization of Saudi doctors occurs primarily because they are taught curative medicine based on the models and ideals of the developed countries, hence they can function effectively in any part of the developed world, but may not be able to cope with the prevalent diseases in the rural areas of KSA.

Professional "neglect". Most medical professionals, especially those working in the private sector, being elitist in their professional training, neglect to cover the social and preventive models of a PHC approach in the

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medical curriculum as they take highly modern curative procedures to be a sign of their professional competency, and a guarantee of "best practice". Most of them adopt a "cure" rather than a "preventive" care approach, and an emphasis on disease prevention is only secondary.[24] Most medical students intend to serve in cities when qualified.[24] A study indicates that doctors in KSA may lack very basic medical skills, such as recording blood pressure even at the consultant level.[26,27] The neglect is also evident in the perception of PHC services. A derogatory image and a lack of concern for this relevant model appears to have become an inherent characteristic of the Saudi society. This could be because the elite and urban class desires to produce the "best" doctors, and view their professionalism only in terms of acquiring the advanced and latest medical technology.

The "English language" factor. The system of medical education in KSA, in terms of the language of instruction and examination, curriculum, disease priorities, clinical methods, treatment procedures, and textbooks are all derived from Western models, and are taught in English language. Most students face difficulties in learning solely because of the foreign language barrier. While some academics have advocated in favor of Arabic as a medium of instruction, there has been no scientific assessment carried out of the merits and demerits of medical education in a non-native language.

Aptitude for medical profession. Currently, the medical education program requires undergraduate entry and comprises of 6 years followed by a one-year internship. Until recently, medical colleges rarely judged the aptitude of the students at the time of admission. The criteria for the eligibility of the students were based only on their academic merit. Therefore, it is quite possible that many of the selected students, while academically able lacked other qualities necessary for them to become good doctors. In 2002, the National Center for Assessment in Higher Education was also established, and given the responsibility to ensure a standardized aptitude examination at the national level for all candidates who intend to apply to the medical colleges.

Lack of standards in medical education. Generally, a holistic vision is missing in planning and policy formulation for medical education in KSA. The establishment of a number of medical colleges in the public and private sectors without determining the quality standards of education has resulted in a spectrum of medical colleges with varying levels of educational quality. Some of these meet international standards, while many have quality gaps in their ability to produce the necessary human resource.

Wrong "prescription". A weak medical education policy in KSA has resulted in the production of doctors trained in a hospital-care setting, who do not have any exposure to community-oriented medical care.[12] While individual medical colleges have been initiating curricular reforms, their focus is primarily on hospital-based clinical skills and objectives assessment methods.[23,24] In the medical education literature, this situation has been termed a 'wrong prescription".[1]

In addition, students are taught using medical texts written by, and for doctors in developed countries that may be different in their health and health care needs, and priorities from KSA. Another wrong prescription is that the doctors for teaching positions in the medical institutions are selected primarily on the basis of their academic qualifications, while their teaching and training skills are not considered. Also, there are no mandatory training programs in medical education for the newly recruited academic staff.

Social science inputs into medical education: a framework. The relevance of medical social sciences to graduate medical education remains obvious, but is left either unattended to, or unfocused. Social science inputs could prove a worthwhile contribution, if the KSA government adopts the Community Oriented Medical Education (COME) approach that has been successful in some developing countries.[7,13,17] This model potentially imparts knowledge and skills in the social-psychological correlates of health and health care. Similarly, there is a need to re-orient policy initiatives on medical education. Drawing upon Otite[28] and Abdullah and Abdullah,[29] a framework for "social science" inputs to guide the curriculum of graduate medical education in KSA is outlined in **Table 1**. The proposed inputs could either be integrated into the existing medical curriculum, or merged and extended with the existing subject of "community medicine". It may be introduced and expanded as a separate subject of "social medicine". Some areas identified above may already be a part of the current medical curriculum needs further development. Here, it is important to emphasize that this curriculum may focus on developing the right skills and attitudes in future doctors, and not just enabling them to pass the examinations.

On the other hand, the selection of candidates for the medical colleges may not only be based on their academic competencies but compulsory psychological texts,[1,30] for ensuring the selection of candidates with the necessary aptitudes. Selecting the right candidates as future doctors can greatly help in ensuring community-oriented medical care reforms. Similarly, social science research needs to be encouraged so that the gaps existing

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Table 1 - Social science inputs into graduate medical education in Saudi Arabia.

Social sciences	Inputs
Geography	Saudi Arabia has a low population density and a difficult topography. The widely spread deserts and mountains in the Kingdom are important in determining the inequalities in the distribution of healthcare services, and the burden of morbidity and mortality. Young medical students need to understand the impact of geographical factors on health and illness to be able to apply their knowledge when providing the most needed comprehensive healthcare to their communities
Social anthropology	Knowledge regarding culture, religion, diets, food habits, taboos, health/ill health behavior and human development cycle, and their association with the health issues in Saudi Arabia, like the increasing prevalence of genetically transmitted diseases, rising burden of diabetes, obesity, hypertension, heart disease, and cancers is essential for community-oriented doctors of the future
Sociology	Knowledge of the existing social systems; social differentiation and stratification, that is, age, gender, marital status, nationality status, ethnicity, social mobility, inequalities and marginalization; similarly, demography, urban and rural societies, groups, and group behavior, and social control can all help young doctors lessen the rural-urban and social-class biases in the current healthcare system
Psychology	Many disorders and diseases that are constantly on the rise in Saudi Arabia are responsible for serious morbidity and mortality like obesity (especially among children and the young), diabetes, hypertension, stroke, heart disease, and cancers are related to behaviors, habits, and lifestyle issues, for example, smoking. Mental health disorders are also prevalent among all age groups and both genders in Saudi society. It is therefore, crucial that the new doctors are well-equipped with knowledge of the psychic and mental processes, personality and social behavior, motivation, attitudes and stress (linked to anxiety, depression, and aggression, and so forth)
Public policy	Young doctors may not only be trained purely as clinicians but, in view of their future role and interests in public health policy, planning and healthcare administration, they should be allowed the basic knowledge of leadership, decision-making, and advocacy to influence the needs-based challenges to secure effective and efficient healthcare delivery
Economics	The uptake of healthcare services is considerably influenced by macro- and micro economic factors. The differences in distribution, equity, access to and utilization of healthcare services is a reflection of economic variability among communities, for example, in the rural and urban areas. It is essential for future doctors to understand the open-market mechanisms of demand and supply-based healthcare, healthcare financing options, and the broader dynamics of community-oriented healthcare delivery
Ethics	Historically, ethics have always been emphasized in medical practice. However, in the current medical system, issues like professional misconduct, and negligence are unattended to, and have led to serious levels of patient dissatisfaction. For patient-centered and community-oriented healthcare, the subjects of moral and social responsibilities in medical practice; religious and medical ethics; the ethical dimensions of patient-doctor and inter-professional relationships; moral values and spirituality in decision-making; patient's rights; and provision of healthcare to the deprived and vulnerable groups are vital

in understanding the determinants of health and disease status, particularly in rural populations, are addressed too. The research findings could then be incorporated into the medical curriculum wherever relevant.

There is considerable volume of research evidence suggesting that medical social sciences should be increasingly integrated to the mainstream medical curriculum. Miles et al[31] cited over one hundred references emphasizing the importance of ethics in medical education 2 decades ago. Reforms in medical curriculum at the undergraduate level are essential in KSA to ensure that they produce doctors who treat patients, and not just their diseases. Owing to the holistic nature of health and the ultimate goals of all healthcare services, medical education needs to be imparted through holistic approaches and a curriculum that draws not only from physical and biological sciences, but also from the social sciences.

For the scarcity of medical social science literature and textbooks produced indigenously, it is vital that research into the determinants of health and disease status, and the dynamics of existing health and social care delivery systems is encouraged to fill in the gaps in the understanding of contemporary health issues in KSA. The research findings could be integrated into the medical curriculum to make it more contextually relevant and useful.

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