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# The need for integrating social and behavioral sciences in the Indian medical curriculum

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## Abstract:

Behavior, social, psychological, and biological factors affect health and disease. It is widely recognized that behavioral and social sciences should become an integral part of medical training. Integrating behavioral and social science into the curriculum is a key issue emphasized in many research. Despite the critical role of behavior and social science in health-care performance, these have not been effectively incorporated in the medical and allied health sciences curriculum. This article emphasizes the role, purpose, and importance of social and behavioral science in the medical curriculum. It also discusses how effectively these domains can be integrated into the medical school curriculum to train future doctors in social and behavioral sciences relevant to medical practice. Such medical education and training will help future doctors to practice with a fully informed medical system.

## Keywords:

Behavioral sciences, foundations of medical education, medical curriculum, social sciences

## Introduction

Multiple interacting factors such as biological, psychological, sociocultural, economic, and behavioral factors influence human health and illness. Behavioral and social sciences contributed to much research-based knowledge that reports the physicians' approaches to prevention, diagnosis, and patient care.<sup>[1,2]</sup> Competent physicians should be knowledgeable about their society and the behavior of members of the society. This knowledge will help physicians become skilled in communications and demonstrate desirable professional behavior, self-awareness, and ethical reasoning. This will also help them to understand the cultural and social differences that exist in any society.<sup>[3]</sup> Thus, behavioral and social sciences have widely been accepted to be an integral part of medical training.<sup>[4]</sup>

## Social and Behavioral Science as a Discipline

In its broader sense, social science is the study of society and the ways people behave and influence the world around us. Knowledge of social and behavioral science will provide insights about the world beyond our immediate experience and explain how our own and other communities perform and provide essential information to governments, policymakers, and other services and organizations including education and health-care providers.<sup>[5]</sup> A range of disciplines is included within the social sciences such as demography, social research and statistics, geography, economics, education, law, social history, politics, psychology, sociology, and social policy. The teaching of social sciences has been a part of the medical curriculum in many nations for more than five decades, and the methods, theories, and critical approaches of the social sciences

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are being utilized within medicine and medical education. The two branches of the social sciences most commonly associated with medical education are psychology and sociology. Behavioral science is one of the many fields dealing with human activities, which generally include sociology, social and cultural anthropology, psychological and behavioral aspects of sociology, economics, geography, law, psychiatry, psychiatry, and political science.<sup>[6]</sup>

The term “behavioral sciences” gained momentum in the 1950s in the United States, often used synonymously with the term “social sciences,” although some writers distinguish between them. The term “behavioral sciences” suggests an approach that is more experimental than that connoted by the older term “social sciences.”<sup>[6]</sup>

### **Importance of Social and Behavioral Sciences in Medical Education**

No physician’s education and medical training are complete without knowing the role of behavioral and social factors in human health and diseases and an understanding of how these factors and personal life experiences affect doctor–patient relationships.<sup>[1,4]</sup> Integrating behavioral and social sciences into medical students’ curriculum is a key issue emphasized in many research studies. This kind of integration will inculcate necessary knowledge, skills, and attitudes toward the social and behavioral aspects of medicine. The integration of social and behavioral sciences will also make future physicians socially motivated and professionally well equipped to meet their patients’ expectations and society’s health-care needs. Despite the vital role of social and behavioral sciences in health-care performance, these sciences have not been effectively included in the medical curriculum.<sup>[4,7]</sup>

### **Domains and Themes of Social and Behavioral Sciences in Medical Education**

Within the clinical encounter, specific interactional competencies are critically related to the effectiveness and subsequent health-care outcomes. These competencies include medical history taking, communication, counseling, social competence, and related soft skills, and behavioral management. Based on relevant evidence-based articles and reports in the literature, the University of California, San Francisco, School of Medicine identified six general domains of knowledge for the transaction under behavioral and social sciences for inclusion in medical school curricula. Cuff and Vanselow<sup>[1]</sup> and Waldstein<sup>[8]</sup> explained those six domains of social and behavioral sciences as:

#### **Mind–body interactions in health and disease**

This domain focuses on the four primary pathways of disease, i.e. biological, behavioral, psychological, and social. Training the medical students in this domain helps them to recognize and understand the complex interactions among these pathways that may compromise a patient’s physical and mental health.

#### **Patient behavior**

This domain centers on behavioral pathways to promoting health and preventing disease. Educating medical students about behaviors that pose a health risk will better equip them to provide appropriate interventions and influence patient behavior.

#### **Physician role and behavior**

This domain emphasizes the physician’s background and beliefs as they may affect patient care and the physician’s well-being.

#### **Physician–patient interactions**

This domain stresses on the ability to communicate effectively as central to a practitioner, which is also a critical element for any physician’s professional success.

#### **Sociocultural issues in health care**

This domain addresses what physicians need to know and do to provide appropriate care to patients from different social, cultural, and economic backgrounds.

#### **Health policy and economics**

This domain focuses on exposing the medical students to topics that will help them understand the health-care system they eventually are going to practice.

Maroufi *et al.*<sup>[3]</sup> derived the following six themes that were emerged from data analysis of global literature on social and behavioral sciences in medical education: “physician–patient interaction,” “medical culture,” “facilitating behavior change,” “socio-cultural issues,” “mind–body medical experience,” and “physician interaction with health-care system.” High-profile reports have appreciated the importance of social and behavioral science education as a foundation for medical training.<sup>[9,10]</sup> Simultaneously, medical programs are under pressure to cope with the explosion of knowledge in basic science (biomedical sciences) and life sciences and technological innovation.

The medical curriculum is immersed in facts, making medical schools look for innovative teaching models that follow flexible approaches to deliver the diverse body of medical knowledge that supports professional practice. Further, independent learning methods are continuously studied and integrated teaching programs are organized within and between the disciplines.<sup>[4,11]</sup>

Future, medical education programs may be designed with multiprofessional approaches that can foster awareness of the important gap between health care (preventive, promotive, curative, and rehabilitative aspects) and social and behavioral science. Students should be offered options to study and undertake projects in sociology, psychology, education, humanities, child growth and development, medical anthropology, gerontology, medical geography, health economics, political science, and allied areas. Another significant issue is creating an environment for future physicians to think critically on a wide range of themes representing the social and cultural context for medical practice.<sup>[12,13]</sup>

### Scope of Social and Behavioral Science in Medical Education

Determinants of human health such as living conditions, physical activity levels, and lifestyles are traditionally a concern for public health and are not closely linked to the medical practice. Such information can be helpful in many ways such as diagnosis, providing treatment options, framing health policies, designing an effective health-care system, improving health outcomes through innovations, and reducing health costs.<sup>[14]</sup>

Although social and behavioral factors influence health and mortality, such determinants are often ignored in clinical practice.<sup>[10,12,13]</sup> Behaviors such as alcohol use and smoking are commonly assessed by primary care physicians, but many other behaviors may be viewed as outside the scope of medical practice. Calls for clinicians to attend to these factors are increasing and several developments are accelerating the medical community's interest in addressing them.<sup>[14]</sup>

Many health-care research outcomes have linked social and behavioral factors including low income, low levels of education, lack of exercise, and stress to the onset and progression of diseases ranging from arthritis and asthma to diabetes and cardiovascular disease and overall mortality. Studies suggest that the ill effects of social and behavioral risk factors such as smoking and social isolation sometimes exceed genetic and clinical indicators such as blood pressure.<sup>[15,16]</sup>

Social and behavioral factors are known to affect health but are not routinely assessed in medical practice.<sup>[15]</sup> Giuse *et al.*,<sup>[11]</sup> emphasized that, if standardized social and behavioral data can be incorporated into the patient's electronic health records (EHRs) that data can provide crucial information about the factors that affect health and the effectiveness of any specific treatment. Incorporating the social and behavioral data into EHRs can improve patient care, outcomes, and population health in several ways. It can inform about the people at

risk and help doctors to advocate preventive measures. It can also facilitate effective shared decision-making with the patient and his/her family members and health-care team. It may also help clinicians to identify the risk factors such as depression, tobacco use, etc. Thus, the information on social and behavioral factors can expand health systems' capacity to tailor services to their population's needs. For example, using the information on determinants of health along with clinical data, physicians can better match high-risk patients with various types of care management programs, or they can initiate new services such as group visits or support groups if they identify social determinants of health as a common problem in their patient population. Social and behavioral data of patients will help health professionals to undertake patient-centered outcomes research.<sup>[9,14]</sup>

### Integrating Social and Behavioral Sciences in Medical Curriculum

Published literature on the role of behavioral and social sciences in medical education and training is scanty and largely from developed countries. Although the need for inclusion of behavioral and social sciences as a discipline in medical education was recognized a few decades ago, even the developed countries have made little progress in improving the quality and quantity of behavioral science teaching in medical schools. Obstacles that prevent better integration of social and behavioral sciences with other disciplines have also been identified. The other issue is that there are no educational guidelines, well-established curricula, training modules, or materials. There is also a severe shortage of adequately qualified and experienced teachers.<sup>[10,13]</sup>

In India, the goal of undergraduate medical education program as envisaged in the revised Graduate Medical Education Regulations-2019 is to create an "Indian Medical Graduate" possessing requisite knowledge, skills, attitudes, values, and responsiveness so that she or he may function appropriately and effectively as a physician of the first contact of the community whereas being globally relevant. To fulfill this goal, the Indian Medical Graduates must be able to function appropriately, ethically, and effectively in their roles as clinician, leader, and member of the health-care team and system, communicator, lifelong learner, and professional. To effectively fulfill the roles mentioned above, the Indian medical graduates must acquire a set of competencies at graduation. To ensure that training aligns with the goals and competencies, the National Medical Commission has proposed new teaching-learning approaches including a structured longitudinal program on attitude, ethics, and communication. This modular program aims to foster habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions,

values, and reflection in daily practice to benefit the individual and community being served.<sup>[17]</sup> To further strengthen the current Indian medical education, social and behavioral sciences components described above may be incorporated judiciously. Harden *et al.*,<sup>[9]</sup> Litva and Peters,<sup>[10]</sup> and Satterfield *et al.*<sup>[13]</sup> recommended that social and behavioral sciences are integrated into the medical curriculum to ensure adequate consideration is given to the relevance of social and behavioral sciences content throughout all stages of students' learning. The integration could be:

1. "Disciplinary specific" which often is concentrated in the early preclinical years
2. "Multidisciplinary" where specific time slots are allotted for social and behavioral sciences within a course to address its particular take on the theme or topic being discussed
3. "Interdisciplinary" where social and behavioral sciences will be integrated as part of a holistic curriculum design in which disciplinary labels disappear.<sup>[18,19]</sup>

### Guiding Questions for Integration of Social and Behavioral Sciences

To effectively integrate social and behavioral sciences content in medical curricula, the following guiding questions can be taken into account:

- What will be the core content for teaching and learning social behavioral sciences?
- Who will facilitate the transaction of the content?
- Where and when the learning experience will take place?
- What effective teaching-learning methods will be used to transact the curriculum?
- What assessment methods will be adopted for assessing the learning outcomes?
- What kind of learning evidence will the learners produce and how will they document them?
- How to create learning resources for effective transaction of content?
- How will the success of the program be measured?

### Conclusion

This article opens a dialog among the stakeholders of medical education about the foundations of medical education and the need to educate future doctors in the social and behavioral foundations of medicine. This article may provide medical educators with contemporary insights on how best the medical students can be prepared to practice a fully informed medicine. Implementing social and behavioral sciences in the medical curriculum requires support and preparedness from medical educators, medical school administration,

policymakers, and other stakeholders. Since medical school faculty act as an effective agent of change, faculty development programs aimed at equipping medical school faculty with the knowledge, attitude, and skills in social and behavioral sciences are vital for successfully implementing social and behavioral sciences domains in the medical curriculum. Medical institutions with a vision and commitment to integrating social and behavioral sciences in medical curricula are more likely to succeed in implementing the 21<sup>st</sup> century medical education.

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### Conflicts of interest

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