INDIAN HEART JOURNAL 67 (2015) 187–191

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/ihj

Other side of the moon

Do we need to change the medical curriculum: regarding the pain of others

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ARTICLE INFO

Article history:
Available online 16 June 2015

ABSTRACT

The current curriculum is behind its time and urgently requires to be reformed. The changes required are not only in the amount and type of desired information but also in the way this knowledge is acquired. Further, literature, art and philosophy require to be integrated in the curriculum so that a medical student can find his/her bearings in the society. Finally, but most importantly focus must be on developing empathy so that a prospective physician can correlate with the pain of patients and act towards relieving it rather than intellectualizing it.

1. Introduction

Medical field has witnessed an explosion of information. Faced with a monumentus task and in an era of competitiveness students are forced to develop an attitude of passive acquisition of knowledge (which enable then to gather as much information as possible over prolonged durations of learning) rather than that based on reflection, curiosity & exploration. The knowledge thus acquired is differentiated (fragmented) rather than integrated in holistic whole and never gets to become wisdom. Further, this approach to learning leads to extreme focus on task at hand (Beta brain activity) to the exclusion of environment and even self. This way a medical student quickly loses his/her bearing in society being completely engrossed and consumed by knowledge and skill gathering sometimes even forgetting the patient, the very reason for his existence. Thus there is a need for reorienting the medical curriculum in 3 ways.

1 Making medical education less of rote learning and more of that by reflection and problem solving (curiosity and exploration).
2 Keeping the medical student oriented with external environment, grounded to reality and promoting understanding of the relation between self and society.
3 Keeping the focus not on information or knowledge but patient at hand. Understanding the need, feeling and expectations of the patient (regarding pain of others).

Thus currently there is a compelling to bring about a reform in medical education.

2. Improvement in medical education

In the practice of medicine with each passing year there is a huge advance in the technological knowledge and application of research findings leading to improved methods of disease prevention, diagnosis, and treatment opportunities which lead to a constantly changing definition of competence that a medical student must acquire to enable him/her to undertake contemporary medical practice. Understandably, these acquired knowledge and skills must be closely calibrated in

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http://dx.doi.org/10.1016/j.ihj.2015.05.015

context with the region where these services are required. At the same time knowledge, skills and treatment paradigms which have become obsolete with the passage of time must be purged from the current curriculum. Further, the needs of society within which the physician is operative also change with time and therefore due accommodation must be made in response to those changes. Certainly there has been a rapid advance in social sciences which is having a profound effect on how new knowledge is applied in real world practice. Thus there is an ever-increasing need for physicians to understand the dynamically changing social and ethical issues; the healthcare delivery systems; financing mechanisms and work within them to assure a high quality of care for all their prospective patients. Finally, there is also a rapid and ongoing development of powerful new technologies that offer great promise as teaching tools and their potential to change the content that we teach; change in philosophy of medical education – embracing early exposure of students to patients, integration of the preclinical curriculum, active learning on the part of the students through problem-based learning approaches; focus on teaching manpower, appropriate and rational re-imbursement for teaching staff to ensure that the faculty devotes the highest level of commitment to the excellence of the educational program.

3. Alignment of physician with self

3.1. *The problem*

Professionalism, effective communication, ability to work as a team with other physicians and para-medical personnel but above all humanism is of para-mount importance to a would-be physician. Initially a young medical student is charged up with a desire to serve the needy, sick and all humanity in general, however, over the course of time they are covertly or even overtly "brain-washed" that he/she is different from the society. The process actually starts right from the day of induction, when these students are exposed to "ragging." As a result of this process the students are practically forced to develop special relation with seniors (boss and macchar!) and even teachers. Thus a successful (?) medical student develops the ability to struggle with the limits of medicine by accepting a power-hierarchy structure in training and patient care, suppression of normal emotional response and self dehumanization. Psychologically (in short term), admittedly it leads to strengthening of ego boundaries and helps develop a strong herd mentality which may help them to cope up with rigors and stresses of medical education. During this phase they start identifying profession of medicine with their own personality as exemplified by the fact that at least 30% of their emails begin with "doc" or "dr."[1] However, on long term because of competition among themselves (for limited resources) and even greed, as also recognition of emerging personal accountability towards patient care, there starts a process of isolation of individual from everybody else and an elusive search for personal:professional balance.[2,3] It is this conflict which in most cases leads to a high prevalence of burnout among medical students and residents. Thus while many students complete medical school with a wealth of knowledge and some skills, but in effect are completely unprepared to really engage in the human aspects of healing as they had completely neglected reflecting on their own personal development during the entire course of their training. At the other end the internal conflict gets so profound that some are unable to cope with it and sink into psychiatric disorders. Thus not surprisingly suicide rate is highest among the medical students.[4,5]

3.2. *What to do?*

3.2.1. *Literature and medicine*

Study of literature adds a new dimension to personality that is not strictly scientific and quantifiable, but nevertheless essential to good medical practice. Many goals could be attained by including the study of literature in medical education: accounts of illness orient the physicians towards the lives of sick and understand their point of view; classical works of fiction about medicine enable physicians to recognize their own role within the society and power and implications of their own actions; improve physicians' expertise in narrative ethics. Suitable texts can be chosen carefully from classics, traditional literary canon and could be novels, short stories, poetry, or even drama and should represent the works of current and regionally diverse writers. This way the study of good literature might lead to the strengthening of human competencies of doctoring.[6]

3.2.2. *Art and medicine*

Practice of medicine has always been considered to be both a science and an art. While discursive nature of medicine as a science (some intricate array of biochemical reactions) is obvious, that of art is more ambiguous. Art can improve the personal understanding of a situation by providing insight; into similarities, shared human values and responses highlighting the oneness between the treating and treated; dissimilarities, the uniqueness of individual both treating and treated thus accentuating the understanding of physicians place within the society; and enrichment of the thought and language of practitioner contributing to refined expression.[7]

3.2.3. *Philosophy and medicine*

The field of philosophy is currently witnessing an exciting era. There are several ongoing debates Materialistic/Mechanistic vs. Dualism; Realism vs. Anti-realism. For example Cartesian reductionism takes a view that the whole (the human being) is no more than a combination or summation of its parts, "once the parts were explained, the whole has been explained without residue" However, this over-dependence on the mechanistic logic turns the physician into a technician whose job is to repair dysfunctional bodies. Likewise realist, conducts scientific inquiry into these real objects like bacteria and cells to provide connection of these "etiologies" to diseases. However, quantum physics has turned these classical philosophies on the head by identifying that visible object and events are not actual objects and events at all but rather they are dependent upon the person observing them "Observer Effect." Niels Bohr famously said "Everything we call real is made up of things we cannot call real." However, the most important philosophy that needs to be understood is that of Medical

Ethics. Thus contemplation of contemporary philosophies provides a broader framework to medicine and physicians and frames them in modern perspective.[8]

4. Alignment of physician with others

4.1. *The problem*

What is the hallmark of medical profession? Is it reducing pain? Is it prolonging life? Indeed it is all these but even more importantly and even at a more basic level it is the ability to perceive pain of a fellow human being. Unfortunately within the medical curriculum there is not an iota of attempt to imbue this spirit; on the contrary there are several attempts to move the physician away from this emotion to become more like a cold calculating machine, a kind of "Mr Spock" of Star Trek fame. This process again starting right from the first lessons at the "Dissection Table": where a cadaver is treated in a cursory "matter of fact" manner. In fact some students take particular pride in ridiculing and joking about this unfortunate former human and inflicting humiliation on it. On the other hand a visceral response to this spectacle is frowned upon as a sign of weak personality. While the classical reasoning for this philosophy has been that clinical empathy should be based in detached reasoning, a "neutral empathy," which involves carefully observing a patient to predict his responses to his illness and do what needs to be done without feeling grief, regret, or other difficult emotions. This would avoid over-identifying with patients and interfering with the objectivity of therapy. Thus physicians are "trained" to strive for detachment to maintain their professional competence, to reliably cure patients regardless of their personal feelings making empathy an intellectual rather than emotional form of knowing. Thus over a course of time human knowledge of suffering becomes some kind of technical impersonal knowledge about a state of affairs (bodies as machines), the term "knowing how" is interchanged with the term "knowing that." However, at a sub-conscious level this inhumanly callous attitude causes a huge psychological distress in an average individual which is further compounded by deficiencies in several aspects of the medical curricula, including the formal (e.g. lack of formal empathy training), informal (e.g. inadequate mentors, shorter hospital stays, and inappropriate learning environments), and hidden (e.g. mistreatment of students and high workload) agenda, they are less likely to experience or demonstrate empathy.[9] In fact several studies have shown that empathy steadily declines throughout medical training, in both medical school and residency.[9–11] But human being is not a computer and the function of empathy is not merely to label emotional states, but to recognize what it feels like to experience something (emotional resonance). Further, beyond the sociological value developing empathy carries several practice advantages as well. Physician empathy has been associated with higher levels of patient satisfaction, adherence to medical recommendations or regimens, and improved clinical outcomes.[12–14] Moreover, empathy appears to positively influence physicians themselves, as empathy has been linked to lower burnout, higher well-being, higher ratings of clinical competence, and less medical-legal risk.[15–17] Physician empathy may even reduce health care costs, as patient centered communication styles have been associated with lower diagnostic test expenditures.[18] Thus while physicians strive to be impersonal, patients want genuine empathy from the physicians, and caring physicians want to provide the same.

4.2. *How to build empathy?*

1 Patient interview training encouraging medical students to maintain their natural curiosity about their patients' lives, in contradiction to prevailing norms where trainees learn to suppress curiosity in order to take rapid, standardized histories.[19]
2 Inclusion of "Pain" in regular curriculum: lectures, textbooks chapters, orientation week workshops, case discussions, acute pain round and chronic pain clinic visits, Q&A sessions, palliative care/chronic pain service rotation, website material (anecdotes, guidelines), online problem based learning, trouble shooting pocket textbooks, feedback from experts about individual performance during case management.[20]
3 Sensitization to behavioral and emotional factors (interaction between these two factors) results in empathic response.[21] Several methods can achieve this sensitization: improved observation skills makes it easier to detect a patient's emotional state, while improving communication skills should help a physician convey his feelings to the patient; self-reflective writing, literature courses and theater helps an observer become more aware of her own emotions and subsequently correlate them with others.[22]
4 Cultural education and inculcating a wide range of interests give a broader frame of reference to understand and relate to a patient.
5 "Role playing" scenarios, typically involving experiential learning in which study participants acted as a patient or family member. Specifically "deep acting" techniques may, over time, allow physicians over a period of time to acquire empathy.[23]
6 Communication skills training are a practical way of delivering empathy.[24]
7 "Motivational interviewing training," a counseling approach aimed at patient behavior change.[24]
8 Mindfulness-based stress reduction (MBSR) is a type of meditation characterized by nonjudgmental, moment-to-moment awareness.[24]
9 Problem-based learning sessions that focused on empathy and communication.[24]
10 Another effective albeit controversial way of acquiring empathy may be exposure to the "pain of other." Human is the only species that can tolerate watching pain of another human. The response to this exposure varies depending on the relation with person experiencing the pain. A particularly useful type is "Cognitive Empathy," taking on the perspectives of the individual in pain which allows the observer to better empathize with victims without as much discomfort. On the other

hand, "Emotional Empathy" involves sharing the emotions of the victims. While it is generally automatic it still can be deliberated upon by being aware of one's own emotions (self-awareness) and taking control of emotional responses to people and situations (self-management). This very skill is referred to as "bedside manner." Connecting to the emotions of others requires the ability to listen and be vulnerable. Active viewing of audio–visual activity pertaining to pain in others can lead to individual's engagement in the world of one in pain, allowing one to feel what the person in pain is feeling. Vulnerability deconstructs the walls that exist between the observer and the observed giving an opportunity to get closer to how others may feel. Admittedly, though what the observer experiences is not the same as the observed it still evokes a mental construct in the mind of observer, the process acting as a building block in empathizing with others. Thus both the two types of empathies may work together to increase the capacity to experiences others' emotional lives vicariously. A skill which is essential in later practice of medicine. In popular media this intervention was investigated in Stanley Kubrick's magnificent film with title "A Clockwork Orange." Susan Sontag a leading public literary figures in the United States demonstrated the usefulness of this philosophy in real world. She wrote one of the earliest and most penetrating and influential interpretations of photography in modern society, *On Photography*. In this visual piece she penned powerful pieces on the brutal effects of the fighting, pieces that also burned with passionate criticism of the seeming incapacity of Europe, the United States, and international agencies to intervene effectively to stop the bloodshed, psychological trauma, and societal destruction. Subsequent work "Regarding pain of others" was another powerful piece.[25,26]

5. Conclusions

The inefficiency of the way the information is processed and the knowledge is acquired by medical students and failure to achieve the formulated sociological objectives necessitates a revision in the medical curricula. There is a need to develop community and health-care oriented, applied educational programs to train skilled, professional and empathic future physicians who are able to perceive pain, fear and discomfort of the patient and act on it rather than indulging in detached reasoning thus becoming "Comfortably Numb".

There is no pain you are receding

Your lips move but I can't hear what you're saying

Now I've got that feeling once again

I can't explain you would not understand

I have become comfortably numb

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