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# Learner-centred Medical Education: Improved Learning or Increased Stress?

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## ABSTRACT

*Ultimately the strongest driving force for change must be the students and the doctors themselves. They must be empowered to demand excellence in the courses they attend and realize that their education is not a favour to them, but a means of preparing them to be the sort of doctor we want in the future.*

Lowry (1993)

**Context:** Globally, as medical education undergoes significant reform towards more "learner-centred" approaches, specific implications arise for medical educators and learners. Although this learner-centredness is grounded in educational theory, a point of discussion would be whether the application and practice of these new curricula alleviate or exacerbate student difficulties and levels of stress.

**Objectives:** This commentary will argue that while this reform in medical education is laudable, with positive implications for learning, medical educators may not have understood or perhaps not embraced "learner-centredness" in its entirety.

**Discussion:** During their training, medical students are expected to be "patient-centred". They are asked to apply a biopsychosocial model, which takes cognisance of all aspects of a patient's well-being. While many medical schools profess that their curricula reflect these principles, in reality, many may not always practice what they preach. Medical training all too often remains grounded in the biomedical model, with the cognitive domain overshadowing the psychosocial development and needs of learners.

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**Conclusions:** Entrusted by parents and society with the education and training of future healthcare professionals, medical education needs to move to a "learner-centred philosophy", in which the "whole" student is acknowledged. As undergraduate and post-graduate students increasingly apply their skills in an international arena, this learner-centredness should equally encapsulate the gender, cultural and religious diversity of both patients and students. Appropriate support structures, role models and faculty development are required to develop skills, attitudes and professional behaviour that will allow our graduates to become caring and sensitive healthcare providers.

**Keywords:** Biopsychosocial model, learner-centred, medical education, patient-centred care

# Introduction

Over the past four decades, a major paradigm shift in education has been the move to learner-centred approaches, one major change being the development of problem-based learning or, PBL (Barrows, 1983, 1986; Taylor & Miflin, 2008) and the move towards competency-based and outcome–based learning (Harden *et al.*, 1999; Harden, 2002). These new approaches have sought to place students as the focus of learning, with their teachers in supporting roles (Dewey, 1956; Brandes & Ginnes, 1986; Neville, 1999; Spencer & Jordan, 1999; Ludmerer, 2004; Dornan *et al.*, 2005).

In medical and healthcare education, this paradigm shift was prompted by many factors, not least the need to produce independent, self-reliant doctors and professionals capable of adapting to and meeting the changing healthcare needs of the communities they serve (General Medical Council, 1993, 2002). According to Brandes and Ginnes (1986), whose six principles of student-centred learning integrate the cognitive and affective domains (see Table 1), the net result should be an individual who is empowered to be a life-long learner, who embraces his/her own abilities and who is accepting of others. The introduction of the humanities, communication skills training and early patient contact in the curriculum and the increasing influence of Family Medicine and community-based teaching in medicine have contributed to the understanding of the patient as an individual with feelings and needs, who is an integral member of a community (Balint, 1969; Engel, 1977; Stewart, 2001; Howe *et al.*, 2004). This patient-centred care approach, together with the recognition of the value of building relationships (i.e. relationship-centred care) with patients (Frankel, 2004; Beach *et al.*, 2006), has been incorporated into many medical curricula (Christenson *et al.*, 2007; Cottingham *et al.*, 2008).

**Table 1: Six principles of student-centred learning** (Brandes & Ginnes, 1986)

| | |
|---|---|
| 1. | The learner takes full responsibility for his/her learning. |
| 2. | Involvement and participation by the student are necessary for learning. |
| 3. | The relationship between learners is more equal, promoting growth and development. |
| 4. | The teacher becomes a facilitator and resource person. |
| 5. | The learner experiences confluence in his/her education (i.e. affective and cognitive domains are integrated). |
| 6. | The learner sees himself/herself differently as a result of the learning experience (i.e. develops a higher conception of learning). |

*But, is there a common understanding or implementation of these learner-centred approaches?* We argue that while medical education generally subscribes to more student-focused curricula, the holistic concept of "centredness" is not always translated into

practice or reflected in our interactions with students, which may partly account for the reported stress of medical students (Toews *et al.*, 1997; Dyrbye *et al.*, 2005; Taylor & Miflin, 2008).

Few would disagree that the study of medicine should be a transformative experience that molds young medical students into caring doctors (College of Family Physicians of Canada, 2008; Shapiro, 2008). For most students, this journey is exciting and satisfying. For others, it is stressful (Toews *et al.*, 1997; Dyrbye *et al.*, 2005) and may contribute to the reported attrition from medical studies (Molnár *et al.*, 2006; Arulampalam *et al.*, 2007). From the time a student is admitted to medical school to when he/she enters the workplace as a newly graduated doctor, medical education should provide a nurturing educational and social environment to develop caring principles, professional attitudes and interpersonal relationships (Hafferty, 1998; Christenson *et al.*, 2007; Shapiro 2008). The literature suggests, however, that all too often students may be "short-changed" in this regard. While they might arrive at medical school receptive, "*… we find that medical education sometimes beats students' ability and willingness to care right out of them*" (Branch, 2000). This may help explain the reported loss of altruism, empathy and ethical erosion observed as students progress through their medical studies (Branch, 2000; Lempe & Searle, 2004; College of Family Physicians of Canada, 2008; Shapiro, 2008). Just as learners are expected to treat patients holistically, so should medical education subscribe to a "whole student" model – a biopsychosocial approach. Attention should be paid not only to the cognitive aspects of learning but learners should be supported emotionally and psychologically through the caring relationships that we foster with them.

Medical educators have responded to some of the shortcomings of a traditional curriculum (Des Marchais *et al.*, 1992; Remmen *et al.*, 1998) by revising the *what* (content), *where* (different clinical settings) and *how* (process) of learning. Good examples of this reform would include early exposure to patients to socialise students into the profession (Dornan *et al.*, 2006) and PBL, to develop problem-solving skills and self-direction (Barrows, 1983, 1986; Taylor & Miflin, 2008). Despite these innovations, stress still pervades the life of many medical students (Dyrbye *et al.*, 2005; Piele & Carter, 2005). We argue that this situation may have arisen because medical educators many not have truly understood or embraced the full implications of learner-centredness. In the present commentary, three main areas where medical education may have been negligent in this regard have been identified:

- *On entering medical school,*
- *Within the curriculum, and*
- *Transition to the workplace.*

## *On entering medical school*

Who we teach is very different from a decade ago, with admission criteria now generally taking cognisance of attitude, behaviour and equity in terms of gender and minority groups in addition to academic excellence (Eva *et al.*, 2004; Lemay *et al.*, 2007; James *et al.*, 2008). With the internationalisation of medical education and the increased intake of previously under-represented minorities and females, students now originate from diverse educational, intellectual and socio-cultural backgrounds. To be learner-centred, this diversity needs to be affirmed at the individual level, which, we believe, not all medical schools can claim (Haidat *et al.*, 2006). Variable institutional environments in terms of teacher understanding of "learner-centred" resource allocation and the cultural context (e.g. individual *vs.* collectivism) may impact on the practical implementation of a learner-centred curriculum (O'Sullivan, 2004).

On entering medical school, students move from "big fish" to "small fry", from a protected, high-achievement environment to one in which they are generally just a face among 200 or more other bright, young individuals – a daunting prospect for even the most

capable student. If, as Edwards (2001) reports "*student-centred learning has the potential danger of creating a person's physical isolation from other learners*", then support such as mentoring, counselling and orientation is essential during this emotional and unsettling transition. Taking cognisance of Maslow's (1954) hierarchy of needs, where a learner's physiological, social and psychological needs must be met for him/her to develop self-actualisation (Hutchinson, 2003) would be a useful starting point for recognising the whole student.

## *Within the curriculum*

*Self-directed learning* Today, often at a very early stage in their studies, students are expected to become self-directed learners and problem-solvers capable of accessing and selecting appropriate resources, as well as using evidence to underpin their decisions in caring for patients. Self-directed and adult learning principles do not, however, appear miraculously. It should be recognised that not all students become independent learners, and may require a more directed learning environment (Dornan *et al.*, 2005). Support is essential for this transition from a previous teacher-centred system to developing self-reliant learners who are expected to reach the desired, advertised or prescribed end point. Successful adaptation depends not only on students' cognitive ability but also on their emotional maturity. Taylor and Miflin (2008) caution us that since the introduction of PBL at an early stage of a student's undergraduate career is a dramatic change in learning, it should be implemented carefully to more effectively control stress response levels.

*Core curriculum and special study selectives* One of the outcomes of curriculum reform has been the identification of "core" content, supplemented by special study modules or selectives (GMC, 1993; Harden & Davis, 1995; Murdoch-Eaton *et al.*, 2004; Riley *et al.*, 2008, 2009). While this may have initially addressed the overloaded traditional curriculum, reform is a lengthy process and by the time a new programme is fully implemented several years later, the theoretical knowledge considered essential at the outset may no longer be current. With the rate at which information is presently being made available and the rapid diagnosis and treatment advances, new curricula may suffer the same factual overload (a common cause of student stress) as the traditional curriculum unless content is *regularly* reviewed.

In a learner-centred gesture, some schools offer special study selectives, which allow students to choose areas of personal interest. The appropriate objectives and assessment procedures are, however, not always satisfactorily articulated (Riley *et al.*, 2008, 2009), creating anxiety amongst learners which may outweigh the enjoyment of engaging in personally relevant activities.

*Psychosocial well-being* While it is well known that a doctor's life is stressful, it is not always acknowledged that this stress begins from the first day as a medical student (Wong, 2008). In Wong's opinion, the subjective experience of being ill, which is currently not taught or discussed much at medical school, should begin when students enter medical school as their perceptions of their own mental distress may influence how they view mental health and seek help. The onus rests on medical schools to make students and graduates aware of their personal and professional limitations, creating an awareness of the need to seek help when necessary and the importance of their own health and ability to practice medicine (Royal College of Psychiatrists, 2001; 2003). Since support at medical school is highly variable and is likely to be academic rather than aimed at developing life-long capabilities of dealing with stress, death and personal development, learners may find themselves alone (Saks & Karl, 2004).

*Death and dying* Contemporary education theory informs us that meaningful learning should be contextually relevant (Dolmans *et al.*, 2002; Schurwirth & van der Vleuten, 2004; Prince *et al.*, 2005). In this regard, early clinical exposure is recommended to socialise students into the profession (Dornan *et al.*, 2006). *But, are young students adequately prepared for the harsh realities -*

*the violence, trauma, HIV, death - of the medical profession?* Treadway's (2007) recent perspective in the New England Journal of Medicine, in which she describes feelings of detachment when 'the code is called', echoes Stafford-Clark's (1995) sentiments more than a decade ago (see Table 2). Exposure to death begins early in medical studies, when the human body is conveniently called a cadaver, as though it was something different from a person who has died. Treadway (2007) recalls how she and her colleagues as young medical students "*…learned to bury our fears in an avalanche of knowledge…..learnt the trick of silencing the parts of [their] brain that didn't really want to be close to death*" (p. 1274). The Thai approach, in which the cadaver is viewed as a teacher (Winkelmann & Güldner, 2004), seems to be the exception rather than the norm in terms of embracing principles of "centredness" with regard to both the learner and the "teacher-patient". As the bare minimum, an orientation programme in Anatomy should be offered.

**Table 2: Stafford-Clark's (1995) reflection on how ill-prepared doctors are in dealing with death**

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|---|
| *"….but now, over 50 years later, 25 years of them spent as a teacher and senior consultant in psychiatry at Guy's Hospital, I am left with a conviction that doctors are still uneasy in the way that they deal with death, common enough in their experience, but often shunned in their communication to the next of kin to whom we owe honest and lucid explanation and compassion as well as concern".* (Stafford-Clark, 1995) |

*Transition to clerkship* While the clinical or clerkship phase is powerful for socialising students into medicine, it is an emotional transition in the journey towards becoming a doctor. Despite a wealth of literature warning of the informal or hidden curriculum (Hafferty, 1998; Lempe & Searle, 2004; Suchman *et al.*, 2004), reports of adverse student experiences ranging from verbal abuse to sexual harassment abound (Silver & Glicken, 1990; Sheehan *et al.*, 1990; Uhari *et al.*, 1994; Kaufman & Mann, 1996; Lebenthal *et al.*, 1996; Kassebaum & Cutler, 1998; Schuchert, 1998; Elnicki *et al.*, 2002; Maida *et al.*, 2003; Rautio *et al.*, 2005; Nagata-Kobayashi *et al.*, 2005; Frank *et al.*, 2006; Wilkinson *et al.*, 2006). Belittling or disparaging remarks not only make the learning environment stressful (Silver & Glicken, 1990) but also erode confidence (Schuchert, 1998), which may impact on students' psychosocial well-being (Elnicki *et al.*, 2002; Maida *et al.*, 2003; Nagata-Kobayashi *et al.*, 2005; Wilkinson *et al.*, 2006) and possibly even causing them to withdraw from their studies (Sheehan *et al.*, 1990). Students may become distressed when they realise that they have "caught" inappropriate behaviours, becoming like the physicians they had previously criticised (College of Family Physicians of Canada, 2008).

Cognisance should thus be taken of student development - from the stage of dualism (Perry, 1968), in which students expect right answers to queries, but particularly in the stage of identity formation (Erikson, 1963), such as during clerkships when students are vulnerable and require guidance in forming relationships. For learners to develop professional authenticity, role models are imperative throughout their studies (Althouse *et al.*, 1999; McLean, 2006; Weissman *et al.*, 2006). But, can appropriate role models always be guaranteed?

## *Transition to the workplace*

The transition from medical school to the workplace, either during an internship or a residency, is probably the most difficult period in medical training (Shapiro *et al.*, 2006; Fischer *et al.*, 2007; Leeder, 2007; College of Family Physicians of Canada, 2008). Despite being "*a cultural leap*" (Leeder, 2007), insufficient opportunities exist during medical training to adequately discuss attitudes and strategies and to develop skills to deal with the many difficult situations that arise in the real world (Shapiro *et al.*,

2006; American Medical Association Initiative to Transform Medical Education, 2007; College of Family Physicians of Canada, 2008). The Australian Medical Association (2007) and the UK Postgraduate Medical Education and Training Board (2008) have attempted to address this issue, but there is little evidence of the same support globally. In reality, particularly in the public sector and in developing countries, most graduates are expected to "hit the ground running" at the outset of their professional lives. In order to experience congruence in their education (Brandes & Ginnes, 1986), orientation and clinical tutors and supervisors to mentor and nurture these new doctors into professional practice should be the minimum support offered.

### *Quo vadis?*

Medical schools across the world need to be congratulated on the strides that have been made over the past decade or two towards making medical studies more contextually relevant. While many schools have adopted learner-centred approaches, we are of the opinion that not everyone has acknowledged or practices the concept in its entirety. We propose that medical education requires a further paradigm shift - from *a learner-centred approach to a learner-centred philosophy*. Rather than being satisfied with the mere application of pedagogical principles, medical educators need to engage with the purpose, nature and ideals of education such that the process of human existential growth is embraced in order to better understand the lives and experiences of our learners. Their learning should be tailored to meet their individual cognitive and affective needs, first as students and later as professionals as they interact with patients. A *philosophy* of learner-centredness embodies the pedagogical principles that can potentially meet our overarching aim of creating the right kind of doctor.

Without recognising and embracing the full implications of "learner-centredness" (i.e. a holistic, biopsychosocial approach based on genuine relationships), medical students will continue to be short-changed. An understanding of the unique nature of individual learning environments is therefore essential (Hafferty, 1998; Suchman *et al.*, 2004; Haidat *et al.*, 2006; Christenson *et al.*, 2007; Cottingham *et al.*, 2008). In addition, appropriate faculty development programmes that foster not only teaching and learning skills but also non-traditional elements of self-awareness, community-building and relationship formation (Pololi & Frankel, 2004) would contribute substantially to a philosophy of true learner-centred education.

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