Multiple influences contribute to medical students' well-being and identity formation

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Mavor *et al.*[1] in this issue of Medical Education, describe a working model elucidating how medical students become either stressed or strengthened during the demanding years that lead them towards fulfilling the longed-for goal of becoming a doctor. The model focuses on the inner circle of the medical student's life. He or she is depicted as being on a continuum of self-complexity, in the midst of forming a medical student identity, while being exposed to medical school social norms. One strength of the model is that it allows for both the rise and fall of the student's well-being. If the student maintains high self-complexity, feels connected to fellow medical students and adheres to healthy norms (e.g. by taking regular exercise), he or she will become resilient as a result. However, a medical student who narrows his or her life to meeting the demands of coursework, and finds little time or energy to engage in other roles, will be at risk, especially if he or she feels disconnected from other medical students and engages in unhealthy behaviours (e.g. binge drinking).

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If the student maintains high self-complexity and adheres to healthy norms, he or she will become resilient

Missing from this model are the other circles in which medical students find themselves. Students learn in a medical context that includes medical school and clinic settings. The hidden curriculum, defined as the ad hoc informal teaching that takes place outside the classroom (e.g. in hallways or on-call rooms) can be a wounding experience[2] and may negatively influence a student's well-being.[3] The culture of medicine itself may impede personal and professional development. Haidet and Stein[4] list some of the assumptions that stem from the hidden curriculum: doctors do not make mistakes; you can know everything if you try hard enough; it is OK to be rude if you are doing something really important, and leaving the hospital (to eat or sleep) is a sign of weakness. Dyrbye *et al.*[3] report that the perception of being taken advantage of or abused is common (50–85%) among medical students and is a source of stress.

The culture of medicine itself may impede personal and professional development

Also part of the medical context are role models.[5] These are not only fellow students, but include residents, housestaff and senior doctors. When they observe unethical practices or see patients treated with indifference, and when cynicism prevails, medical students' identity formation can be compromised.[6] A study by Allen *et al.*[2] quotes one third-year medical student as writing: 'The more I spend time with certain physicians, the more I see that many of them are jaded, and the more I feel like I'm naïve.' However, positive role models do exist within the medical education framework. When students are in the presence of doctors who value balance, compassion and self-care, they feel reassured that their role in patient care is, in fact, meaningful. Likewise, when senior residents and staff doctors admit that they too do not know everything about medicine and that they often look up work-related information, this eases the pressure for medical students.

In the presence of doctors who value balance, compassion and self-care, students feel reassured that their role in patient care is meaningful

Medical students also find themselves within the circle of a health care system. They may notice how self-sacrificing and perfectionist doctors can be: workaholism is widespread. They are privy to the fact that many health care professionals are exhausted or burned out. Although students themselves may feel overwhelmed and even burned out, they hesitate to seek professional help as they fear social stigma and judgement.[7]

When they enter hospitals and clinics, students are at the lower end of the medical hierarchy, at which they may feel that their contributions to health care are not significant. Given that medical training emphasises the acquisition of knowledge, technical skills and efficiency, students may lose touch with the value of their reassuring presence to patients. In addition, it is difficult for medical students to form relationships with patients as they must move from one rotation to the next.

Medical students also find themselves within the circle of a health care system

Finally, the larger circle within which all these circles are found is society. It has expectations of doctors and health care systems. This includes the emphasis that some students' families place on social status, whereby they may view certain specialties as more 'prestigious'. Entering such a specialty may require research work and significantly more on-call duty. Students naturally will try to live up to these social demands; this may lead to distress when they cannot be and do all that is asked of them.

What has been done to support medical students so that their years in medical school can teach them not only how to minister to patients but also how to become resilient? Mavor *et al.*[1] suggest targeting the individual and his or her peers. Of the various approaches reported, Mindfulness-Based Stress Reduction has been shown to improve medical students' well-being by decreasing levels of stress and depression, and increasing empathy and self-compassion.[8–10] However, bearing in mind the circles within circles proposed in this commentary, although students may be encouraged to engage in self-care and to practise medicine mindfully, they are unlikely to practise what they have learned if they are in a medical context that either fails to encourage this or, worse, extinguishes it.

Mindfulness-Based Stress Reduction has been shown to improve well-being by decreasing stress and depression, and increasing empathy and self-compassion

There are programmes that target the medical school environment itself. For example, Vanderbilt School of Medicine in the USA offers a comprehensive medical student wellness programme.[11] Monash University Medical School in Australia operates ESSENCE, a programme that is a required part of the curriculum throughout the entire medical school training period.[12] The University of Rochester School of Medicine and Dentistry teaches mindful practice throughout medical school.[13] (See Dobkin and Hutchinson[13] for a review of the teaching of mindfulness in medical schools).

Students are unlikely to practise what they have learned if they are in a medical context that fails to encourage this

Although these efforts are laudable, the answer may reside in changing the way in which medicine is practised and taught. We need to train the trainers so that they, in turn, can show medical students how to operate as whole persons offering service to whole people (patients).[14] At McGill Programs in Whole Person Care, we emphasise the need to re-humanise medical training and practice, keeping in mind the dual roles of medicine: cure when possible, and care always.[15] This must start with our being respectful when we teach our students, with our modelling of relationship-centred practice, and with our remaining whole ourselves. Medical students will then be more likely to use their energy in pursuit of their goal to become compassionate and competent doctors without sacrificing their well-being and harming their identity formation.

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Medical student resilience, educational context and incandescent fairy tales

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In their paper, Mavor and colleagues[1] set out a well-reasoned and theoretically distinctive resistance-to-stress model of resilience. Within this model, the authors conceptualise medical student well-being, burnout and stress as being shaped by a tripartite set of variables: (i) self-complexity; (ii) identity, and (iii) reference group norms. The proposed model is quite useful in highlighting the complexities of context and coping, and we agree with the authors[1] that social psychological factors make appreciable contributions to the complex issues surrounding well-being and medical education. We also support the authors' effort to move beyond a prevalence model of stress and well-being. Nonetheless, we feel there are a number of unsecured threads at the edges of their arguments that warrant additional scrutiny, two of which we explore here: (i) the seductive tug some might feel to implement such a model within medical school admissions, and (ii) the siren call to deploy such a model to curb the more excessive elements of stress without ensuring the preservation of the lower-level stress identified by Mavor *et al.*[1] as necessary to promote both knowledge acquisition and professional formation. We explore these threads by drawing upon two well-known fairy tales: Snow White and the Seven Dwarves, and Goldilocks and the Three Bears.

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The proposed model is quite useful in highlighting the complexities of context and coping

The fairytale of Snow White and the Seven Dwarves reflects a number of the issues raised within this article,[1] including those of resilience, medical student selection, and remedial interventions. The dwarves are a diverse cohort, a combination of peers and allies of Snow White. Each has his relative strengths and weaknesses, but collectively they demonstrate the functional necessity of heterogeneity. Snow White is a somewhat conflated individual known for her humanist values and joyous acceptance of each of her peers, but she is also vulnerable to poisonous elements and to the necessity of rescue by a charming other. Like all medical students, Snow White experiences multiple vectors of stress, the primary source of which is the poisoned apple. Snow White's rescuer is an outside agent, Prince Charming, who might well represent the medical school and its faculty.

