

# SAFE-DRS: Health and Wellbeing in the Curriculum in the Auckland Medical Programme

Fiona Moir, Jill Yielder, Holly Dixon, and Susan Hawken University of Auckland<sup>iv</sup>

SAFE-DRS is the multi-year, multi-component health and wellbeing curriculum in the Auckland Medical Programme. SAFE-DRS is an acronym for: Self-care and skills, Access help, Focused Attention, Emotional Intelligence, Doctor as Patient and Colleague, Reflective Practice, and Stress-Resistance. This commentary argues that wellbeing curricula should be part of all medical programmes, by highlighting the evidence that links doctors' personal health to the health of their patients, the impact on patient safety and quality of care, and implications for the workforce. The core content of the SAFE-DRS components is described, along with lessons learned from development and implementation. A link is provided to the full curriculum.



### Introduction

SAFE-DRS is the multi-year, multi-component health and wellbeing curriculum that forms an integral part of the Medical Programme at the University of Auckland (UoA). It was introduced in 2013 and has been strengthened and revised over the last five years. The authors believe that wellbeing curricula are a necessary part of undergraduate medical programmes and argue for their widespread adoption. This commentary provides an in-depth description of the SAFE-DRS curriculum and the evidence underpinning its' content, in order to highlight the relevance of such training for all doctors. Rather than providing a programme evaluation, the commentary will include key evidence as it progresses sequentially through three areas: the significance of wellbeing curriculum and arguments for their inclusion, SAFE-DRS curricular content, and curriculum development and implementation.

# The Significance of Wellbeing Curricula for Medical Students and Doctors

In 2014 the Medical Council of New Zealand introduced the NZ Curriculum Framework for newly graduated doctors that included a section on 'Personal Wellbeing', with learning objectives such as 'balance availability to others with care for personal health, managing fatigue, stress and illness'. It also emphasised the importance of doctors having their own GP (Henning et al., 2009). Doctors' health has also recently been added to The Physician's Oath, the vow read out by doctors when they qualify. The amendment, endorsed by the World Medical Association in 2017, added the clause: "I will attend to my own health, well-being, and abilities in order to provide care of the highest standard."

These changes have occurred in part because of the clear associations between a doctor's own health and the health of their patients. Doctors' own health habits can influence their frequency of health promotion conversations, along with their credibility and ability to motivate patients (Frank et al., 2000; Oberg & Frank, 2009). For example, doctors' personal fat consumption has been linked to their likelihood of speaking with patients about cholesterol, and similarly there is a correlation between doctors' personal health behaviour and their screening practices for exercise (Frank et al., 2001; Frank, 2004), alcohol and tobacco use and skin cancer (Frank, 2004). Furthermore, improving doctors' wellbeing and self-awareness can enhance their empathy, communication skills and ability to be reflective practitioners (Neumann et al, 2011), all of which



impact on patients' quality of care. A seminal article by Fahrenkopf et al (2008) in the British Medical Journal showed that depressed doctors were six times more likely to make medication errors than their non-depressed colleagues, thus emphasising the relevance for patient safety.

While there is strong evidence for making wellbeing a core component of medical training, the potential benefits of wellbeing curricula stretch far beyond medicine. Such curricula encompass fundamental life skills, clearly valuable and applicable to a wide range of home and work environments, both in university and beyond. Although there may be some people who do not see wellbeing as a priority or who brush it off as being 'fluffy' or optional, the recent Health and Safety legislation (Health and Safety at Work Act 2015) in New Zealand has emphasised the importance of wellbeing in the workplace. Doctors' wellbeing, in particular, has come into the spotlight due to increasing evidence demonstrating links between practitioners' health and the provision of a safe, high-quality service.

# SAFE-DRS Curricular Content

The components of the SAFE-DRS wellbeing curriculum were selected after appraisal of the evidence regarding doctors' health and its' influence on patient safety and quality of care, or because they were a known contributor to ill-health in medical students. The working group convened for this curriculum development task included members with expertise in medical education, doctors' health, burnout prevention, professionalism, curriculum development and assessment. SAFE-DRS is an acronym for the key elements of the programme, and some of the key evidence is summarised below, by looking at each component in more detail:

- Self-care and Skills
- Access Help
- Focused Attention
- Emotional Intelligence
- Doctor as Patient and Colleague
- Reflective Practice
- Stress-Resistance.



# Self-Care and Skills

This encompasses a wide range of topics including physical health topics (e.g., alcohol use, exercise, sleep and nutrition), as medical students' lifestyles have been shown to become less healthy as they progress through medical school (Ball & Bax, 2002). Psychological approaches to assist with managing negative thinking patterns that can precipitate distress (e.g., perfectionism, self-criticism and anxiety) are also included. There is strong evidence for the benefits of gratitude and for compassion-based practices on practitioner resilience (e.g., Lyubomirsky et al., 2005; Emmons & McCullough, 2003), burnout prevention and patient care (e.g., Dev et al., 2018; Seppala, Hutcherson, Nguyen, Doty, & Gross, 2014).

### Access Help

It is well documented that medical students often hesitate to reach out for help as they fear that this might affect their career progression, or be viewed as weak (Chew-Graham et al., 2003; Amarasuriya et al., 2015). For example, one USA study reported that only 26.5% of students with depression reported seeking treatment (Tija et al., 2005). In SAFE-DRS, students are informed of the care pathways available to them, and are also asked to explore their own barriers (Thistlethwaite, Quirke, & Evans, 2010) and enablers to seeking help. As doctors' personal health behaviour can also affect their interactions with patients, it is important that they learn to prioritise their own physical health (Frank, 2004) and develop healthy help-seeking behaviour as trainees (Thistlethwaite et al., 2010). Medical students are also at risk of depression, where early intervention is key (Moir, Yielder, Sanson & Chen, 2018), furthering the case for including help-seeking behaviour in the curriculum.

### Focussed Attention

The 'focused attention' component of the curriculum largely focuses on the attention training aspects of mindfulness: being aware and focussing on the present moment, whilst cultivating an attitude of non-judgement towards those experiences (Kabat-Zinn, 1990). The inclusion of mindfulness in the curriculum aims to enable students to find a way to activate their relaxation response, but students are encouraged to do this in other ways if they prefer, for example with body-based practices. The curriculum also emphasises that mindfulness can be helpful in adaptively regulating emotions in high stress situations and that there is evidence that it enhances



productivity and learning. There is abundant evidence demonstrating the psychological and physiological benefits of receptive and non-judgmental attention for both non-clinical and clinical populations (e.g., Kuyken et al., 2015; Anderson et al., 2007; Epel et al, 2016). Studies have also demonstrated that mindfulness-based interventions can reduce self-reported state and trait anxiety and overall psychological distress, and can increase empathy, even during high stress periods (e.g., Danilewitz, Bradwejn & Koszycki, 2016; Hassed, de Lisle & Pier, 2009; Phang, Mukhtar, Ibrahim, Keng & Mohd Sidik, 2015). To give students options for accessing an attentive state, a yoga session is also included in the Year 4 Health and Wellbeing Day. Yoga has been shown to reduce stress and anxiety, and can be particularly beneficial for medical students (e.g., Fares & Fares, 2016, Prasad et al., 2016; Simard & Henry, 2009).

### Emotional Intelligence

Emotional intelligence (EI) concerns the ability to identify, assess and manage the emotions of self and others, and forms an essential element for managing challenging clinical situations, teamwork and leadership. Literature relating to the importance of EI is profuse, in particular its' significant role in understanding emotions and people in the workplace and its' role in leadership and success (e.g. Caruso, 1999; Mayer et al., 2016; Goleman, 2011, 2013). Studies also indicate that EI is linked directly to health and wellbeing, for example, through increased resilience (Armstrong et al., 2011; Schneider et al., 2013), decreased depression and suicide risk (Aradilla-Herrero et al., 2014), coping behaviours (Saklofske et al. 2007), health (Schutte et al., 2007), life satisfaction and well-being (Kong & Zhao, 2012; Schutte & Malouff, 2011) and flourishing in the workplace (Schutte & Loi, 2014). Studies have also shown the relationship between EI and academic achievement (Chew et al., 2013; MacCann & Zeidner, 2010). In particular, the research by Chew et al. (2013), a study of first and final year medical students, concluded that there was a significant relationship between medical students with higher levels of EI and their performance in continuous assessments and in their final examinations.

### Doctor as Patient and Colleague

Colleagues deserve high quality care similar to other patients, and wellbeing curricula in health programmes can emphasise that informal care for colleagues may be sub-standard or viewed as unprofessional. There are specific factors to be taken into consideration when the doctor is also a



patient. These can include denial, avoidance, fears about confidentiality, over-identification and the pitfalls of 'corridor consultations' (Tyssen, 2001), along with how to strengthen the relationship by focusing on empathy, joint-decision-making and managing boundaries (Kay, Mitchell, & Clavarino, 2010). This component of the curriculum is also an opportunity to address the consequences of self-diagnosis, self-referral and self-prescribing. A study at one London medical school showed that over 50% of Year 4 medical students felt it was appropriate for doctors to self-investigate and self-refer. Of those students, about a quarter had already self-referred to a specialist and 13% had received a prescription from a friend (Hooper, Meakin, & Jones, 2005). A recent New Zealand study of doctors training to be Anaesthetists similarly reported that 47% of the 428 trainees surveyed reported self-prescribing and 28% did not have their own GP (Downey, McDonald & Downey, 2017). The Medical Council of New Zealand advises that prescribing for self or family should only be done in exceptional circumstances, due to discontinuity of care and the lack of clinical objectivity (Medical Council of New Zealand, 2016). This is emphasised in the SAFE-DRS curriculum.

'Doctor as colleague' is where unprofessional behaviours such as bullying, harassment and discrimination can be addressed. Institutional and systems factors can be highlighted, to emphasise that such problems are unlikely to occur in isolation (Shanafelt & Noseworthy, 2017). Students can learn skills for giving feedback, as well as developing self-awareness of their own judgement and bias (Shapiro, 2018). Alongside teaching skills and attitudes designed to prevent and respond to unprofessional behaviour, it is important for Faculty to state that unprofessional behaviour is unacceptable and to outline pathways for reporting and receiving support.

# Reflective Practice

Critically reflective practice is defined by Brookfield, one of the leading contributors to research in this field, as "a process of inquiry involving practitioners in trying to discover, and research, the assumptions that frame how they work" (1998, p.197). This ability is becoming increasingly recognised as important in professional competency within medicine (Friedman et al., 2001; Kalet et al., 2007). Griggs (2009) succinctly argues for the importance of critical reflection in medicine, saying "Physicians deal with complex and ill-structured problems. They must be able to reflect in order to function professionally while adapting to their patients' needs" (p.1). To become an expert clinician, knowledge and action needs to be made conscious and reflected on in order to learn



from experience and make improvements. Mezirow (1991) maintains that it is not so much peoples' experiences, but how they interpret and explain those experiences, that determine their actions and their performance. Authors such as Driessen et al. argue that medical students and doctors are limited in their ability to critically reflect and in their capacity for self-assessment (2007, in Yielder & Moir, 2016). For this reason, it is important to include opportunities for students to learn how to critically reflect and to apply this process to challenges that arise during clinical learning.

#### Stress Resistance

The phrase 'stress-resistance' rather than resilience, was selected for SAFE-DRS as it encompasses the need for doctors to cultivate an adaptive response to daily stressors (Sisley, Henning, Hawken, & Moir, 2010) rather than an ability to bounce back from adverse events (Dyer & McGuinness, 1996). There is strong evidence signalling that the psychological health of medical students is of concern within New Zealand (Henning et al., 2009) and internationally (Dyrbye et al., 2014). This is thought to be due to multiple factors, including the personalities of those attracted to medicine, selection processes, workload, assessment strategies, students' help-seeking behaviour and specific stressors of the clinical environment (Moir et al., 2018). An educational approach that acknowledges and addresses the complexity of these issues is required. Individuals can be trained in skills and attitudes to influence their own stress response, but this should be offered in conjunction with strategies to promote a healthy culture within the profession, and an on-going drive to address workplace stressors in the system (Shanafelt & Noseworthy, 2017).

### **SAFE-DRS** Learning Process

The seven components of SAFE-DRS are re-visited in a spiral mode throughout the years to highlight the relevance of topics at particular points of the medical programme. For example, with the EI component, students learn the basic concepts in Year 2, the relevance of EI for communicating with patients in Year 4, and the influence of EI for teamwork and leadership in Year 5. SAFE-DRS is delivered via lectures, tutorials and online learning with experiential learning being prioritised, as this has been shown to encourage behaviour change. A mandatory workshop, attended once by each Year 4 student, is held six times a year to enable small group teaching. This includes a choice of seminars on topics such as managing anxiety, preventing burnout,



assertiveness, time-management, and coping with death and dying. In keeping with the holistic and inclusive atmosphere for the day, 'creative slots' are offered between topics, where students can showcase their extracurricular talents such as art, music and poetry.

The full SAFE-DRS curriculum with all of the learning outcomes can be requested at ppsadmin@auckland.ac.nz

# **Development and Implementation**

# Curriculum Development

Increasing attention has been placed on the 'role of the doctor' (Old et al., 2011), and medical schools have been challenged to address the new skills, attitudes, knowledge and personal attributes that future doctors require. In 2011, in response to these drivers, the Medical Programme at UoA commissioned a working party (including authors SH, FM and JY) to explore the foundations and activities for a *Personal and Professional Skills (PPS)* domain as part of a re-invigorated curriculum. The Auckland Medical Programme is comprised of domains which run longitudinally throughout Year 2 to 6 of the programme. In 2011, the domains were *Applied Science for Medicine, Clinical and Communication Skills, Hauora Māori*, and *Population Health*. It was proposed that PPS would form an additional fifth domain, which would be formally assessed and of equivalent value to the other four curriculum domains. The new PPS domain consists of six major themes:

- 1. Professionalism and reflective practice
- 2. Ethics and the law
- 3. Cultural Competence
- 4. Health and Wellbeing
- 5. Learning and teaching
- 6. Leadership (theme currently under development)

The health and wellbeing curriculum, later given the acronym SAFE-DRS, was developed within the PPS domain between the years of 2010 and 2012, and implemented in 2013.



The assessment principles adopted for the PPS domain (including SAFE-DRS), outline the need for more than one method of assessment, with multiple, small samples of evidence required over time to provide reliability. Assessment for the domain consists of three primary elements: direct observation by clinical staff; assignments; and a portfolio, with the portfolio carrying the majority weighting. The inclusion of direct observation addresses the concern that students can 'fake' professionalism (Rees & Knight, 2007), and contributes to creating a robust and coherent curriculum. The 'direct observation' component of SAFE-DRS requires clinical supervisors to assess students' awareness of their own limitations, management of boundaries and ability to manage stress on the wards, for each clinical placement they undertake.

Using portfolios for assessment builds on the principles of subjectivity, process and progression (Yielder & Moir, 2016). Emphasis is placed on the use of adult principles of learning, including authenticity, deep learning, and the integrated manner in which students can present their knowledge (ibid). The Auckland medical programme portfolio is student- driven, and consists of the compilation of multiple pieces of evidence on which students have critically reflected, to demonstrate how the domain learning outcomes have been achieved. Students have illustrated the level of insight, maturity and synthesis of personal and professional qualities that they are capable of achieving, often in a very creative manner. The PPS domain gives a clear message that these are fundamental longitudinal elements of the medical programme.

#### Implementation

While SAFE-DRS was implemented in 2013, it has retained some flexibility in order to allow new topics to be added in response to students' needs. The authors found that it paid to encourage collaboration from a wide range of staff and students, integrating their ideas into the development and implementation wherever possible, in accordance with behaviour change models (Miller & Rollnick, 2013). While there needs to be governance to set up systems (Storrie et al., 2010), an exclusively top-down approach is unlikely to be as successful. Wellbeing is 'personal' and is seen by many people as a sensitive topic. Awareness of this is crucial, as there are a range of views on where the boundary lies between peoples' personal and professional lives. From the outset it was clear that facilitators and assessors must also communicate clearly about the confidentiality or follow up of any personal health information disclosed by students.



Part of the SAFE-DRS curriculum was included in the standard Year 2 course evaluation at the end of its' first year of implementation in 2013. 237 Year 2 students, a 99.5% response rate, completed the course evaluation. 95% of students agreed that writing a self-care diary had changed their self-awareness about their personal health, and 77% agreed that it had changed their health behaviour. A robust longitudinal evaluation of SAFE-DRS is currently underway.

One of the lessons learnt during SAFE-DRS implementation was the importance of separating student support initiatives from curricular development and delivery. This was addressed by convening two committees with different terms of reference. One is focussed on the provision of support (Pastoral Care Sub-committee), and the other on education (the SAFE-DRS curriculum Working Party). This structure enables a clear distinction between roles, whilst enabling one group to alert the other should they detect a recurring concern of relevance to them.

# Conclusion

The authors believe that the seven components of SAFE-DRS are the key to healthier, safer practitioners. Summarising each of the components in turn:

- A doctor with healthy *Self-care* habits who exercises and eats well, is likely to be more credible with patients in health promotion consultations and to screen more frequently for related conditions.
- A doctor who can *Accesses help* appropriately is less likely to be working whilst ill and has a reduced chance of making mistake.
- A mindful doctor will be better able to learn to *Focus* during long procedures, and will have cultivated the ability to choose how they respond in each moment, as well as being less likely to become depressed.
- An *Emotionally intelligent* doctor is more likely to be empathic and be a better leader and communicator.
- A *Doctor who is comfortable with the patient* role is likely to respond helpfully to colleagues in distress and less likely to self-prescribe.
- A *Reflective practitioner* will be self-aware and able to learn from their mistakes and failures.



• A doctor with better *Stress-resistance* is more likely to succeed in a high-pressure environment.

Together, all of these skills and attributes enhance the patient experience, promote good quality of care and safety, and protect and nurture an ailing workforce. Comprehensive wellbeing curricula create doctors who are better able to look after themselves and their patients, and the evidence supports their inclusion as an integral part of medical training.

# Acknowledgement:

The authors would like to acknowledge the work of other members of the original Auckland Health and Wellbeing Curriculum Working Group: Professor Andrew Hill and Dr Peter Huggard; Dr Craig Hassed for initial consultation and the use of some amended Monash Health Enhancement Programme exercises in SAFE-DRS Year 2; Professor John Kolbe for his suggested addition of 'and colleague' to the 'Dr as Patient' SAFE-DRS component; and Professor Warwick Bagg, Head of the Auckland Medical Programme for his leadership in emphasising the importance of a wellbeing curriculum and supporting its' implementation.

### References

- Amarasuriya, S. D., Jorm, A. F., & Reavley, N. J. (2015). Perceptions and intentions relating to seeking help for depression among medical undergraduates in Sri Lanka: A cross-sectional comparison with non-medical undergraduates. *BMC medical education*, 15(1), 162. doi: 10.1186/s12909-015-0453-8
- Anderson, N. D., Lau, M. A., Segal, Z. V, & Bishop, S. R. (2007). Mindfulness-based stress reduction and attentional control. *Clinical Psychology and Psychotherapy*, 14, 449–463. doi:10.1002/cpp.544
- Aradilla-Herrero, A., Tomas-Sabado, J., & Gomez-Benito, J. (2014). Associations between emotional intelligence, depression and suicide risk in nursing students. *Nurse Education Today*, 34(4), 520-525.
- Armstrong, A., Galligan, R., & Critchley, D. (2011). Emotional intelligence and psychological resilience to negative life events. *Personality and Individual Differences, 51*(3), 331-336.
- Brookfield, S. (1998). Critically reflective practice. Journal of Continuing Education in the Health Professions, 18, 197-205.
- Caruso, D. (1999). Applying the ability model of emotional intelligence to the world of work. Retrieved from <u>https://www.yumpu.com/en/document/view/3586564/applying-the-ability-model-of-emotional-intelligence-</u>



- Chew, B., Zain, A., & Hassan, F. (2013). Emotional intelligence and academic performance in first and final year medical students: A cross-sectional study. *BMC Medical Education*, *13*(44). doi: 10.1186/1472-6920-13-44
- Chew-Graham, C. A., Rogers, A., & Yassin, N. (2003). 'I wouldn't want it on my CV or their records': Medical students' experiences of help-seeking for mental health problems. *Medical Education*, 37(10), 873-880.
- General Medical Council. (2003). Tomorrow's doctors: Recommendations on undergraduate medical education. London: Retrieved from <u>https://www.educacionmedica.net/pdf/documentos/modelos/tomorrowdoc.pdf</u>
- Danilewitz, M., Bradwejn, J., & Koszycki, D. (2016). A pilot feasibility study of a peer-led mindfulness program for medical students. *Canadian Medical Education Journal*, 7(1), e31–e37.
- Dev, V., Fernando, A. T., Lim, A. G., & Consedine, N. S. (2018). Does self-compassion mitigate the relationship between burnout and barriers to compassion? A cross-sectional quantitative study of 799 nurses. *International Journal of Nursing Studies, 81*, 81-88. doi:10.1016/j.ijnurstu.2018.02.003
- Downey, G B; McDonald, J M; Downey, R G. (2017). Welfare of anaesthesia trainees survey. Anaesthesia & Intensive Care. 45(1):73-78.
- Dyer, J. G., & McGuinness, T. M. (1996). Resilience: Analysis of the concept. *Archives of Psychiatric Nursing*, *10*(5), 276-282. doi: 10.1016/S0883-9417(96)80036-7
- Dyrbye, L. N., West, C. P., Satele, D., Boone, S., Tan, L., Sloan, J., & Shanafelt, T. D. (2014).
  Burnout among US medical students, residents, and early career physicians relative to the general US population. *Academic Medicine*, 89(3), 443-451. doi:10.1097/ACM.00000000000134
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, 84(2), 377–389. doi:10.1037/0022-3514.84.2.377
- Epel, E. S., Puterman, E., Lin, J., Blackburn, E. H., Lum, P. Y., Beckmann, N. D., ... Schadt, E.
  E. (2016). Meditation and vacation effects have an impact on disease-associated molecular phenotypes. *Translational Psychiatry*, 6, e880. doi:10.1038/tp.2016.164
- Fahrenkopf, A. M., Sectish, T. C., Barger, L. K., Sharek, P. J., Lewin, D., Chiang, V. W., ... & Landrigan, C. P. (2008). Rates of medication errors among depressed and burnt out residents: Prospective cohort study. *BMJ*, 336(7642), 488-491. doi: 10.1136/bmj.39469.763218.BE
- Fares, J. & Fares, Y. (2016). The role of yoga in relieving medical student anxiety and stress. *North American Journal of Medicine and Science, 8*(4), 202–204.
- Ford, A. (2002). Peer support in colleges and universities: A training manual (2<sup>nd</sup> ed.). Rugby: Pettifer Publishing Services.



- Frank, E. (2004). Physician health and patient care. JAMA, 291(5), 637-637. doi:10.1001/jama.291.5.637
- Frank, E., Breyan, J., & Elon, L. (2000). Physician disclosure of healthy personal behaviors improves credibility and ability to motivate. *Archives of Family Medicine*, 9(3), 287-290.
- Frank, E., Galuska, D. A., Elon, L. K., & Wright, E. H. (2004). Personal and clinical exerciserelated attitudes and behaviors of freshmen US medical students. *Research Quarterly for Exercise* and Sport, 75(2), 112-121. doi: 10.1080/02701367.2004.10609142
- David, M. F. B., Davis, M. H., Harden, R. M., Howie, P. W., Ker, J., & Pippard, M. J. (2001). AMEE Medical Education Guide No. 24: Portfolios as a method of student assessment. *Medical Teacher*, 23(6), 535-551. doi: 10.1080/01421590120090952
- Goleman, D. (2011). *Leadership: The power of emotional intelligence*. Northampton: More Than Sound, Digital Edition.
- Goleman, D. (2013). *What makes a leader: Why emotional intelligence matters*. Northampton: More Than Sound, Digital Edition.
- Griggs, M. (2009). Use of reflection in medical education. Unpublished PhD dissertation. University of Missouri-Columbia.
- Hafferty, F. W. (1991). Into the valley: Death and the socialization of medical students. New Haven: Yale University Press.
- Hassed, C., de Lisle, S., Sullivan, G. & Pier, C. (2009). Enhancing the health of medical students: Outcomes of an integrated mindfulness and lifestyle program. *Advances in Health Sciences Education: Theory and Practice*, 14(3), 387-398.

Health and Safety at Work Act 2015

- Henning, M., Hawken, S., & Hill, A. (2009). The quality of life of New Zealand doctors and medical students: What can be done to avoid burnout? New Zealand Medical Journal, 122(1307), 102-110.
- Hooper, C., Meakin, R., & Jones, M. (2005). Where students go when they are ill: How medical students access health care. *Medical Education*, 39(6), 588-593. doi: 10.1111/j.1365-2929.2005.02175.x
- Kabat-Zinn J. (1990). Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness. Dell Publishing; New York.
- Kalet, A. L., Sanger, J., Chase, J., Keller, A., Schwartz, M. D., Fishman, M. L., ... & Kitay, A. (2007).
  Promoting professionalism through an online professional development portfolio: Successes, joys, and frustrations. *Academic Medicine*, 82(11), 1065-1072. doi:10.1097/ACM.0b013e31815762af
- Kay, M., Mitchell, G., & Clavarino, A. (2010). What doctors want? A consultation method when the patient is a doctor. Australian Journal of Primary Health, 16(1), 52-59. doi: 10.1071/PY09052



- Kong, F., & Zhao, J. (2013). Affective mediators of the relationship between trait emotional intelligence and life satisfaction in young adult. *Personality and Individual Differences*, 52(2), 197-201.
- Kuyken, W., Hayes, R., Barrett, B., Byng, R., Dalgleish, T., Kessler, D., ... Byford, S. (2015). Effectiveness and cost-effectiveness of mindfulness-based cognitive therapy compared with maintenance antidepressant treatment in the prevention of depressive relapse or recurrence (PREVENT): A randomised controlled trial. *The Lancet, 386*(9988), 63–73. doi:10.1016/S0140-6736(14)62222-4
- Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology*, 9(2), 111. doi:10.1037/1089-2680.9.2.111
- Mayer, J., Caruso, D., & Salovey, P. (2016). The ability model of emotional intelligence: Principles and updates. *Emotion Review*, 8(4), 290-300. doi:10.1177/1754073916639667
- MacCann, C., Fogarty, G. J., Zeidner, M., & Roberts, R. D. (2011). Coping mediates the relationship between emotional intelligence (EI) and academic achievement. *Contemporary Educational Psychology*, 36(1), 60-70. doi: 10.1016/j.cedpsych.2010.11.002
- Medical Council of New Zealand. (2016). Statement on providing care to yourself and those close to you. Wellington: Retrieved from https://www.mcnz.org.nz/assets/News-and-Publications/Statements/Statement-on-providing-care-to-yourself-and-those-close-toyou.pdf
- Mezirow J. (1991). Transformative dimensions of adult learning. San Francisco: Jossey-Bass Publishers.
- Miller, W.R. & Rollnick, S. (2013). Motivational interviewing: helping people change (Third Edition). New York, NY: Guilford Press.
- Moir, F., Yielder, J., Sanson, J., & Chen, Y. (2018). Depression in medical students: Current insights. Advances in Medical Education and Practice, 9, 323–333. doi:10.2147/AMEP.S137384
- Monrouxe, L. V., Rees, C. E., & Hu, W. (2011). Differences in medical students' explicit discourses of professionalism: acting, representing, becoming. *Medical Education*, 45(6), 585-602. doi: 10.1111/j.1365-2923.2010.03878.x
- Neumann, M., Edelhäuser, F., Tauschel, D., Fischer, M. R., Wirtz, M., Woopen, C., ... & Scheffer, C. (2011). Empathy decline and its reasons: A systematic review of studies with medical students and residents. *Academic Medicine, 86*(8), 996-1009. doi:10.1097/ACM.0b013e318221e615
- Oberg, E. B., & Frank, E. (2009). Physicians' health practices strongly influence patient health practices. *The Journal of the Royal College of Physicians of Edinburgh*, 39(4), 290-291. doi:10.4997/JRCPE.2009.422
- Old, A., White, H., & Foley, P. (2011). Consensus statement on the role of the doctor in New Zealand. *New Zealand Medical Journal, 124*(1345), 117-120.



- Paykel, E. S. (1994). Life events, social support and depression. *Acta Psychiatrica Scandinavica, 89*, 50-58. doi: 10.1111/j.1600-0447.1994.tb05803.x
- Phang, C. K., Mukhtar, F., Ibrahim, N., Keng, S.-L., & Mohd. Sidik, S. (2015). Effects of a brief mindfulness-based intervention program for stress management among medical students: The Mindful-Gym randomized controlled study. *Advances in Health Sciences Education*, 20(5), 1115–1134. doi:10.1007/s10459-015-9591-3
- Prasad, L., Varrey, A., & Sisti, G. (2016). Medical students' stress levels and sense of well being after six weeks of yoga and meditation. *Evidence-Based Complementary and Alternative Medicine*, 127, 1–7.
- Rees, C. E., & Knight, L. V. (2007). The trouble with assessing students' professionalism: Theoretical insights from sociocognitive psychology. *Academic Medicine*, 82(1), 46-50. doi:10.1097/01.ACM.0000249931.85609.05
- Saklofske, D., Austin, E., Galloway, J., & Davidson, K. (2007). Individual difference correlates of health-related behaviours: Preliminary evidence for links between emotional intelligence and coping. *Personality and Individual Differences, 42*(3), 491-502. doi: 10.1016/j.paid.2006.08.006
- Schneider, T., Lyons, J., & Khazon, S. (2013). Emotional intelligence and resilience. *Personality and Individual Differences, 55*(8), 909-914. doi: 10.1016/j.paid.2013.07.460
- Schutte, N., Malouff, J., Thorsteinnson, E., Bhullar, N., & Rooke, S. (2007). A meta-analytic investigation of the relationship between emotional intelligence and health. *Personality and Individual Differences*, 42(6), 921-993. doi: 10.1016/j.paid.2006.09.003
- Schutte, N., & Malouff, J. (2011). Emotional intelligence mediates the relationship between mindfulness and subjective well-being. *Personality and Individual Differences*, 50(7), 1116-1119. doi: 10.1016/j.paid.2011.01.037
- Schutte, N., & Loi, N. (2014). Connections between emotional intelligence and workplace flourishing. *Personality and Individual Differences*, 66, 134-139. doi: 10.1016/j.paid.2014.03.031
- Seppala, E. M., Hutcherson, C. A., Nguyen, D. TH., Doty, J. R. & Gross, J. J. (2014). Lovingkindness meditation: A tool to improve healthcare provider compassion, resilience, and patient care. *Journal of Compassionate Health Care*, 1(5). doi:10.1186/s40639-014-0005-9
- Shapiro, J. (2018). Confronting unprofessional behaviour in medicine. *BMJ, 360*, k1025. doi: 10.1136/bmj.k1025
- Shanafelt, T., & Noseworthy, J. (2017). Executive leadership and physician well-being: Nine organizational strategies to promote engagement and reduce burnout. *Mayo Clinic Proceedings*, 92(1), 129-146. doi:10.1016/j.mayocp.2016.10.004
- Simard, A. A., & Henry, M. (2009). Impact of a short yoga intervention on medical students' health: A pilot study. *Medical Teacher*, *31*(10), 950–952. doi: 10.3109/01421590902874063



- Sisley, R. C., Henning, M. A., Hawken, S. J., & Moir, F. (2010). A conceptual model of workplace stress: The issue of accumulation and recovery and the health professional. *New Zealand Journal of Employment Relations*, 35(2), 3–15.
- Storrie, K., Ahern, K., & Tuckett, A. (2010). A systematic review: Students with mental health problems—a growing problem. *International Journal of Nursing Practice*, 16(1), 1-6. doi:10.1111/j.1440-172X.2009.01813.x
- Swick, H. M. (2000). Toward a normative definition of medical professionalism. *Academic Medicine*, 75(6), 612-616.
- Thistlethwaite, J., Quirk, F. & Evans, R. (2010). Medical students seeking medical help: A qualitative study. *Medical Teacher*, *32*(2), 164-166. doi: 10.3109/01421590903434177
- Thomas, L. (2012). Bringing student engagement and belonging in higher education at a time of change: A summary of recommendations from the What Works? Student Retention and Success programme. Bristol: University of Bristol.
- Tjia, J., Givens, J. L., & Shea, J. A. (2005). Factors associated with undertreatment of medical student depression. *Journal of American College Health*, 53(5), 219-224. doi:10.3200/JACH.53.5.219-224
- Tyssen, R. (2001). The physician-patient relationship when the patient is a physician. *Tidsskrift for* Den Norske Laegeforening. 121(30), 3533-5.
- Yielder, J., & Moir, F. (2016). Assessing the development of medical students' personal and professional skills by portfolio. *Journal of Medical Education and Curricular Development*, 3, 9-15 doi:10.4137/JMecd.S30110.