Digital Wellbeing in Medical Students

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Background: Medical students have access to a large set of online resources to support their learning, and the quantity and diversity of these resources is only increasing. In tandem, non-educational digital activities are increasingly popular and available. This is often characterised as positive for students' education and social interactions, however it is possible that the amount of digital activity could be detrimental to students' wellbeing.

Summary of Work: 103 female and 84 male 5th year Medical Students at the University of Otago completed a wellbeing survey, which included measures of global wellbeing as well as five questions specifically targeting their digital wellbeing. Students were asked to rate their agreement on a 5-point likert-type scale in response to items relating to their use of digital technology for learning and non-educational purposes.

Summary of Results: More than 50% of respondents indicated that they found the amount of online material available for their studies to be overwhelming. Associations were found between concerns about online and digital activity, and perceived adverse effects on success at Medical School.

Discussion: Preliminary analysis suggests that although students reported that they feel well prepared by the Medical School to use online resources effectively, there are a number of students who need further support.

Conclusion: Digital wellbeing in medical students is an important area of investigation, especially as the amount of digital material increases in availability and quantity. Further investigations could more clearly identify the types of online activity that are causing concerns. Medical schools may need to provide more targeted advice for students to help them further develop digital literacies.

Take Home Messages: Increasing the amount of online material for students could be detrimental to their wellbeing if adequate guidance and support is not in place.
Medical Student Motivation for Well Being and Self Determination Theory

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Background: Following the introduction of a new undergraduate medical curriculum at the University of Liverpool, increased focus has been placed upon student well being. As part of this change programme, first year undergraduate medical students attended a well being conference aimed to reduce stigma around mental health issues and promote well being.

Summary of Work: The wellbeing conference consisted of interactive workshops and included talks from the medical school staff. The conference was evaluated using online student feedback, session data produced on the day and ethnographic work. Using self determination theory as a theoretical lens, student understanding and their personal motivation for achieving well being was explored.

Summary of Results: Initially students demonstrated some apprehension towards the concept of well being and the conference. However, following talks by staff members about their personal and professional experiences, interactive workshops and activities, students learned to recognise their own well being, coping strategies and how they might require support in the future. They also demonstrated understanding that failure is a part of medicine, and how they can learn from this experience.

Discussion: Students’ relatedness with the key staff’s professional and personal stories shifted their perceptions about the importance of wellbeing. Staff provided students with a variety of ideas/feedback/coping strategies around wellbeing and students valued the informal, none controlling and none judgmental interaction with the staff. Motivation to maintain wellbeing varied among students.

Conclusion: The range of activities students were involved with tested their perceptions of themselves and each other, enabling them to extend their friendship groups and appreciation of trying new ways of working. The importance of positive motivation and experience for enhanced performance and wellbeing identified by Ryan and Deci (2000) offers valuable insight for medical educators.

Take Home Messages: Medical students are apprehensive about addressing well being and mental health issues. Learning about coping strategies and accessing support from staff can improve their motivation to maintain well being.

Knowledge and Role Modelling Deficiencies in the Physical Activity Realm, Significant Intervention Required in Australian Medical Students; MEDx Update

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Background: The next generation of doctors’ biggest challenge will be managing and treating non-communicable disease and they may be ill-prepared. The MEDx study explores the impact of medical education on student knowledge and attitudes towards exercise as medicine and associations with students own physical activity (PA) levels.

Summary of Work: Ongoing biannual online surveys (2014-2016) of postgraduate Deakin University (Australia) medical students exploring knowledge of, attitudes toward, and participation in exercise as medicine. Findings have led to new PA learning objectives in the medical curriculum.

Summary of Results: Repeat surveys of >500 students, across 4 years revealed that attitudes towards exercise as medicine were resoundingly positive, indicating significant support for curriculum inclusion. Even so, student PA levels are low, with less than one-third of students meeting Australian Physical Activity Guidelines (APAG). Drivers for engaging in PA tended to be mental or physical health related rather than voluntary students reported that university commitments took away time for PA. The introduction of Exercise as Medicine learning of objectives raised student awareness of APAG from 0.7 to 2.6% in 1 year but failed to change PA participation.

Discussion: Attitude to PA was resoundingly positive, participation was however low, mirrored in both the USA and UK. The introduction of learning objectives boosted student knowledge of APAG. Similar results have been shown when introducing brief curriculum additions in other areas such as nutrition. Unfortunately the impact thus far has been small and thus a more significant, structured program is required. Staff role modelling and timetable modification to encourage student PA levels should also be addressed.

Conclusion: Teaching PA learning objectives improves student knowledge and possibly PA behaviour but the university environment itself hinders PA. A more scaffolded and expansive curriculum is likely to be needed to translate this knowledge and role-modelling behaviour to improved patient outcomes.

Take Home Messages: Learning objectives in a medical curriculum that target knowledge of and attitudes towards PA may improve the health of patients and doctors.
Teaching Medical Students Wellness Coaching to Improve Lifestyle Habits

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Background: Lifestyle modification can reduce the potential for major diseases, like cancer and diabetes. Wellness coaching can improve healthy lifestyle habits and is starting to become integrated into new models of care delivery as part of a comprehensive approach to improving population health.

Summary of Work: All first-year medical students completed a longitudinal wellness coaching curriculum that included classroom-based instruction and peer health coaching sessions. Students worked in triads, taking turns being the wellness coach, receiving health coaching, and providing feedback to the health coach. All students completed pre and post surveys assessing attitudes and behavior change.

Summary of Results: At the end of the course, 89% of students thought peer coaching was helpful and 89% reported making a positive change in their own behavior as a result of the peer coaching. Two-thirds considered themselves healthier after the activity. 95% endorsed the curriculum should remain. In comparison to baseline, students became more confident in their ability to make health behavior change (p=0.02). Differences were also seen in readiness to make positive health behavior change changes (p=0.001).

Discussion: Incorporating wellness coaching into the medical school curriculum leads to self-reported behavior change. Further work is needed to understand barriers and facilitating factors for health behavior change among medical students, if the experience leads to measurable improvements in well-being, and if students use their wellness coaching skills subsequently with patients.

Conclusion: Given the role of lifestyle in disease burden, a wellness coaching curriculum is a valuable addition to the curriculum as medical students learn wellness coaching skills, experience wellness coaching aimed at changing health behavior, and make positive health behavior change.

Take Home Messages: Teaching wellness coaching could equip medical students with strategies to promote their own health as well as that of their patients.

Salivary Biometrics and Heart Rate Monitoring for Optimizing Medical Student Education

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Background: Excessive amounts of stress can result in deleterious effects on performance. The U shaped curve of stress on education has demonstrated that education is stifled by too much or too little stress. The goal of this study is to demonstrate how these objective metrics of stress can be utilized to improve proficiency of individual student training.

Summary of Work: 24 medical students who had recently completed their 2nd year of medical school participated in a 5 day intensive surgical skills simulation training program. The students were responsible for a 5 bed ER and 2 bed OR suite. The curriculum included designated time periods for didactic lectures, procedural skills practice, formal ground rounds presentations and debriefing after simulations. Salivary biochemical samples were obtained at specific time frames and heart rate data was monitored continuously throughout the event 24/7.

Summary of Results: Salivary Biometrics: Average sAA levels of all students increased throughout the training, but the high spike noted during the initial event was absent. R-R Microvariability - Average stress level during events decreased each day. The noted inconsistencies in hormone evaluation of stress level observed between ER and OR groups involved on switching roles during the day was not seen on R-R as the evaluations were continuous in R-R.

Discussion: Results indicate the possibility to utilize these new objective markers to individualize training. Hormonal daily evaluation during any significant event tells us the level of stress the curriculum/scenario itself produces. Consistently higher than baseline sAA levels gives a strong indication of individual habituation. The R-R microvariability provides insight into individual stress levels over time, and average R-R stress level correlates well with average sAA level across the group.

Conclusion: The R-R microvariability allowed us to evaluate the individual student as to when that individual is too stressed to learn and when they are ready to learn.

Take Home Messages: Stress can be objectively measured in high stress simulations to individualize and improve learning of medical students.
Responding to study stress: The prevalence of dysfunctional eating patterns among medical students in Norway (STUDMED 2015)

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Background: Previous reports indicate more dysfunctional eating patterns (EDS) and eating disorders among medical students in Norway compared with other university students. We lack studies that investigate whether disturbed eating patterns can be related to study stress similar to mental health problems, burnout, anxiety and depression. The purpose of the current study is to assess the prevalence of EDS among medical students at different levels of education, gender and study curriculum, and the association between EDS, study stress and symptoms of mental health.

Summary of Work: Baseline survey data from all participants in STUDMED 2015: A new project about the effects of study curriculum and study conditions on contentment and mental health among Norwegian medical students. Main outcome is the Eating Dissatisfaction scale (EDS-5).

Summary of Results: Response rate 63.9% (N=1044/1634). Preliminary analyses indicate that 17% of the students displayed EDS. There were differences according to faculty (p=.023), but no difference according to semester. There were higher prevalence of EDS among female students than male (X² = 40.647, N= p <.001).

Discussion: There seems to be a relatively high prevalence of EDS, especially women, that is associated with, or a risk for development of, eating disorders among medical students.

Conclusion: The relatively high occurrence of EDS warrants further examination of possible study conditions or curriculum factors, in addition to mental distress, that may be related to such symptoms and eating disorder among medical students.

Take Home Messages: The relatively high levels of dysfunctional eating patterns among medical students at two Norwegian universities may be related to school stress and their mental health problems, but this should be further studied.