Stress in medical school – can we predict who is vulnerable?

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Background: Individual student responses to the stressors of medical school vary significantly. The goal of this study was to determine whether coping styles and stress levels of students in preclinical training predicted chronic and posttraumatic stress levels during 4th year of training.

Summary of Work: In 2012, the Perceived Stress Scale (chronic stress), the Impact of Event Scale Revised (posttraumatic stress), and the Coping Inventory for Stressful Situations (task, emotion and avoidant oriented coping styles) were administered to 47 2nd year medical students in a large urban Canadian medical school. In 2014, the same instruments were administered to the same cohort of student during their 4th year of training, with 33 students completing the survey the second time.

Summary of Results: Stepwise regression analyses show that the students’ self-reported chronic stress levels in their 2nd year of training was the sole predictor of later stress levels, predicting 37% of the variance in chronic stress (p<.01) and 53% of the variance in posttraumatic stress (p<.01) levels during their 4th year. Neither early coping styles nor posttraumatic stress levels were predictors of later chronic or posttraumatic stress (all beta = -.14 to .12, p values = .33 to .95).

Discussion and Conclusions: Stress responses of medical students early in their training are strong predictors of the severity of later stress and posttraumatic stress levels. As such, interventions aimed at identifying and supporting vulnerable students should be targeted to the early years of training.

Take-home messages: Students with higher stress in preclerkship should be identified and actively followed with stress management interventions throughout training.

Burnout and stress in medicine in France: what challenges for Schools of Medicine?

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Background: Medical students experience stress and burn out, and mental illness at a higher rate than the general population. The objective was to characterize the burn out and stress and to identify associated factors among medical students.

Summary of Work: A cross-sectional study was conducted in medical students in pre graduation (from 4th to 6th). In France, at the end of the 6th year (in June), there is the National Ranking Examination. An anonymous self-administered questionnaire was used. The burn out was measured using the Maslach scale, which addresses three scales: emotional exhaustion (burn out), depersonalization and personal accomplishment.

Summary of Results: A total of 542 students were included (response rate: 88.0%), including 388 students in 4th and 5th year and 3 and 154 students in 6th year (28.4%). The mean age was 23.1 years (SD = 1.6), sex ratio M:W=0.73. The average stress was 18.0 (SD=6.6) among 4th and 5th students and 19.4 (SD = 6.9) in the 6th year students (p = 0.03). In the 6th students, 33.6% presented a high level of burn out versus 27.5% in 4th and 5th students (p=0.004) . A high level of burn out was significantly associated with stress (AOR=1.45, 95% CI=1.35-1.53; p <10-4) and working hours (AOR=1.13, 95% CI=1.05-1.19; p = 0.002)

Discussion and Conclusions: The prevalence of burn out is high among medical students, especially for those in 6th year, preparing the national examination. Burn out can have personal and professional consequences. These results suggest that new approaches may be needed to reduce the stigma of depression and to enhance its prevention, detection, and treatment.

Take-home messages: There is a high level of burn out and stress in medical students. Schools of medicine have new challenges for prevention and management of psychological distress.
Capturing the student experience

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Background: The Higher Education Authority initiative ‘Developing an Inclusive Culture in Higher Education’ inspired this project, to identify with students any inclusion issues they felt inhibited their learning.

Summary of Work: Initial student questionnaires showed that 53% of the respondents reported behaviours or styles that would hinder their learning and 33% reported seeing or experiencing bullying behaviour. A qualitative research project was initiated to explore issues in more depth using focus groups and individual interviews. All data was transcribed and analysed and from this, we created scripts using the student narratives to create a film.

Summary of Results: Three main themes were identified in our analysis: improving the teaching environment, integration of overseas students, and issues surrounding complaints procedures. Students reported concerns about lecturing, unprofessional behaviours such as public interrogation and bullying questioning styles, specific discriminatory behaviours, and being made to feel unwelcome and neglected. There were also some good examples where students felt respected and included by both clinicians and tutors.

Discussion and Conclusions: Creating confidential, safe environments for students to give anonymous feedback as part of the research project led to insightful student comments on role-modelling and bullying behaviour that could have a detrimental effect on student inclusion and retention. The film that was created has become an invaluable and forceful tool for engaging both staff and students in a process for change.

Take-home messages: Using research to create a film based on student narratives can be a powerful way to generate discussion and motivate both staff and students to address important inclusion issues.

Is dating-gender violence accepted as a societal “norm” by college students from Universidad Nacional Autónoma de México (UNAM)? A comparative study

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Background: Dating-gender violence is a social and public health problem. It is a serious and pervasive problem among college students.

Summary of Work: Our objective was to find out whether societal legitimising of dating-gender violence was accepted by college students from five schools at UNAM (53.4% men, 46.6% women, mean age 19 year old). Methodology: we carried out an exploratory cross-sectional descriptive study in a non probabilistic sample of 146 medical, engineering, psychology, philosophy and accounting students. We collected information through a questionnaire and performed statistical analysis using SPSS version 20 and proved at 5% level of significance differences by sex/gender and school using Chi-square.

Summary of Results: Approval of legitimising dating-gender violence share for women and men of all groups are shown: Categories, agreement of total population (male and female in %) and agreement of medical students (male and female in %):

1.- Jealousy is a token of love: 74.4, 41.2 (p=<0.000); 35.7 and 0
2.- Insulting your partner is normal: 61.5, 42.6 (p=0.02); 0.0, 0.0
3.- It is valid to impose rules in a dating relationship: 69.2, 50 (p=0.017); 42.9, 66.7
4.- Pinching, biting, pushing are normal as a game: 39.7, 29.4 (p=0.19); 28.6, 16.7
5.- It is valid to criticize the look, the outfit and the way of thinking of your partner: 14.1, 23.5 (p=0.14); 35.7, 0.0

Agreement in ten more features were present only among accounting students. Some differences were found by school.

Discussion and Conclusions: Dating-gender violence is determined by inequity and unequal power gender relations, the meaning is different, more men than women accept male domination and women subordination.

Take-home messages: Gender perspective is necessary to study and prevent dating-gender violence.
**Background:** There is growing concern within the medical community regarding poor physician wellbeing. The University of Notre Dame Australia Fremantle, Graduate School of Medicine, examined strategies to include in the course to facilitate medical student acquisition of effective self care and stress management skills.

**Summary of Work:** An integrative mindfulness and lifestyle program, based on the work of Dr Craig Hassed (2009), was identified as being a comprehensive and evidenced-based intervention to pilot. In 2014, the six week ESSENCE+ Wellbeing Program was introduced in semester one of the first year of the four year course and evaluated, in a semi-formal fashion.

**Summary of Results:** Initial evaluation results collaborated published reports that such training for medical students was beneficial in terms of reducing negative emotions and stress, enhancing mindfulness, and facilitating empathy and self-compassion. In early 2015, trained tutors will again offer the program to 13 small groups of between eight and nine students.

**Discussion and Conclusions:** The proposed research will investigate impacts of the intervention in a more formal and rigorous fashion. It is envisaged that the research findings and the experience of the collaborative approach to the development and implementation of this program will be of interest to the broad community of medical educators.

**Take-home messages:** Collaboration and a research partnership with Leicester University Medical School, UK, which are planning to implement Dr Hassed’s program, has already been established. It is envisaged that this and similar international collaborations will foster a richer evidence base for the mandatory inclusion of such programs for medical students.

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**SAFE-DRS: Health and Well-being in the Medical Curriculum**

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**Background:** In 2013, The University of Auckland medical programme adopted a reinvigorated curriculum which included “Health and Well-being” (SAFE-DRS). There is evidence that doctors’ self-care and help-seeking behaviour can affect patient-care as well as affecting doctors’ personal health. Teaching health and well-being in the medical curriculum has been shown to have multiple benefits.

**Summary of Work:** The multi-year SAFE-DRS curriculum was developed to include:

- Self-care/skills
- Access help
- Focussed attention
- Emotional intelligence
- Doctor as patient
- Reflective practice
- Stress-resistance.

SAFE-DRS topics are re-visited throughout the programme to enhance earlier learning and highlight clinical relevance. Innovative teaching and learning methods using experiential learning, creativity, humour, and personal stories are used, and opportunities are taken to enhance help-seeking behaviour and link to student support services.

**Summary of Results:** A survey of 236 Year 2 students (RR 99.6%) at the end of 2013 showed that 95% of students agreed that SAFE-DRS lectures and tutorials had changed their self-awareness and/or behaviour regarding their personal health. 77% of students agreed that completing exercises for the self-care journal had changed their behaviour regarding their personal health.

**Discussion and Conclusions:** To engage students and re-inforce learning, health and well-being is best learnt over multiple years in an experiential and reflective way, enabling students to develop a lasting skill-set. As well as improving students’ own health, the benefits for clinical practice can include an enhanced ability to learn, and the development of empathy, compassion, self-awareness, self-regulation and improved clinical decision-making.

**Take-home messages:** Health and well-being learning is a necessary initiative for the purposes of both self-care and patient-care. The SAFE-DRS curriculum appears to meet these needs.
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UK Undergraduate Medical Students’ Experience of Personal Bereavement

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Background: Undergraduate medical students’ experience of personal bereavement (PB) is relatively unknown. PB may influence attitudes towards course components, including dissection and end of life care (EOLC), and academic performance.

Summary of Work: PB “loss of someone close recently” Analysis of data of PB, attitudes toward EOLC and death anxiety from 1132 first and 780 final year students in 15 UK medical schools, participating in an online questionnaire survey. Comparison of students with and without experience of PB.

Summary of Results:
• Incidence: Year 1: 398 (35.2%), Final Year: 319 (40.9%) • Experience of PB within last 2 years: Year 1: 251 (22.2%), Final Year: 201 (25.8%) • Among those reporting PB: Year 1: 143 (35.9%), Final Year: 115 (36.0%) experienced multiple losses. → Number of deceased: Year 1: 519, Final year: 311 → Of deceased: Grandparents Year 1: 62.8%, Final Year 53.8% and Friends Year 1: 9.4%, Final year: 14.4% • Students experiencing PB → More likely to anticipate guilt after a patient’s death → Year 1: 66.8% versus 60.1% (X² 5.018 p=0.25), Final year 51.1% versus 42.3% (X² 5.877 p=0.15) • No relationship between PB and death anxiety

Discussion and Conclusions: Significant proportions of first and final year students experienced PB and for many this was recent. PB was associated with anticipating guilt following a patient’s death but not with death anxiety.

Take-home Messages: Experience of PB may affect students’ attitudes towards course components, including EOLC and educators should be mindful that a significant proportion of students starting their course may have experienced PB recently, and a significant number will experience losses during their course.