**Posters: Student Stress and Wellbeing**

**Location:** Hall 4, SECC

**Stress, Anxiety and Depression among Medical Students in a Multi-ethnic Setting**

*Bibi Kulsoom**, Alfaisal University, Biochemistry, College of Medicine, Riyadh, Saudi Arabia  
*Nasir Ali Afsar, Alfaisal University, Pharmacology, College of Medicine, Riyadh, Saudi Arabia*

**Background:** Contemporary literature suggests that medical education might adversely affect students' mental health. Alfaisal University at Riyadh is a leading developing institution, where there has been a concern regarding the mental well-being of the students. This study assesses the level of depression, anxiety, and stress among students in relation to potential underlying reasons.

**Summary of Work:** All 575 medical students in five years participated anonymously by filling out DASS-21 questionnaire twice. Firstly, 2-3 weeks before a major examination (Pre-Exam), and secondly, during regular classes (Post-Exam). Correlation was sought regarding gender, year of scholarship, attendance of a pre-medical University Preparatory Program (UPP), housing and smoking. The subjective comments from students were also obtained.

**Summary of Results:** A total of 76.8% and 74.9% students participated in pre- and post-examination groups respectively. Majority were children of expatriate workers in Saudi Arabia and included Arabs, South Asians, and North Americans. Prevalence of depression, anxiety, and stress was high (43%, 63%, 41% respectively) which reduced (30%, 47%, 30% respectively) to some extent after examinations. Saudis and those who had attended UPP had higher DASS scores. Smoking and female gender could predict higher levels of ‘baseline’ depression, anxiety, or stress.

**Discussion and Conclusions:** The students had high “baseline” level of depression, anxiety, and stress and higher if an examination is near. Smoking and gender appear to predict higher DASS-21 scores whereas study burden and hectic schedule were perceived major contributors.

**Take-home messages:** Hectic schedule, examination, smoking, and being a female lead to high depression, anxiety, or stress among medical students.

**Medical student coping styles influence measures of empathy, patient-centeredness, and tolerance of ambiguity**

*Jeffrey J.H. Cheung**, University of Toronto, The Wilson Centre, Toronto, Canada  
*Kulamakan Kulasegaram, University of Toronto, The Wilson Centre and Undergraduate Medical Education, Toronto, Canada  
*Leslie Nickell, University of Toronto, Undergraduate Medical Education, Toronto, Canada*

**Background:** Medical students globally have varying coping responses to stress during medical school. Understanding the impact that these coping mechanisms may have on student perceptions of patients, their environment, and colleagues is important and will enable more effective programming.

**Summary of Work:** 246 pre-clerkship medical students from the University of Toronto completed a series of surveys at the beginning of year 1 and end of year 2. The Ways of Coping Questionnaire was used to identify coping styles and subsequently compare differences in scores on the Jefferson Empathy Scale (JES), Patient-Practitioner Orientation Scale (PPOS), and Tolerance of Ambiguity Scale (TAS).

**Summary of Results:** Initial coping style was predictive of JES, PPOS, and TAS scores. Self-Controlling copers showed lower JES ($F_{1,201}=8.5; p<0.005; d=0.41$) and TAS ($F_{1,202}=13.3; p<0.005; d=0.51$) scores, Seeking Social Support copers showed higher JES ($F_{1,201}=10.3; p<0.005; d=0.45$), PPOS ($F_{1,203}=6.7; p<0.05; d=0.36$) and TAS scores ($F_{1,202}=8.1; p<0.01; d=0.40$), and Escape-Avoidance copers showed lower TAS ($F_{1,202}=4.5; p<0.05; d=0.30$) scores. Evidence of a shift in coping style was also found.

**Discussion and Conclusions:** Self-Controlling and Escape-Avoidance may be maladaptive coping styles and were associated with lower empathy and tolerance of ambiguity; whereas Seeking Social Support was associated with greater empathy, patient-centeredness, and tolerance of ambiguity and may therefore be a more adaptive coping style. Coping styles are not innate but flexible processes; allowing the possibility that we may help students address the psychological stressors associated with medical education by teaching and facilitating these processes.

**Take-home messages:** Coping styles of medical students impact not only their stress responses, but also empathy, patient-centeredness, and their ability to deal with psychological ambiguity. Medical schools can pro-actively teach and support adaptive coping styles.
Measuring Mistreatment of Medical Students by Healthcare Professionals Using the Learning Environment for Professionalism (LEP) tool

Melissa Forgie*, University of Ottawa, Medicine, Ottawa, Canada
Timothy Wood, University of Ottawa, Innovation in Medical Education, Ottawa, Canada
Philippe Rousseau, University of Ottawa, Faculty of Medicine, Ottawa, Canada
Anna Byszewski, University of Ottawa, Medicine, Ottawa, Canada
John Leddy, University of Ottawa, Cellular and Molecular Medicine, Ottawa, Canada

Background: Medical schools must ensure, through formal assessment, that their learning environment promotes the development of appropriate professional attributes in their medical students. Based on some higher than average rates of mistreatment reported on the Graduation Questionnaire (GQ), the uO MD program was deemed to be non compliant on the learning environment standard. The GQ data lacks the site-specificity required to provide targeted sanctions or remediation. The professionals most often accused of mistreatment were clinical faculty, residents and nurses. The LEP survey, a validated tool designed to assess (un)professional behaviours on clinical rotations was modified to gather feedback on these three groups.

Summary of Work: The students completed the online survey anonymously at the end of all clinical rotations over 12 months. Data compiled from 825 LEP surveys at one hospital site identified rotations with highly positive or negative levels of professionalism.

Summary of Results: Rotations demonstrating negative professionalism attributes were those where students reported high rates of mistreatment. The (un)professional behaviors were consistent across clinical faculty, residents and nurses. The LEP survey, a validated tool designed to assess (un)professional behaviours on clinical rotations was modified to gather feedback on these three groups.

Discussion and Conclusions: A modified LEP can be used to identify specific rotations where the learning environment is unfavorable which in turn helps to identify rotations where there are high rates of student mistreatment. This is the first time the LEP has been used to assess professionalism of non-clinicians. Take-home messages: Fear of reprisal often prevent students from formally identifying individual sources of mistreatment, thus greatly impairing a program’s ability to impose appropriate sanctions or remediation. The LEP survey is an effective way to identify specific sources of mistreatment while protecting student anonymity.

The PCM-CADET Readiness Project: An integrate approach for the first-year medical cadets of Phramongkutklao College of Medicine

Nawaporn Hirunviwatgul*, Phramongkutklao College of Medicine, Department of Psychiatry and Neurology, Bangkok, Thailand
Jessada Yingwiwanapong, Phramongkutklao College of Medicine, Department of Psychiatry and Neurology, Bangkok, Thailand

Background: Our previous studies demonstrated that the 2nd year medical cadets at Phramongkutklao College of Medicine (PCM) had the highest incidence of stress condition compared with other medical cadets. The common causes were having frequent examination, routine army practice program as well as practicing their disciplines at the Medical Cadet Command Unit. In order to prepare the readiness for the 1st year medical students before entering the 2nd year medical cadet curriculum, we introduced a 2 days project to reduce their stress condition.

Summary of Work: The project composed of three phases which were; 1) Phase I: a half day classroom training for the 2nd and 4th year medical cadets to act as group leaders to conduct experiential learning groups, 2) Phase II: the experiential phase for the 1st year medical cadets took one and a half days. These consisted of ice-breaking session, indoor experiential learning groups and walk rally 3) Phase III: Reflective phase consisted of debriefing and self reflection with experiential positive feedback from instructors.

Summary of Results: Satisfaction scores using Likert scale (5=strongly approved 4= approved 3=undecided 2=disapproved 1= strongly disapproved) showed a high score of 4.26 ±0.77. The approach process was 4.19±0.75. Application of learning-based self-adjusting with medical cadet activities was 4.26±0.82. From their written feedback, medical cadets reflections showed improvement of experiential thoughts and feelings. They had positive attitudes towards friends, senior medical cadets, instructors and army practices in PCM.

Discussion and Conclusions: The PCM-CADET readiness project has been successfully performed for 7 years. The effectiveness of the project has been systemically evaluated and improved every year. The outcomes showed that our medical cadets understand rules and regulations of PCM that they can early prepare and motivate themselves for physical and mental readiness, group cohesion and locus of control. Take-home messages: Early intervention should motivate awareness of medical students and promote mental health.
Increased workload and perceived stress among preclinical students

Teodor Svedung Wettervik*, Gothenburg University, Gothenburg, Sweden

**Background:** Surveys allowing students to assess the quality of the preclinical part of medical education on a national level in Sweden are relatively new and are an important tool when working with student educational interests. For the first time, we are able to evaluate elements such as student satisfaction and study load at a national level. This tool allows us to identify trends that may over time provide insight into variables affecting education quality.

**Summary of Work:** We have constructed a survey for assessing the preclinical studies on a national level. We asked the students questions related to their medical education such as overall satisfaction, study load and economic situation. The survey was sent out to all the students at semester 6 at all the seven medical universities in Sweden in 2009, 2011 and 2013. Our frequency response has been close to 60%.

**Summary of Results:** In both 2011 and 2013, 80% of students were overall satisfied with their education. However, data from 2013 reveal a trend where students perceive an increased study load and spend more hours studying. Almost 80% of the medical students are stressed or extremely stressed by their education workload. Compared to 2011, more students (a 5% increase) responded that they were extremely stressed. Results from 2013 also show that students in big cities are less satisfied with their economic situations, and therefore tend to take on extra work to a greater extent than other students.

**Discussion and Conclusions:** Thus, although overall satisfaction is high, increased study load in combination with economic dissatisfaction causes increased stress amongst medical students. This trend indicates that the wellbeing of preclinical medical students may be at risk.

**Take-home messages:** The wellbeing of preclinical medical students may be at risk.

Is the Newborn Life Support course really that stressful? An observational study

Nicola Holme*, Leeds Teaching Hospitals NHS Trust, Leeds, UK
Catherine Harrison, Leeds Teaching Hospitals NHS Trust, Leeds, UK
Ben Shaw, Liverpool Women’s Hospital, Liverpool, UK

**Background:** Resuscitation courses are renowned for being stressful. This study aimed to determine whether there is a significant stress response to the newborn life support airway test (NLSAT) amongst different health care professionals.

**Summary of Work:** Stress levels of candidates on Newborn Life Support (NLS) courses, in the UK, were measured using salivary cortisol levels and validated anxiety questionnaires (State Trait Anxiety Inventory). 80 healthcare professionals (nurses, doctors and midwives) were recruited. Stress levels were measured at baseline (10am), immediately before and 20 minutes after starting the NLSAT. Demographic data including experience was collected.

**Summary of Results:** Cortisol measurements failed to detect any significant rise in stress levels. Significant stress levels were induced by the NLSAT when measuring anxiety scores; mean baseline score was 39.63 (SD 11.75), mean pre-NLSAT score was 48.38 (SD 12.89) and mean post-NLSAT score was 42.82 (SD 13.65). STAI scores rose significantly in all professionals from baseline to post-NLSAT (p<0.001) with greatest change detected for midwives (+11.82 (SD 7.64, p-value <0.001)) compared to nurses (+8.86 (SD 12.1, p-value <0.001)) and doctors (+7.96 (SD 2.9, p-value <0.001)). Experience had no impact on stress levels. It was not possible to determine if stress levels impacted on performance due to the low re-sit rate (7.5%).

**Discussion and Conclusions:** Stress levels induced by the NLSAT are significant with variation amongst different healthcare professionals. Midwives and nurses are generally less familiar with assessment using simulation, potentially enhancing their stress levels. These findings have implications for the NLS and similar courses.

**Take-home messages:** Stress levels vary amongst different healthcare professionals performing the NLSAT.
Sleep Duration and Academic Performance Among Undergraduate Medical Students in Saudi Arabia

Khulood Kuhail, Alfaisal University, Medicine, Riyadh, Saudi Arabia
Shouq Kherallah, Alfaisal University, Medicine, Riyadh, Saudi Arabia
Jumanah Sarraj, Alfaisal University, Medicine, Riyadh, Saudi Arabia
Ahmad Abuzaid, Alfaisal University, Medicine, Riyadh, Saudi Arabia
Lama Alfakhri*, Alfaisal University, Medicine, Riyadh, Saudi Arabia

Background: Sleep deprivation has detrimental effects on medical students’ examination performance. There is insufficient literature addressing sleeping habits of medical students in relation to their academic performance in Saudi Arabia. This study aims to assess the relationship between medical students’ duration of sleep and academic performance.

Summary of Work: An online, anonymous, cross-sectional, self-reported survey was administered to second- and third-year students at Alfaisal University—College of Medicine, Riyadh, Saudi Arabia. The survey explored the students’ duration of sleep (routine basis and one night before exam) as well as their cumulative grade point average (cGPA) scores. Quantitative statistical analysis was performed.

Summary of Results: One hundred and eighty students (n=180/278) responded to the survey (response rate: 65%). The mean±standard deviation (SD) of sleeping hours on routine basis and the night before exam was 7.8±2.1 and 4.3±1.2 (p<0.000, ANOVA test), respectively. No statistically significant gender differences were identified. On routine basis, 8.2%, 45.9% and 45.9% of students sleep <4 hours, 4-6 hours and >6 hours, respectively. The night before exam, 65.5%, 27.9% and 6.6% of students sleep <4 hours, 4-6 hours and >6 hours, respectively. Average cGPA of students sleeping <4 hours, 4-6 hours and >6 hours the night before exam are 3.55, 3.72 and 3.31 out of 4.0-scale (p<0.000, ANOVA test), respectively.

Discussion and Conclusions: Our results largely voiced other published literature. The night before exam, majority of medical students had reduced sleeping. Moreover, students who slept 4-6 hours had the best academic performance.

Take-home messages: Effective interventions that highlight and encourage healthy sleeping patterns are essential to improve medical students’ academic performance.

Psycho-social distress of first and third year students in an integrated, modular medical curriculum at the Charité Universitätsmedizin Berlin

Asja Maaz*, Charité, Universitätsmedizin Berlin, Dieter Scheffner Fachzentrum Projektsteuerung, Berlin, Germany
Tanja Hitzblech, Charité, Universitätsmedizin Berlin, Dieter Scheffner Fachzentrum Projektsteuerung, Berlin, Germany
Silke Boehm, Charité, Universitätsmedizin Berlin, Dieter Scheffner Fachzentrum Projektsteuerung, Berlin, Germany
Sylvie Tappert, Charité, Universitätsmedizin Berlin, Dieter Scheffner Fachzentrum Projektsteuerung, Berlin, Germany
Harm Peters, Charité, Universitätsmedizin Berlin, Dieter Scheffner Fachzentrum Projektsteuerung, Berlin, Germany

Background: The Charité - Universitätsmedizin Berlin introduced a new 6 years, integrated, outcome-orientated undergraduate medical program in 2010. Implementation of the new curriculum has been accompanied by significantly modified study conditions. This study focuses on the level of psycho-social distress students experience in the new curriculum.

Summary of Work: This study aims to examine psycho-social distress students experience in their first year and in their third year. A total of 165 students (25% response rate) were interviewed by an online questionnaire using 4 standardized self-assessment scales concerning distress, quality of life and self-reported health. The data are analyzed using descriptive statistic measures.

Summary of Results: Analysis shows that first year students experience more psycho-social distress than third year medical students in the new curriculum at the Charité. Based on their self-evaluation, female students feel more often psycho-social distressed than their male colleagues independent of the year of study. Students with a migration background report more often about psycho-social distress. 20% of first year students state the need of psychological counselling. 5% receive counselling sessions, whereas only 3% of the third year students wish counselling session, but 10% receive counselling.

Discussion and Conclusions: First year students experience more psycho-social distress than third year medical students. Apparently, students develop strategies to cope with the demands of their studies. Potentially, they learn to ask for help and to utilize supportive counselling.

Take-home messages: It is important to monitor psycho-social distress to offer adequate counselling services.
Stress Treatment for Medical Students: Implementation of an Online Platform at the University of Freiburg

Zoltán Höhling*, University Medical Center Freiburg, Psychosomatic Medicine and Psychotherapy, Freiburg, Germany
Niklas Gilsdorf, University Medical Center Freiburg, Psychosomatic Medicine and Psychotherapy, Freiburg, Germany
Sarah-Lu Oberschelp, University Medical Center Freiburg, Psychosomatic Medicine and Psychotherapy, Freiburg, Germany
Michael Wirsching, University Medical Center Freiburg, Psychosomatic Medicine and Psychotherapy, Freiburg, Germany
Andrea Kuhnert, University Medical Center Freiburg, Psychosomatic Medicine and Psychotherapy, Freiburg, Germany

Background: At last year’s AMEE conference our team presented data describing study-related stress-levels and associated psychosomatic symptoms of medical students of the University of Freiburg. We also described plans for an online platform where medical students could anonymously seek help and exchange their experiences with fellow students and experts.

Summary of Work: The plans for an online platform were put into practice during 2014 and the platform finally launched in November 2014. Medical students of all semesters have access to it through the university’s learning management system and find information about common stress-related psychosomatic disorders, a range of self-help tools (such as meditation exercises), lists of contact points for professional help and an anonymous online-forum.

Summary of Results: In the initial phase after the platform’s launch, it was accessed by a considerable number of medical students. Platform sections like general information on psychosomatic symptoms and its possible remedies, active engagement in the interactive online-forum was rare. We are currently advertising the platform intensively and trying to point out the assured anonymity of the platform and its interactive forum.

Discussion and Conclusions: Although initial acceptance of the platform was relatively high, students showed a rather passive way of using our platform. While user statistics showed a clear demand for information on stress-related psychosomatic symptoms and its possible remedies, active engagement in the interactive online-forum was rare. We are currently advertising the platform intensively and trying to point out the assured anonymity of the platform and its interactive forum.

Take-home messages: Reluctance to discuss stress-related psychosomatic symptoms with peer medical students may not be solely based on anonymity concerns.

Effects of Buddhism mindfulness on stress among first-year internal medicine residents

Nitipatana Chierakul*, Faculty of Medicine Siriraj Hospital, Mahidol University, Medicine, Bangkok, Thailand

Background: Transitional period from undergraduate to postgraduate medical education is a stressful condition for individual physician with ambition for becoming a specialist. The objective of this study is to evaluate the effect of intervention to reduce stress among first-year internal medicine residents using brief mindfulness program in a Buddhism way.

Summary of Work: A one-day workshop on Buddhism mindfulness was offered to interested physicians during a preparedness course before entering into internal medicine training program of Siriraj Hospital in academic year 2014. Comparison between those with and without significant stress as defined by increment of raw score $\geq 2$ or increment of stress level category using the Thai Stress Test (TST), was performed at baseline (M0) and 3 months after training (M3).

Summary of Results: At M0, there were 56 of 64 residents who gave informed consent for stress monitoring program, 32 were female, 20 were new-comer (finished undergraduate education from other medical schools), and 29 were in affiliated program. Among 18 residents voluntary enrolled to the workshop, 13 were female. At M3, 17 of 56 residents (30%) developed significant stress. No significant difference between the two groups in term of sex, new-comer status, being in affiliated program, and workshop non-participant, were observed ($p = 1.000, 0.762, 0.773, \text{and} 0.213$ respectively). Collection of longitudinal effects are now ongoing.

Discussion and Conclusions: Brief intervention with Buddhism mindfulness for first-year internal medicine residents, has no short-term effect on stress.

Take-home messages: Effective mindfulness development in postgraduate medical education is quite a difficult task.
Improving autonomic balance in medical students

Jessada Chungpaibulpata, Vachira Phuket Hospital, Phuket, Thailand
Tappana Sumpanaranax*, Vachira Phuket Hospital, Psychiatry, Phuket, Thailand
Maytinee Konkaew, Vachira Phuket Hospital, Psychiatry, Phuket, Thailand

Background: Autonomic function can be tested by heart rate variability study. Its imbalance can be occurred while body and mind have stress. Adjustment to stress or resilience is important factor for balancing. Heart rate variability was shown some stress in our medical students in fourth year medical students. Three year later their copings and adjustments to stress able to balancing their autonomic functions in their life styles. Arrangement in curriculums and recreation processes can make equality for harmonize between study and health in medical students.

Summary of Work: Finger probe in five minute was done by medical equipment (Medicore, SA-3000P). Participants are 24 fourth year medical students (first clinical study year) and eleven of them were done again in the next three years (final year of medical students).

Summary of Results: Comparison SRD (Successive R-R interval difference) was shown statistical significant between before and after three clinical study years (0.91 vs 1.01). (Z= 2.72, p <0.5).

Discussion and Conclusions: Our curriculum and practical module in clinical year medical study may improve their ability to coping with stress. Adjustment in our medical students may be in healthy way.

Take-home messages: Adjustment and coping to stress is important factor for medical study.

Work Life Balance of medical students in Vachira Phuket Medical Education Center

Sakanya Koysupsin*, Vachira Phuket Medical Education Center, Pediatrics, Phuket, Thailand
Anuchit Chuvate, Vachira Phuket Medical Education Center, Pediatrics, Phuket, Thailand

Background: Medical students in clinical practice years are usually under pressure. Inappropriate time management results in impaired quality of life, stress, and discontinuation of medical education. The purpose of this study is to evaluate quality of life of our medical students and identify imbalance of their life in order to provide them assistance promptly.

Summary of Work: All medical students in 4th to 6th year at Vachira Phuket medical education center were enrolled in a cross-sectional study. Each student completed questionnaire of time management in six aspects which consist of education, family relationship, social life, personal health, leisure activities and entertainment and religion activities. Data were presented with radar graph in each year group, and analyzed with ANOVA and LSD at a significance level of 0.05.

Summary of Results: The fifth year medical students had the highest average overall score in six aspects (61.26 percent; SD 8.89). The sixth year medical students had the lowest average overall score (55.24 percent; SD 11.08). The difference reach statistical significance (P=0.037). Analysis with LSD in each aspect found that sixth year medical students had significantly lower score in social life aspect than other years (50.33 percent; P=0.011) and in leisure activities than fifth year (38.17 percent; P=0.001).

Discussion and Conclusions: The fifth year medical students had better work life balance than other years. The sixth year medical students had worse quality of life in social life and leisure activities than other years in Vachira Phuket medical education center.

Take-home messages: The sixth year medical students should be encouraged social life and leisure activities for improvement their quality of life.
The Development of Teaching-Learning Model to Promote Attitude toward Exercise for Health Promotion of Medical Students

Chirawan Chootip*, Songkhla Hospital, Rehabilitation, Songkhla, Thailand
Phuangpetch Siriloetthananon, Songkhla Hospital, Rehabilitation, Songkhla, Thailand

Background: Exercise is a primary implementation for health promotion, which plays an important role in healthcare. Self-experience in the benefits of exercise is the most practical approach to promote the attitude toward exercise.

Summary of Work: We developed a teaching-learning model in the health promotion course to promote attitude toward exercise for health promotion of medical students. 23 medical students in the fourth year who enrolled in the Health Promotion course were assigned to implement their knowledge of exercise into daily life for 4 weeks, during which they recorded mode of exercise, duration, frequency, intensity and calculated energy expenditure in a logbook. Physical fitness of medical students was assessed before and after running an individual exercise program.

Summary of Results: The majority of mode and intensity of exercise was moderate intensity of aerobic exercise. The frequency of exercise was 4.5±0.9 time per week. The energy expenditure was 2,265±430 in males and 1,178±430 Kcal/week in females. The reduction of body mass index and body fat were 86.9% and 100% respectively. The increased scores found in handgrip strength (78.3%), body flexibility (91.3%), lung capacity (69.6%) and cardiovascular fitness (95.6%). There was a statistically significant difference (p < 0.001) between pretest and posttest of attitude toward exercise.

Discussion and Conclusions: Implementation of active learning of individual exercise in health promotion course lead to better physical fitness and promote attitude toward exercise for health promotion of medical students.

Take-home messages: Active learning of exercise promotes attitude toward exercise for health promotion of medical students.

Comparative quality of life study of 1st vs 3rd year medical students in the Faculty of Medicine, Thammasat University

Nuchanart Suealek*, Faculty of Medicine, Thammasat University, Preclinical Science, Patumthani, Thailand
Paskorn Sritipsukho, Faculty of Medicine, Thammasat University, Pediatrics, Pathumthani, Thailand

Background: Normally, the educational program for medical doctors in Thailand consists of basic sciences taking place in 1st year, and basic medical sciences/preclinical sciences which are set in 2nd and 3rd year. We wanted to examine differences in quality of life (QOL) between 1st and 3rd year medical students, due to the differences in academic content in the Faculty of Medicine, Thammasat University.

Summary of Work: After the end of 1st and 3rd year, students were assigned to complete questionnaires, a Thai abbreviated version of World Health Organization Quality of Life (WHOQOL-BREF-THAI). This questionnaire (26 questions) includes four domains: physical health, psychological health, social relationships, the environment, and also overall QOL. The scores range from 1 (very poor/very dissatisfied) to 5 (very good/very satisfied); the QOL score was interpreted as “poor”, “fair”, and “good”.

Summary of Results: From the data (79% response rate), scores of 1st vs 3rd year medical students in “good” levels for physical health, psychological health, social relationships, the environment, and overall QOL were: 51.83% vs 45.05% (p=0.173), 62.80% vs 48.65% (p=0.006), 53.33% vs 51.82% (p=0.278), 43.83% vs 51.38% (p=0.053), and 58.75% vs 54.63% (p=0.428), respectively.

Discussion and Conclusions: Although the academic content was more challenging, the amount of third-year medical students in “good” QOL were similar to first-year students. This may be due to more extracurricular activities available to third-year students to relieve the academic stress.

Take-home messages: Third-year medical students tended to have less satisfaction than first-year students, QOL of higher year students should be further investigated to understand this phenomenon.
**#5HH15 (27399)**

Health promotion education and practice program for medical students: Medical students should be healthy

*Sakulrat Srirojana*, Kalasin Hospital, Pediatrics, Kalasin, Thailand

**Background**: Health behavior is an important competence for a good doctor. Most medical students have inappropriate health behavior such as diet, exercise and stress management. Kalasin Medical Education Center (KMEC) has set up a health promotion curriculum since 2012 for improvement of health behavior in medical students.

**Summary of Work**: Closed-ended questionnaires were provided to 4th year medical students before and three months after health promotion education & practice program in 2013 academic year. A three day program for health promotion education & practice consisted of diet, exercise, meditation and stress management. They had a health check-up annually.

**Summary of Results**: Total numbers of 4th year medical students were 25, 36% were male. Medical students had good perception and attitude to exercise affecting health, mind and social well-being. They have improved inappropriate health behavior (diet: 72% & 80%, exercise: 44% & 48%, stress management: 40% & 60%). They have been more healthy (88% & 92%) and there were increase numbers of medical students who have normal body mass index (56% & 60%).

**Discussion and Conclusions**: Health promotion education & practice program is good for improvement of health behavior in medical students.

**Take-home messages**: Medical students should be healthy and be role models in health promotion.

---

**#5HH16 (24940)**

A review of the efficacy of educational interventions aiming to promote wellbeing and reduce stress and burnout among doctors and/or medical students

*Julie Ferguson*, NHS Education for Scotland, Medicine, Glasgow, UK

Suzanne Stirling, NHS Education for Scotland, Medicine, Glasgow, UK

**Background**: Stress and burnout are widely recognized as problems among both medical students and doctors. In light of this there has been a call for interventions aimed at promoting the wellbeing and reducing the incidence of stress and burnout in physicians. Although the need for interventions to reduce stress and burnout and improve wellbeing of doctors is clear, the best way to do it is not. Therefore, the overall aim of this review is to determine the effectiveness of interventions to reduce the incidence of stress and burnout and/or improve the wellbeing of physicians.

**Summary of Work**: Relevant electronic bibliographic databases have been searched for studies that aimed to assess the impact of interventions aiming to reduce stress, reduce the incidence of burnout or improve the wellbeing of doctors. Two reviewers independently selected and quality assessed the studies and abstracted data regarding study design, setting, intervention employed, outcomes identified and conclusions.

**Summary of Results**: Database searches yielded 3261 articles. Studies not meeting the inclusion criteria or the quality criteria (n=3240) were excluded. A total of 19 studies met the inclusion criteria and quality assessment criteria and have been data extracted. The data is currently being analysed and the full results will be reported in the poster.

**Discussion and Conclusions**: This poster will discuss the main findings of the review, focussing on identifying the aspects of the interventions that most positively influence wellbeing or stress/burnout levels.

**Take-home messages**: Potential implications for practice will be discussed and how the identified aspects can be incorporated into future interventions. Finally implications for future research will be considered.
Leisure-time physical activity and quality of life in medical students

Munique Peleias*, School of Medicine of University of Sao Paulo, Sao Paulo, Brazil
Itamar Santos, School of Medicine of University of Sao Paulo, Sao Paulo, Brazil
Patricia Tempeski, School of Medicine of University of Sao Paulo, Sao Paulo, Brazil
Silmar Gannam, School of Medicine of University of Sao Paulo, Sao Paulo, Brazil
Paulo Silveira, School of Medicine of University of Sao Paulo, Sao Paulo, Brazil
Milton Martins, School of Medicine of University of Sao Paulo, Sao Paulo, Brazil

Background: Previous studies have shown a positive association between the intensity of leisure-time physical activity (PA) and quality of life (QoL). We evaluated the responses of a QoL questionnaire (WHOQOL-BREF) and PA in medical students.

Summary of Work: We studied 1,350 medical students of a random sample from 22 Brazilian medical schools (VERAS study). PA was classified as no PA, low, moderate or vigorous.

Summary of Results: There was a positive association between all domains of WHOQOL-BREF (physical, psychological, social relationships and environment) and the intensity of PA (p<0.05). Both male and female medical students with vigorous PA presented statistically significant more positive responses than students with no PA in 14/26 items of WHOQOL-BREF. The greater differences were in the questions “how much do you enjoy life”, “how satisfied are you with your sex life” and “how would you rate your quality of life” (p<0.001). For only males, the greater difference was “how satisfied are you with your access to health services?” (delta=23.6%, p<0.001) and for females was “to what extent do you feel your life to be meaningful?” (delta=10%, p=0.017).

Discussion and Conclusions: We observed a positive association between QoL and PA in 84.6% of items of WHOQOL-BREF for males and in 61.5% for females. Medical students that reported vigorous PA also have higher scores of QoL. There is a strong association between quality of life and the intensity of leisure-time physical activity in medical students.

Take-home messages: Medical schools must develop programs of physical activity to medical students.

A one year follow-up study on the effects of Simple Happiness class in medical students

Rungrat Jitvaropas*, Thammasat University, Biochemistry, Preclinical Science, Faculty of Medicine, Pathum thani, Thailand
Pattharawin Pattararanitima, Thammasat University, Internal Medicine, Faculty of Medicine, Pathum thani, Thailand
Winitra Nuallaong, Thammasat University, Psychiatry, Faculty of Medicine, Pathum thani, Thailand

Background: Soft skills cannot be completely separated from professional development for medicine education. Happiness is a skill and an essential component of studying. This study was to assess the self development and happiness of medical students after attending the Simple Happiness class and one year follow-up.

Summary of Work: One hundred seventy-eight second-year medical students at the Thammasat University completed the Simple Happiness classes. Afterwards, the self-assessment was evaluated immediately (in 2013, response rate 92.7%) and one year later (in 2014, response rate 74%) using a 5 Likert-type scales questionnaire (Cronbach’s alpha 0.804).

Summary of Results: The effect of classes revealed the improvement of their life skill and self-development including 5 domains-happiness, goal-setting, inspirations, encouragement and sharing. All domains were graded at 4 or 5 by at least 80% of the respondents as well as 68% of students agreeing that the skill is practical in real life. Their skill was still performed at the one-year follow-up study. However, the average score of one year later was significantly decreased in all domains as compared to after class in 2013 (p<0.01). Therefore, the annual boost-up workshop may be suggested for students. The long-term follow up study will be further investigated.

Discussion and Conclusions: The findings in this study showed an agreement that the Simple Happiness class has an effect on their happiness and life skill after class and one year later. The soft skill and professional skill should be simultaneously developed in medical education.

Take-home messages: Happy medical education will change the world. Let’s start NOW.