Education Horizon-Scanning Bulletin – June 2020

Compiled by John Gale

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Dental Education
Stress and the dental student
Source: BMC Medical Education

**In a nutshell:** Stress is often thought of as something dentists inflict rather than suffer from. However, in this study Xiu-Jiao Lin, from Fujian Medical University in China, studied the links between stress and academic performance in 347 dental undergraduates. Stress was found to reduce students' marks and female students were found to have significantly higher marks than men.

You can read the whole of this article at

General Healthcare Education
When teenagers pretend to be patients
Source: Nurse Education Today

**In a nutshell:** Many people volunteer to pretend to be patients for the purposes of educating healthcare professionals. Who knows whether they get a cup of tea and a biscuit afterwards but it’s certainly a lot more time-consuming than blood donation if – physically at least – a little less painful. In this study Andree S. Gamble, from Monash University in Australia, led a team of researchers interviewing teenagers about their experiences as simulated patients. Adolescents offered unique insights and intimate knowledge of their lived experiences of simulated patient work. Adolescents reflected upon the often positive but sometimes challenging journey of simulated patient work. The identification of harm, largely unrecognized by adolescents themselves is the most concerning finding of this study.

You can read the abstract of this article at

Staying aware of adverse events
Source: BMC Medical Education

**In a nutshell:** Pharmacovigilance is watching out for – and dealing appropriately with – adverse effects from drug treatment, as practised, somewhat less than successfully by the doctors of the late Michael Jackson and, before him, Elvis Presley. In this study Sunil Shreshtha, from Nepal Cancer Hospital and Research Centre, led a team of researchers assessing the effectiveness of a training programme designed to teach pharmacovigilance to health professionals in a Nepalese cancer hospital. Their study found that the training improved the students’ knowledge of, and attitudes to, pharmacovigilance. 23.6% of the 89 participants said they lacked the time to report adverse drug reactions (ADRs) and 13.5% said that there was no
remuneration for reporting ADRs. Just under a quarter (24%) “recommended frequent pharmacovigilance awareness programs via continuing medical education or other similar kinds of workshops for improvement of pharmacovigilance.”

You can read the whole of this article at

When boredom begets boredom
Source: The British journal of educational psychology

In a nutshell: As any librarian teaching the ins and outs of database searching for the 133rd time will tell you, it can be difficult not getting bored with teaching the same thing over and over again. In this study Katy Y.Y. Tam, from the University of Hong Kong, led a team of researchers assessing the impact of teachers’ boredom on students’ own levels of boredom and motivation. 437 students and 17 teachers took part in the study which found that the higher the teachers’ boredom, the lower the students’ motivation. The students weren’t good at perceiving when their teachers were actually bored but when they thought their teachers were bored this increased their own feelings of boredom which, in turn, decreased their motivation. Short of copious supplies of gin-and-tonic how this gets round the problem of having to teach search strategies rather than the novels of Anthony Powell or 1980s cricket is a moot point.

You can read the abstract of this article at
http://dx.doi.org/10.1111/bjep.12309

Medical Education
What medical students make of health coaching
Source: BMC Medical Education

In a nutshell: Many people smoke, eat too much, drink too much alcohol and don’t take enough exercise – and that was before the lockdown. In this study, Arti Maini, from Imperial College London, led a team of researchers interviewing 39 third-year medical students who had “participated in an experiential health coaching training module and practised their health-coaching skills in primary-care settings.” The researchers found five themes emerged from the interviews with the students which were:

- Mindset
- Skills
- Application of skills
- Perceived value
- Context
The students’ training in health coaching led them to shift towards a non-judgemental, solution-oriented mindset in which they accepted the ability of each person to define what they needed and come up with a way of getting it. The students’ change in mindset also helped them develop skills in communication, active listening and self-reflection.

You can read the whole of this article at


**Burnout and the physician researcher**

**Source:** BMC Medical Education

**In a nutshell:** Whether from a heroic desire to further medical knowledge or a wish to get away from their dreadful patients many doctors also do some medical research. Combining the two can be an exhausting business and in this study Chithra R. Perumalswami, from the University of Michigan, led a team of researchers investigating burnout in this group of people. 408 physician-researchers in Japan took part in the study which found that burnout was slightly higher in women than in men. Burnout scores were lower among those who had a mentor and whose workplaces had well-being consultation services. Burnout scores were also lower among those with larger amounts of grant funding and those with a role model they thought had a good work-life balance.

You can read the whole of this article at


**Breathless in Berlin**

**Source:** BMC Medical Education

**In a nutshell:** Rather like chewing gum – although less inclined to get stuck to one’s trousers – medical education comes in a variety of flavours. Discipline-based education tackles things by subject whereas competency-based education aims to equip students with the tools they need to make good medical decisions. But which is better at teaching clinical reasoning to students? In this study a team of researchers, led by Anja Czeskleba, from the Medical University of Berlin, compared the two approaches in a study of 60 medical students. 30 of them had been taught using one approach with the remainder being taught using the other. The students were given a knowledge test and six video “cases,” – all of which featured breathlessness – to work on. The researchers found no significant differences in knowledge or clinical reasoning between the two groups.

You can read the whole of this article at

What keeps medical students’ reservoirs topped up?
Source: BMC Medical Education

In a nutshell: In the Coping Reservoir Model people’s ability to cope is likened to a reservoir with some things, like sleep and relaxation, topping it up whereas other things, like stress and exhaustion deplete it. In this study Kelly Rhea MacArthur and Jonathan Sikorski from the University of Nebraska, analysed 105 medical students’ reflective writing in an attempt to see what topped up their “reservoirs,” during their pre-clinical years. The researchers found that “the main positive factors are psychosocial resources, intellectual stimulation, and social support/relationships. Most importantly, relationships with patients shape all three of these positive factors and provide the main source of hope that the stress of medical school will get better.”

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-020-02067-8

Country life, or bright lights, big city?
Source: BMC Medical Education

In a nutshell: For every person who dreams of a rural idyll with chickens in the back yard and wisteria around the door there’s another pining for art galleries and restaurants and missing Waitrose. In this study Jannine Bailey [sic] and Sabrina Pit [sic] from Western Sydney University held focus groups with 62 final-year medical students after they’d finished a year’s clinical-school placement. They found that “Most students have high levels of anxiety around starting work but they acknowledge that this may be exaggerated. They believe that in rural areas they get higher quality supervisory support than in urban hospitals as people know you better, whereas in the city you are more anonymous. However, the level of responsibility placed on rural interns was considered to be a double-edged sword. While rural interns were allowed to do more than be a ‘paper-pusher’ this level of responsibility means they are more accountable. The majority felt that doing your first training years in a metropolitan hospital can be crucial to getting on a training program in your chosen speciality.”

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-020-02103-7

Teaching critical appraisal to medical students
Source: The Journal of the Royal College of Physicians of Edinburgh

In a nutshell: Nothing is guaranteed to strike more fear into a librarian’s heart than “would you mind teaching the F1s about critical appraisal?” Evaluating journal articles can be a tricky business with no clear answers and day trips on leaky intellectual boats to rocky shores of statistics and medical terminology. In this study Alice E. Lee, from Imperial College London, led a team of researchers investigating the effectiveness of a two-day, mixed-methods, national teaching programme which
included an interactive lecture and workshop, quiz and viva-style examination. 59 students from 17 medical schools completed the programme which led to significant improvements in confidence and test performance.

You can read the abstract of this article at 
http://dx.doi.org/10.4997/JRCPE.2020.118

**Group coaching for leadership**
**Source:** BMC Medical Education

**In a nutshell:** Leading people is a very different skill from doing a more practical job. A number of mediocre footballers, for instance, have become great managers while, conversely, a number of great footballers have failed as managers. Medicine is no exception to this with even the most-talented doctors struggling with leadership skills. In this study Bente Malling, from Aarhus University in Denmark, led a team of researchers investigating the effectiveness of group coaching at teaching leadership skills to 45 newly-qualified doctors. The coaches were health professionals with certified coaching training and there were a total of six courses where the doctors were able to share experiences and problems from their professional lives. Five themes emerged from interviews with the doctors which were:

- Revelation of the hidden curriculum
- Importance of professional relations
- Inter-professional communication
- Conflict management
- Emerging leadership skills

The newly-qualified doctors’ “communication skills improved due to an increased awareness of other peoples’ perspectives and preferences. They realized the importance of good relations, saw how they could become active contributors in their departments and began to practice leadership skills through e.g. involvement of the team, delegation of work and negotiation of own obligations.”

You can read the whole of this article at 

**Is four- or two-step better for teaching surgery?**
**Source:** BMC Medical Education

**In a nutshell:** Teaching surgical skills is a bit like learning DIY. You can read all the books you want to but it’s not until you’re standing there weeping with a drill in your hand and a whole in your wall big enough to bury a racehorse in that you actually learn anything. Learning by doing in surgery carries more serious consequences and
in this study Lukas B. Seifert, from Goethe University in Frankfurt, led a team of researchers comparing the traditional “see one, do one,” approach with Peyton’s four-step approach. 102 students took part in the study which found that the four-step approach was significantly superior when the students were compared directly after the teaching but that there was no difference after eight weeks. Nevertheless, the researchers concluded that “the modified video-based version of Peyton’s ‘4-step Approach’ is the preferred method for teaching especially complex motor skills in a large curricular scale.”

You can read the whole of this article at https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-020-02105-5

The fine art of interpreting wallpaper patterns

Source: GMS journal of medical education

In a nutshell: In histology people examine patterns – usually in fetching shades of mauve, pink, and purple reminiscent of tie-dyed T-shirts or modish wallpaper – which show what is going on in people’s cells. In this study Christina Drees, from Goethe University in Frankfurt, led a team of researchers studying the effectiveness of an interactive e-learning software histology course. 213 students took part in the study: 65 took the traditional programme of Goethe University; 56 used the new, interactive software; and 92 did not use any software at all. The interactive software was rated significantly better with regard to usability and motivational aspects than the traditional learning programme and using the software resulted in a significant increase of knowledge acquisition when compared to the students who had used no software at all.

You can read the abstract of this article at http://dx.doi.org/10.3205/zma001328

Nurse Education

What do nursing students think about immunization?

Source: Nurse Education Today

In a nutshell: As the world struggles to get to grips with coronavirus it’s easy to forget that there are plenty of diseases we do have a vaccine for. In this study Kathryn L. Wilson, from Eastern Michigan University, led a team of researchers studying 74 nursing students’ attitudes towards immunization. The researchers found that the students “had a decreased perception of disease severity, likelihood of infection without immunization, and concern of side effects compared to previous research involving parents. In addition, students have poor confidence in the ability to educate their clients about immunizations.”

You can read the abstract of this article at
Nursing students and social media

Source: Nurse Education Today

In a nutshell: Amid all the time-wasting, insults and self-righteousness it’s easy to forget that social media can be a force for good too. In this study Muna Alharbi, from Monash University in Australia, led a team of researchers who interviewed 16 nursing students about their use of social media. Three main themes emerged from the interviews which were:

- Learning about nursing professionals’ identity through social media
- Adopting the identity of nursing
- Students sharing their understanding of nursing

The researchers also found that “students used social media to learn about the nursing profession, and this helped them to develop a sense of belonging to the nursing profession. The students also used social media to share their experiences as nursing students and to enhance society’s understanding of the importance of the nursing profession.”

You can read the abstract of this article at


How are nursing students coping with the lockdown?

Source: Nurse Education Today

In a nutshell: In this study Bella Savitsky, from Ashkelon Academic College in Israel, led a team of researchers studying levels of anxiety among 244 nursing students during the coronavirus lockdown in Israel. The researchers found that 43% were suffering from moderate anxiety whilst 18% were suffering from severe anxiety. Being a woman, lack of protective equipment at work, and having children were all significantly associated with higher anxiety as was alcohol use, using sedative drugs, and excessive eating. Stronger resilience and the use of humour were both associated with lower anxiety.

You can read the abstract of this article at


What nursing students learnt from the escape room

Source: Nurse Education Today
**In a nutshell:** It’s almost impossible to say whether Escape Rooms – in which people solve clues in order to leave a locked room – will be more or less popular after the lockdown. On the one hand people might have got used to living in one room and be rather upset at the prospect of moving out; or the other people might have already spent so much time in confinement they can’t resist the prospect of getting out as quickly as possible. In this study Briyana L.M. Morrell, from the University of Indianapolis, led a team of researchers, studying this issue. The researchers found that the escape promoted “soft skills,” for professional practise; at the same time the escape room required confidence, critical thinking, and teamwork. The escape room encouraged a shared-leadership programme and mimicked real-life constraints with professional implications.

You can read the abstract of this article at


**Does high-fidelity make a difference?**

**Source:** Nurse Education Today

**In a nutshell:** Many nursing schools use high-fidelity simulation to teach students critical thinking. But does it actually work? Trying to find out was Janine R. Blakeslee, from Davenport University in Michigan. 69 students took part in the study. 36 of them took part in a high-fidelity simulation while the rest used written case studies. The study found that neither approach made a statistically-significant difference to the students’ critical-thinking skills.

You can read the abstract of this article at

https://doi.org/10.1016/j.nedt.2020.104494

**The Spanish gymkhana without ponies**

**Source:** Nurse Education Today

**In a nutshell:** Depending on whether one is familiar with the cartoons of Norman Thelwell or the novels of Jilly Cooper gymkhanas conjure up images either comedic, or erotic. Gymkhana means something different to Spanish nursing lecturers though and in this study Diana Jimenez-Rodriguez, from Almeira University in Spain, led a team of researchers examining the effectiveness of the Gymkhana Room for Education and Evaluation in Nursing Studies (GREENS©) “a pedagogical model that can be used as a learning and assessment method in nursing training workshops. This model combines the advantages of gamification, the flipped classroom and the use of low-fidelity clinical simulation, also including self-reflection and peer evaluation of the situations experienced.” 77 students took part in the study which found GREENS© was liked by the students and reduced the anxiety around assessment. “More than 60% of the students answered “agree” or “strongly agree” with the idea that GREENS© is useful for improving motivation, teamwork, learning, fun and knowledge assessment.”
Running the rule over in-service training

Source: Nurse Education Today

**In a nutshell:** In-service training can range from the genuinely useful via a nice day out with some free biscuits to an hour stuck in front of an e-learning package watching the pizza-wheel of doom whirr around futilely. In this study Hanna Kalio, from the University of Eastern Finland, led a team of researchers analysing 7,817 documents from 203 in-service training projects between 2002 and 2020. “The most frequent competencies that were addressed were health promotion and clinical skills (17%), preventing social problems (16%) and promoting the wellbeing of children and families (15%) and older adults (14%). The main target groups were general health and social care professionals (19%). A total of 222 training interventions were used by the 203 projects and the most frequently used methods were conventional classroom education (56%), followed by coaching and orientation (12%) and theme days (9%). Only 38% of the projects measured the effects of the training and the main method was collecting feedback from participants.”

You can read the abstract of this article at

https://doi.org/10.1016/j.nedt.2020.104493
What old nurses want from new ones

**Source:** Nurse Education Today

**In a nutshell:** In this study In Ok Sim, from the Red Cross College of Nursing in Seoul, interviewed 31 experienced paediatric nurses asking them what qualities they looked for in new ones. Three themes emerged from the interview which were:

- Honesty and effort
- Problem-solving
- Relationship-orientation

You can read the abstract of this article at

[https://doi.org/10.1016/j.nedt.2020.104511](https://doi.org/10.1016/j.nedt.2020.104511)

Web-based simulation. What nurses want to know

**Source:** Nurse Education Today

**In a nutshell:** Traditional simulation presents obvious difficulties in a post-COVID-19 world. One way around this is web-based simulation (WBS) and in this study Sook Jung Kang and Yoonjung Kim, from Ehwha Women’s University in Korea, asked 132 registered nurses what they would like to learn in a WBS. 96.2% said that new nurses needed simulation training and 90.2% said that WBS was necessary. The most important category of learning, as far as the nurses were concerned, was fundamental nursing knowledge, followed by fundamental nursing technique. The top-ranked items were: cardiopulmonary resuscitation; care of artificial airways; oxygen therapy; and mechanical ventilation.

You can read the abstract of this article at

[https://doi.org/10.1016/j.nedt.2020.104508](https://doi.org/10.1016/j.nedt.2020.104508)

What do nurses really think about e-learning?

**Source:** Nurse Education Today

**In a nutshell:** What software developers have in mind as they write e-learning modules are happy students, with a dreamy look on their faces and a mug of coffee in their hands, gaily updating their knowledge of life-saving medical procedures. Those receiving it, on the other hand, often contemplate desperately trying to retain the will to live as they go through their annual dose of data-security training. In this study Christopher J. Stevens, an independent researcher from Ontario, Canada, led a team of researchers who interviewed 10 registered nurses about their experiences of e-learning. The following themes emerged from the research:
• Unsatisfactory learning experiences
• Meaningful learning experiences
• Enhancing learning experiences

You can read the abstract of this article at

https://doi.org/10.1016/j.nedt.2020.104509

**Nursing students and medication management**

**Source:** Nurse Education Today

**In a nutshell:** Medication management – knowing how much of what medicine to give to which people (and as importantly what *not* to give) – is an important part of being a nurse. In this study Mairead Moloney, from the University of Limerick, led a team of researchers who interviewed 14 final-year nursing students about medication management. Four themes emerged from the interviews which were:

• Developing an understanding
• Embedding knowledge in practice
• Engaging in practice
• Accepting professional responsibility

You can read an abstract of this article at

https://doi.org/10.1016/j.nedt.2020.104512

**WhatsApp for student nurses**

**Source:** Nurse Education in Practice

**In a nutshell:** Life can be lonely when you’re a new nurse. In this study Rita Abiodun, from the University of the Western Cape in South Africa, led a team of researchers who enrolled 76 new graduate nurses in a WhatsApp community of practice which ran over an eight-week period. Many of the new nurses were using WhatsApp already and rated it highly for ease of use and usefulness. Interactions with alumni, bridging and bonding social capital, professional integration and a sense of belonging to a community of practice all significantly improved.

You can read the abstract of this article at

https://doi.org/10.1016/j.nepr.2020.102826
Pharmacy Education
When filling out forms is serious business
Source: BMC Medical Education

In a nutshell: Unless you’re very lucky most people spend a certain amount of their working day on data entry. For healthcare professionals this often takes the form of updating medical records yet this isn’t something that’s always covered in their training despite the fact that a missed tick in an “Allergies,” box or a slip of the pen in the “Kidney to be Removed,” field can have serious consequences. In this study Olga O. Vlashyn, from Purdue University in Indiana, led a team of researchers assessing the use of training electronic medical records (tEMRs) in pharmacy education. From a sample of 156 students 48.7% agreed, or strongly agreed, that using tEMRs enhanced their learning in pharmacy classes and laboratories. From interviews with a smaller (22) group of students four main themes emerged which were:

- Current priorities for use within the pharmacy curriculum
- tEMR benefits
- tEMR barriers
- Future priorities for tEMR use to prepare students for pharmacy practice

You can read the whole of this article at
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