



Joint Education and Training Library



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Dental Education

Virtual jaws at the dental school

Source: BMC Medical Education

In a nutshell: Most of us are familiar with dentists and dental nurses scurrying out of the room in an alarming fashion while we are left at the mercy of X-rays beamed at our mouths. Interpreting such X-rays is an important part of being a good dentist and in this study Elham Soltanimehr, from Kermanshah University of Medical Sciences in Iran, led a team of researchers comparing the effectiveness of virtual education and traditional teaching at improving students' x-ray interpretation. 39 dental students took part in the study, 20 of them receiving a virtual learning package while the rest had six traditional one-hour classes. The researchers found that the virtual group improved their theoretical knowledge more than the classroom one but that the two groups' performance was no different in a clinical exam. The researchers concluded "to improve our students' reporting skills, we need to revise our virtual educational programme so that the students have more opportunities to engage in reporting skills."

You can read the whole of this article [here](#).

Medical Education

Distance learning and Dettol

Source: BMC Medical Education

In a nutshell: Dettol was – and maybe still is – reputed to kill all known germs dead. Linguistic redundancy aside this aim is becoming increasingly difficult to achieve as more and more microbes evolve to become resistant to things designed to kill them. One way to make things easier is to prescribe fewer antibiotics something known in the jargon as antimicrobial stewardship. In this study Michel Laks, from the Universidade Federal de São Paulo in Brazil, led a team of researchers looking into the effectiveness of a distance-learning programme designed to teach medical students antimicrobial stewardship. Three-quarters of the eligible students completed the course. All of the participants considered their knowledge adequate or insufficient before the course and said that it was quite important, or important, to address the topic during medical education. 70.5% said that they had learned "quite a lot," or "more than expected," about the topic and would dedicate more time to it if they could.

You can read the whole of this article [here](#).

How to keep doctors eyes on the prize

Source: BMC Medical Education

In a nutshell: People like to think that those messing about with their eyes – medically speaking – know what they’re doing. In most cases it’s a fair assumption but there’s a lot to learn and in this study Sidra Zafar, from the Johns Hopkins University School of Medicine, led a team of researchers looking at which characteristics affected junior doctors’ performance on the Ophthalmic Knowledge Assessment Programme (OKAP). 192 junior doctors took part in the study. OKAP performance was found to have a significant positive correlation with a greater number of hours spent studying, the use of online question banks and/or lectures arranged by residency programmes and with “OKAP-specific didactics.” The factors most predictive of scoring in the top 25% of marks were: higher step 1 scores; the presence of incentives; a greater number of hours spent studying and fewer hours spent in research three months before the exam. Interestingly doctors who were least likely to depend on group-study sessions as a learning method tended to score more highly in the exam.

You can read the whole of this article [here](#).

Log books in Lion Mountain land

Source: BMC Medical Education

In a nutshell: People training to be surgeons – or other types of doctor for that matter – often keep logbooks recording the operations they’ve been involved in (presumably without glued-in tissue samples) and what they’ve done during them. In this study Ø. V. Svendsen, from the Norwegian University of Science and Technology in Trondheim, led a team of researchers looking into the use of logbooks in Sierra Leone (or Lion Mountains in English). The researchers compared the last 100 logbook entries of the trainees with the official hospital records. 3,169 database entries from 35 trainees were analysed. 62.2% matched the hospital records, 10.4% were close matches, 26.9% were over-reported and 20.7% were under-reported. The researchers concluded that “information gathered from surgical logbook systems must be applied with care, and great efforts must be made to ensure that the logbook systems used provide reliable data... Clear instructions and proper training should be provided when introducing the logbook system to the users. The importance of logging all procedures, including minor ones, should be emphasised. The logbook system should be user friendly and only as extensive as necessary.”

You can read the whole of this article [here](#).

Can self-explanation improve students' performance?

Source: BMC Medical Education

In a nutshell: Self-explanation is a learning strategy that requires students to engage actively with the learning material, providing for themselves specific explanations about its components, how these relate to each other and to their own prior knowledge, to deepen their understanding of the content. Which all sounds suspiciously like going away, reading a few books, taking notes and thinking about things. In this study M. Chamberland, from the Université de Sherbrooke in Canada, studied the interaction between self-explanation and feedback in a study of 94 third-year medical students. The researchers concluded that “providing feedback to students in the form of correct diagnosis after using self-explanation with clinical cases is potentially beneficial to improve their diagnostic accuracy but this effect is limited to similar cases.”

You can read the whole of this article [here](#).

Burnt out in Brazil

Source: BMC Medical Education

In a nutshell: Rainforests are vast tracts of land full of dangerous predators, uneatable animals and unspeakable parasites and diseases. Many people think they're marvellous so one might imagine that close proximity to them would engender relaxation and cheerfulness. In this study Paula Lage Pasqualucci, from the Universidad de São Paulo in Brazil, led a team of researchers putting this theory to the test by investigating depression, anxiety and burnout in a sample of 606 doctors. The researchers found that 19% of them were depressed, 16% were anxious and 17.7% were suffering from stress. Burnout syndrome was present in 63% of the sample. There was a statistically-significant positive correlation between burnout syndrome and depression, anxiety and stress and the more mental symptoms people suffered from the worse their quality of life was.

You can read the whole of this article [here](#).

Intercalating in an emergency

Source: BMC Medical Education

In a nutshell: Medical students give up a lot compared to those studying other subjects. They get less chance to watch daytime TV, sit around in coffee shops discussing the meaning of life and broaden their cultural horizons by making the most of more free time than they will get for the rest of their working lives. Intercalation is an attempt to sugar this pill somewhat by giving medical students the chance to take some time out of their studies and engage with French literature, philosophy or

military history. Some students are made of sterner stuff though and in this study Blair Graham, from Plymouth University, led a team of researchers looking into the effects on students of intercalating in emergency care. 37 students and 14 supervisors took part in the study. The students reported greater confidence across a range of clinical and procedural competencies and the supervisors reported students' competences in clinical, inter-professional and academic writing skills to be commensurate with, or in some cases greater than, the level expected of a final-year medical student. The supervisors also reported benefits to their own professional and personal development including improved teaching and mentoring skills, intellectual challenge and help with audits and service-improvement projects.

You can read the whole of this article [here](#).

Why consultants keep on learning

Source: The Journal of Continuing Education in the Health Professions

In a nutshell: Doctors shouldn't stop learning once they've qualified although many might be tempted to. But what motivates them to keep learning and going on courses apart from the chance to spend a day drinking coffee and eating biscuits away from their dreadful patients? In this study Stephanie M.E. van der Burgt, from VU University in Amsterdam, led a team of researchers looking into medical specialists' motivations for continuous learning. The researchers found that there were four motivational profiles among the medical specialists. HAMC (High Autonomous and Moderate Controlled); MAMC (Moderate autonomous and Moderate Controlled); MALC (Moderate Autonomous and Low Controlled); and HALC (High Autonomous and Low Controlled) into which most of the women in the study fell.

You can read the whole of this article [here](#).

Team-based learning – suffering slackers and shining stars

Source: BMC Medical Education

In a nutshell: Depending on your perspective teamwork conjures up images of joyful collaboration, smiling people and jumping in the air as you achieve your mutual goal or a living embodiment of Jean-Paul Sartre's comment that hell is other people. Whatever your view there's no escaping from it and medical education often uses team-based learning. In this study Gonzalo A. Carrasco, from Rowan University in New Jersey, led a team of researchers looking at the differences between those who performed well in team learning and those who didn't. 260 students took part in the three-week study which found that those who were in the top third in their final exams showed highly significant weekly improvements in their iRAT scores – iRAT being the individual readiness assurance test designed to measure how well students had prepared for their team-based learning. Students in the bottom third in their final exams did not, on the other hand, show any improvement in their iRAT scores until

the last week of the course. So, even under team-based learning slackers who leave things until the last minute tend not to prosper.

You can read the whole of this article [here](#).

Role models and clinical placements

Source: BMC Medical Education

In a nutshell: Despite endless disappointments, and the fact that people who do extraordinary things tend not to behave in ordinary ways, lapses by prominent people are often greeted with sanctimonious pursed lips and the claim that said prominent person hasn't lived up to their position (one rarely sought and seldom accepted) as a role model. More realistic role models can – with luck – be found in the workplace and in this study Oliver Keis, from the University of Ulm in Germany, led a team of researchers studying how German medical students perceive role models during their clinical placements. 96 students took part in the study which found that role models and role modelling played an important role in clinical placements. The positive function of medical staff as role models predominated across all specialties. Junior doctors were the most frequently perceived role models (28.5%), followed by consultants (25.1%) and nursing staff (22.4%). The most commonly-perceived positive quality was interaction with students (16.5%), followed by team behaviour (13.6%), interaction with patients (13.6%) and professional expertise (13.4%).

You can read the whole of this article [here](#).

Medical students and the hard of hearing – a dialogue with the deaf

Source: BMC Medical Education

In a nutshell: Communicating with any patients can be fraught with difficulty – even more so when those patients happen to be deaf. In this study Michelle Gilmore, from Queen's University Belfast, led a team of researchers looking into the effectiveness of deaf-awareness training for medical students. Second-year students who took an optional deaf-awareness and basic sign-language module were compared to students who took another module. The researchers found that the students who took the course had a more positive attitude towards deaf people and knew more about deafness. "Focus groups suggested integrating deaf awareness training into existing undergraduate communication skills teaching, with the inclusion of deaf tutors."

You can read the whole of this article [here](#).

Finding the middle ground

Source: BMC Medical Education

In a nutshell: In an age when opinions are starkly polarised the idea that both sides of the debate might have something to offer is increasingly unfashionable. One such debate in medical education is between the merits of traditional teaching (chalk and talk, so to speak) and problem-based learning in which students are given a challenge to get to grips with and learn while doing so. But what happens if you mix the two approaches? Rodrigo Jiménez-Saiz from Ciudad Universitaria in Madrid, and Domenico Rosace, from McMaster University in Canada reviewed research studies into the different approaches and found that a mixture of traditional teaching and problem-based learning was superior to either approach on its own, both in terms of how much students learned and their levels of satisfaction.

You can read the whole of this article [here](#).

Playing to learn – trivial pursuit or monopoly on wisdom?

Source: BMC Medical Education

In a nutshell: Sometime in the 1960s it was decided that people didn't have to bother growing up*. Middle-aged people could continue to wear jeans, take drugs and go to festivals while those partial to the twee could continue to enjoy sickly cupcakes and notebooks covered in unicorns. Tapping into this trend are the developers of educational board games one of which is *PlayDecide* [sic] *patient safety*. In this study Marie Ward, from University College Dublin, led a team of researchers looking into the effectiveness of this game in promoting a safety culture among junior doctors. In the researchers' words "the game proved to be a valuable patient safety educational tool and proved effective in encouraging deep discussion on patient safety. There was a significant change in the reporting behaviour of junior doctors in one of the hospitals following the intervention."

*Some might say this author has yet to advance beyond adolescent cynicism but I couldn't possibly comment

You can read the whole of this article [here](#).

No smoke without role play

Source: BMC Medical Education

In a nutshell: Whilst Boris Johnson has his romantic tiffs played out for a mass audience and Jeremy Corbyn gets interrogated about anti-Semitism every time he pops out for a pint of milk it seems that smokers can scarcely leave the house these days without being pounced on by a Guardian reader wielding a nicotine patch. In this study Kye-Yeung Park, from Hanyang University College of Medicine, led a team of

researchers comparing the effectiveness of standardised patients (people pretending to be patients sticking to a pre-determined range of responses) and role-play in teaching junior doctors smoking cessation. 113 fourth year medical students were divided into two groups. One group were taught using standardised patients while the other group took part in role-play sessions with other students. Both groups did equally well on subsequent clinical tests and in terms of how their confidence improved although the group who had practised on standardised patients felt more confident than the group which had practised with role play. Role play is a lot cheaper however, so the researchers concluded that it was a question of balancing cost against students' self-confidence when deciding which method to use.

You can read the whole of this article [here](#).

Picassos and proctology

Source: BMC Medical Education

In a nutshell: Some medical schools like to include the arts in their curricula for medical students in the hope that it may turn them into well-rounded people able to hold their own at dinner parties and sympathise more with their students. In this study Bowen He, from the University of Texas, led a team of researchers looking into the effectiveness of a course called *The Art of Observation* an optional elective put on in collaboration with educators from the Dallas Museum of Art. The researchers analysed evaluations from 65 medical students and found that the following benefits accrued:

- 1) Enhanced observation skills: by engaging with art and completing relevant activities students developed the ability to synthesise a compelling narrative in addition to learning technical skills
- 2) Improved physician socialisation: students reported self-awareness, increased tolerance of ambiguity, and development of a humanistic view of medicine
- 3) Reduction in burnout symptoms: students reported an enhanced sense of wellbeing after each session

You can read the whole of this article [here](#).

Nurse Education

Motivation and the nursing student

Source: BMC Medical Education

In a nutshell: Cluedo focuses on the suspect, location and murder weapon behind homicides wisely leaving motives to one side. As TV psychiatrist Frasier Crane once observed 'who knows why people do anything?' What makes people decide to become

nurses has risen up the agenda in recent years, particularly as many countries are short of them. In this study Linda Messineo, from the Istituto per le Tecnologie Didattiche in Palermo, led a team of researchers looking into the motivations of 133 first-year nursing students. The team used [self-determination theory](#) to analyse the students' responses and identified four motivational profiles:

- Students with a good-quality motivation profile (high autonomous and low controlled)
- Students with a poor-quality motivation profile (low autonomous and high controlled)
- Students with a low quantity motivation profile (low autonomous and low controlled)
- Students with a low quantity and poor-quality motivation profile (i.e. prevalence of controlled motivation)

You can read the whole of this article [here](#).

[Annotated exemplars. Learning by example or a waste of ink?](#)

Source: BMC Medical Education

In a nutshell: When students get their work back they tend to look at the bottom line – their marks – rather than painstakingly ploughing through the acres of red pen tutors fondly imagine they will read. Annotated exemplars are an attempt to get round this. They are examples of previous attempts at the task, complete with feedback from tutors which – it is hoped – students will read and reflect on before undertaking the task for themselves. In this study Rebekah Carter, from the University of Western Sydney, led a team of researchers investigating whether annotated exemplars really do improve students' performance. 1,120 students took part in the study, just under half of whom used an annotated exemplar. Students who were more likely to use the exemplar were older, women and more likely to be born outside Australia. However, of those who used the exemplar there was no demonstrated increase in assessment marks.

You can read the whole of this article [here](#).

[Can you train people to have empathy?](#)

Source: Nurse Education Today

In a nutshell: Most people think nurses should have empathy (or sympathy as it was called before it was re-branded) for their patients. But is it an innate quality or something you can teach. Much effort has been devoted to pursuing the latter

approach and in this study Pilar Bas-Sarmiento, from the University of Cádiz, led a team of researchers studying the effectiveness of an intervention designed to improve nursing students' empathy. 116 students took part in the study, half of whom took the empathy course and the rest of whom were made to wait. The study showed that the students' empathy, their knowledge and their self-esteem were all improved by the intervention.

You can read the abstract of this article [here](#).

Empathy and the Famous Five

Source: Nurse Education in Practice

In a nutshell: There are almost infinite variations in how people behave towards one another both from person to person and even within the same person in different situations. Psychologists tend to reduce this to five variables though: Openness (to new people and experiences, Agreeableness, Conscientiousness, Extroversion/Introversion and Neuroticism (emotional stability) – the so-called Big Five. Qunfang Wan, from Sichuan University in China, led a team of researchers looking into the links between the Big Five and empathy in a sample of 471 nurses. Empathy was positively associated with conscientiousness and agreeableness but negatively associated with neuroticism. The personality traits were able to explain just over a third of the variation in empathy between the students and the researchers concluded that “Big five personality trait theory is a pretty good model to predict the empathy level of nurses.”

You can read the abstract of this article [here](#).

Nursing Tree Time – coming to a library near you

Source: Nurse Education Today

In a nutshell: One of the many contradictory aspects of the 21st century is the contrast between the rape threats, hard-core pornography and vile abuse available online and the suffocating tweekness of adult colouring books, unicorn pyjamas and sugary cupcakes increasingly prevalent in what we used to call ‘the real world.’ Tending towards the latter approach were a team of researchers led by Martin Christensen from Western Sydney University. They developed Nursing Tree Time “an academic pastoral support programme that encompassed a nursing academic, an academic skills advisor and a student welfare counsellor.” For two hours a day over two thirteen-week semesters a nursing academic was available in the campus library to provide support and advice for any undergraduate nursing student who wanted it. Extra support was provided by an academic skills advisor and a student counsellor. 80% of the students were highly in favour of this type of support, 60% of them made the sessions a priority and 73% felt they had influenced them in continuing their studies.

You can read the abstract of this article [here](#).

Getting a better blend for self-directed learning

Source: BMC Medical Education

In a nutshell: In the same way that grooming is best reserved, linguistically speaking, for dogs, chimpanzees and paedophiles some might argue that the words blending or blended are best saved for whisky, coffee and paint. Educational researchers beg to differ though and blended coaching involves a mixture of face-to-face support and online help for students with their studying. In this article Gie-Ok Noh, from Konyang University and Dong Hee Kim, from Sungshin University (both in Korea) looked into the effectiveness of a self-directed learning programme for nursing students which used blended coaching to help them. 91 students took part in the programme. The students were divided into two groups, only one of which got blended coaching to help them with their self-directed learning. The researchers found that the students who had had their coaching had a significantly higher improvement in “competency in the implementation of self-directed learning and were more satisfied with their clinical practice.”

You can read the whole of this article [here](#).

Primary Care Education

GPs and the gene genie

Source: BMC Medical Education

In a nutshell: Doctors are called upon to look at many things: piles, scrotums, boils and rashes among them. ‘Can you take a look at my DNA,’ isn’t among the most common questions but it might be soon so people working in primary care need to know something about it. In this study Brittany Harding, from McMaster University in Canada, led a team of researchers looking at the educational needs of urban and rural primary care providers (PCPs). The researchers held one urban and two rural focus groups involving a total of 19 people. The participants said that they had a responsibility to make sure patients got genetic care but that roles and responsibilities for providing such care were poorly defined. The PCPs said there was a need for further education and resources to enable them to provide care for people with genetic ailments. The researchers developed a model of care involving identifying patients with genetic conditions that they could manage alone, those that they could manage with informal or electronic consultation and those needing specialist referral.

You can read the whole of this article [here](#).