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# Education Bulletin – November 2024

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# Dental Education

## When you don’t need gas to get to sleep

**Source:** BMC Medical Education

**In a nutshell:** With a bright light being shone in your face, and a man in a green smock attacking your teeth with a pick you’d have to be quite a severe insomniac to nod off in a dentist’s chair. In this study a team of researchers, led by Janine Sambale from Philipps-University Marburg in Germany, investigated what dental students were taught about sleep medicine in Germany. 58.3% of the lectures, and 14.3% of the students said that dental sleep medicine was included in the curriculum. The average teaching hours per semester on this topic were 1.4. A greater knowledge of sleep medicine on the part of the lecturers was correlated with the inclusion of dental sleep medicine in the curriculum, and with the number of teaching hours per semester.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06042-5>

## Putting the bytes into dentures

**Source:** BMC Medical Education

**In a nutshell:** I don’t dare Google it, but presumably there is a small corner of the internet devoted to people with a fetish for false teeth. It’s a fair bet though that most people choose to enter virtual reality with a full set of gnashers, even if they don’t possess them in the off-line world. In this study Feng Luo, from Sichuan University in China, led a team of researchers assessing the effectiveness of online learning at teaching dental students complete denture rehabilitation. They found that the students had a “strong engagement with online learning, with a majority valuing its flexibility, accessibility, and capacity to facilitate self-paced, individualized learning.” However, there were “notable gaps,” in the students’ confidence in, and preparedness for, complete denture rehabilitation after doing the online course.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06070-1>

## “Be there in a bit. I’ll just print some teeth out.”

**Source:** BMC Medical Education

**In a nutshell:** Such is the speed of advance of 3D printing and medical technology I wouldn’t be surprised if in 10 years’ time were able to print out a new liver for ourselves on the way home, between after-work drinks and the off licence. In this study Lisanne Carnier, from the University of Würzburg in Germany, led a team of researchers studying the use of 3D-printed teeth in dental education. The researchers created “a realistic multilayer tooth with enamel, dentin, integrated caries, pulp, and electrometric and X-ray imaging abilities.” 396 teeth were produced, tested, and evaluated by 66 fourth- and fifth-year dental students. “Compared with natural teeth, the printed teeth were generally rated positively and significantly better in all criteria than typodonts [model teeth] used previously … In general, the students desired more exercises with 3D-printed teeth for their studies.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06230-3>

# General Healthcare Education

## When pi helps you break the circumference

**Source:** Computers & Education

**In a nutshell:** In this study Woon Chien Cecilia Teng and Gek Ling Claire Tan, from the National University of Singapore, studied the effectiveness of an escape room designed to teach statistics to undergraduates. The researchers found “significant learning gains … with large effect sizes across all cohorts… the game enhanced learning in the cognitive, affective, behavioural, and interpersonal domains, and was well-received by students.”

You can read the abstract of this article at

<https://doi.org/10.1016/j.compedu.2024.105171>

## What makes a good virtual simulation?

**Source:** BMC Medical Education

**In a nutshell:** Human nature being what it is, even in the digiverse there are some corners that are better than others. For every lovingly pixellated version of St Mark’s Square in Venice, or Macchu Picchu, there’s the cyber equivalent of a 1970s shopping centre with leaves piling up in the corner, and rats gnawing on an out-of-date leg of lamb round the back of Morrison’s. In this study Qingqing Liang, from Nanjing Forestry University in China, led a team of researchers investigating what makes a good virtual simulation. 538 students took part in the study which divided the ingredients for success into four dimensions:

* Student dimension
  + Learning motivation
  + Task value
* Course dimension
  + Course content
  + Course flexibility
  + Course quality
* Technical dimension
  + Interface design
  + Interaction design
  + Technical adaptability
  + Technical reliability
* Embodied dimension
  + Social presence
  + Spatial presence

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06082-x>

## Do coaches really earn their money?

**Source:** BMC Medical Education

**In a nutshell:** the effectiveness of coaches in this article was a team of researchers led by Shuang Hu, from the University of Turku in Finland. They reviewed the evidence on the effectiveness of coaching in developing the leadership of healthcare managers. They found that “most coaching interventions were based on theory and empirical evidence,” and that “overall, coaching positively impacts outcomes for managers, organizations, and staff.” The perceptions of the people being coached fell into six categories: barriers; facilitators; effective components; attitudes; satisfactory aspects; and suggestions for designing high-quality coaching interventions to improve leadership.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06081-y>

## Building resilience in healthcare students

**Source:** BMC Medical Education

**In a nutshell:** People have different ways of being resilient. I find reminding myself of the overall goal of work and why I’m here helps – respectively, paying off the mortgage on a three-bed semi in Crewe and accumulating enough general knowledge for my retirement pub-quiz team. In this study a team of researchers, led by Soi Moi Chye from IMU University in Malaysia, interviewed 28 healthcare students about resilience. The researchers “identified five key themes contributing to resilience”:

* Life experience
* Socioeconomic factors
* Personal attributes
* Support resources
* Role modelling

The researchers also found that “universities play a crucial role in fostering resilience among health professions students through soft skills training, workplace-oriented training, mentoring, and extracurricular activities. These opportunities enable students to develop and strengthen resilience in both formal and informal settings. Such initiatives not only equip students to manage future career challenges but also support their overall personal and professional development.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06127-1>

# Interprofessional Education

## Putting all the pieces together to keep patients safe

**Source:** Nurse Education in Practice

**In a nutshell:** Whether it’s a doctor’s surgery or 999 most medical treatments begin with a telephone call. Those at the other end of 999 are often called upon to assume a wide variety of roles: bouncer, hostage negotiator, Samaritan, and first-aid expert among them, but they aren’t often included in training with paramedics and nurses. In this study Margot Rykhoff, from Humber College in Toronto, led a team of researchers studying the effectiveness of an interprofessional simulation exercise involving nursing, paramedic, and emergency-telecommunication students. 81 nursing students, 38 paramedics, and 11 trainee call handlers took part in the simulations. The researchers found that after taking part in the programme the students recorded high scores for “attitudes towards the importance of teamwork and collaborative practice.” Themes emerging from open-ended questions to the students included: communication and collaboration in teamwork; responsibilities and leadership; patient-centred care and safety; and emotional dynamics and professional growth.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.104166>

## Doctors, pharmacists, and sticky-backed plastic on the prairies

**Source:** BMC Medical Education

**In a nutshell:** After “nit outbreak,” and “INSET day,” there’s no word more guaranteed to strike terror into parents’ hearts than “project,” conjuring up, as it does, visions of afternoons slathered in Copydex, or up to your waist in a peat bog counting insects. At certain points, praise be, offspring’s projects are other people’s problems and in this study a team of researchers, led by Hana E. Hinkle, from the University of Illinois, studied joint community projects carried out by pharmacy and medicine students as part of their studies. The projects were carried out “as a capstone to a four-month longitudinal, immersive community-based experience in a rural primary care setting.” Mental-health was the most-frequently covered topic area (15.7%), followed by nutrition and exercise (10.1%), and substance abuse (9.6%). The researchers concluded that the “themes reflect priority health issues in rural communities while providing a scholarly activity for health profession student trainees Past projects have also been implemented in highly rural areas where research is not often conducted.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06190-8>

# Medical Education

## Grit and the junior doctor

**Source:** BMC Medical Education

**In a nutshell:** Grit is the combination of perseverance and passion that allows people to achieve their goals in life. Well, that’s what I tell myself as I resist the temptation to crawl into the guinea pigs’ cage and curl up into a ball with them every morning. In this study Pattarapol Kitthavorn, from Mahidol University in Thailand, led a team of researchers studying grit in a sample of 120 resident doctors. Overall, there was no change in the level of grit of the doctors but grit levels did decline during their first year as residents. Grit was positively associated with quality of life and the doctors’ satisfaction with their learning and was also linked to feeling less stress.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06011-y>

## Learning styles and OSCEs

**Source:** BMC Medical Education

**In a nutshell:** Learning styles are something of a moot point in educational circles. Some people swear by them, and tailor their approach accordingly, whereas others consider them to be the pedagogical equivalent of the [four humours](https://en.wikipedia.org/wiki/Four_temperaments). Sitting firmly in the former camp were a team of researchers, led by Anne-Cécile Ezanno, from Bégin Military Teaching Hospital in France. They studied 55 learning students asking them about their preferred learning style and seeing if this made any difference to their OSCE results. 47.3% of the students favoured a theoretical learning style; 27.3% an active style; 14.6% a reflective one; with 5.4% opting for a pragmatic approach. The researchers found no statistically-significant relationship between learning styles and OSCE marks, although those with a pragmatic style did slightly better than average.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06054-1>

## Balint groups and empathy

**Source:** BMC Medical Education

**In a nutshell:** In this study Bin Gong, from Zhejiang University in China, led a team of researchers reviewing the evidence on whether Balint groups could improve empathy in doctors. The reviewers found 11 studies which met their quality criteria and found that doctors who took part in Balint groups showed a significant increase in empathy compared to control groups. The effect of the Balint groups was greater among doctors and nurses than for medical students and those who went to 10 or more sessions showed a greater improvement than those who went to fewer.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06098-3>

## Segmented teaching and surgical skills

**Source:** BMC Medical Education

**In a nutshell:** In segmented teaching, skills are broken down into their constituent elements and learned separately, rather than being taught as a whole. In the context of my driving lessons this led to me sitting in a layby in a dark housing estate in Crewe, staring into an existential void of self-loathing, as I practised being able to signal without switching the windscreen wipers on. In this study Chao Liu, from the University of South China, led a team of researchers investigating the effectiveness of segmented learning at teaching 31 medical students clinical-practice skills. Compared to a control group the experimental group showed better “operational assessment scores,” and higher scores for “history-taking, physical examination, professionalism, doctor-patient communication, organizational efficiency, and comprehensive abilities.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06060-3>

## Teaching pediatric cardiology fellows to communicate serious news: a pilot study

**Source:** BMC Medical Education

**In a nutshell:** In this study a team of researchers, led by Lauren S. Crafts, from Harvard Medical School, studied the effectiveness of a new method of teaching paediatric cardiology doctors how to break bad news. The doctors took part in a three-hour communication training session. The session used *VitalTalk* methodology, and was facilitated by two *VitalTalk* facilitators. The doctors spent an hour learning the skills of delivering serious news and responding to emotion, and two hours in role play with primed actors, followed by a “brief group wrap-up activity.” “Finding the right words, balancing honesty with hope, and clinical and prognostic uncertainty were the top three factors that contributed to making conversations difficult.” After the course there was a significant increase in the doctors’ preparedness to communicate a new diagnosis of congenital heart disease, discuss poor prognoses, check understanding, and respond to emotion; and an increase in their comfort responding to emotions. Four of the doctors said they had used the skills from the training course in their work when they were followed up eight months later.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06078-7>

## When doctors are better than AI – at least for now

**Source:** BMC Medical Education

**In a nutshell:** In this study Ryan S. Huang, from the University of Toronto, led a team of researchers comparing the performance of two AI chatbots – Chat GPT40 and Claude-3 – against 320 F1 and F2 doctors in “addressing medical scenarios characterized by diagnostic uncertainty.” They found that, compared to the human doctors, both chatbots did worse. F1 doctors got 61.1%; F2 doctors 63.3%; Claude-3 57.7% and ChatGPT40 53.3%. Claude-3 took longer over its answers and gave longer answers than ChatGTT40. The researchers concluded that while “AI chatbots like GPT-4o and Claude-3 demonstrate potential in handling structured medical knowledge, their performance in scenarios involving diagnostic uncertainty remains suboptimal compared to human residents.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06115-5>

## What do medical students know about AI?

**Source:** Journal of Health Organization and Management

**In a nutshell:** Given that Microsoft Word still hasn’t worked out I loathe Calibri; YouTube hasn’t clicked that whilst I love The Smiths I can’t abide The Cure; and that our leave system recently had me attempting to book days off in 1920, I might be forgiven for being a little sceptical about artificial intelligence. That doesn’t stop other people from getting over-excited though and in this study A. Subaveerapandiyan, from Sai University in India, led a team of researchers surveying 374 medical students about their knowledge of artificial intelligence. The researchers found “varying levels of AI literacy among medical students with a basic understanding of AI principles.” They recognised the key benefits of AI, such as improved diagnosis, accuracy, and enhanced treatment planning but relied mainly on online resources to stay informed on AI. Their worries about it included AI reinforcing bias, privacy, and people becoming over-reliant on the technology.

You can read the abstract of this article at

<https://doi.org/10.1108/JHOM-04-2024-0154>

## Emotional intelligence and humanistic care

**Source:** BMC Medical Education

**In a nutshell:** Humanistic care is defined as “listening to patients’ needs and wishes, understanding their emotions and feeling the value of life,” and in this study a team of researchers, led by Ming-wei Luo, from Panzhihua Central Hospital in China, investigated its links with emotional intelligence. 236 doctors took part in the study which found that there was a significant correlation between emotional intelligence and humanistic care. Appraisal of one’s own emotions; appraisal of others’ emotions; emotional control; and school community work experience all predicted “humanistic care competence.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06097-4>

## Students give thumbs up to problem-based learning

**Source:** BMC Medical Education

**In a nutshell:** You’d think there were enough problems in the world already without creating them for the benefit of medical education. There is a growing body of evidence to suggest that problem-based learning works though, and in this study Ahmad Zaker Almagribi, from Najran University in Saudi Arabia, led a team of researchers attempting to find out what medical students thought about it. 106 pre-clinical students took part in the study which found that 73.6% of them enjoyed it and found it motivating, compared to team-based learning and traditional lectures. Problem-based learning was seen as more effective when it came to acquiring knowledge (50%); teamwork (62.3%); and high academic performance (58%).

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06148-w>

## Arts and empathy

**Source:** BMC Medical Education

**In a nutshell:** Martim Fornetti and Miguel Barbosa, from the University of Lisbon, studied the association between empathy and artistic practice in a study of 450 medical students. 158 of them were actively engaged in the arts; of whom 118 practised music. Those students who were involved in the arts scored higher overall for empathy, in particular for the fantasy subscale of empathy. Scores were higher for those engaged in more than one artistic activity, and for those who had practised the arts for longer.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06146-y>

## When the students support each other

**Source:** BMC Medical Education

**In a nutshell:** It’s a moot point whether there’s ever a time you can’t learn something from somebody older than yourself. In this study Shannon M. Ruzycki, from the University of Calgary in Canada, led a team of researchers investigating a “near-peer support model consisting of three faculty physicians, trained in peer support, who receive contacts from residents needing support for any issue. Directors of Resident Support physicians provide empathetic listening, referral to existing resources, and peer support for residents.” The peer supporters had a total of 62 contacts over the two-year evaluation period which required a median of two hours to address with the shortest resolution being five minutes, and the longest more than 40 hours. The most-common topic dealt with was feedback and evaluation and the most-common response was listening and support. Residents also contacted the peer supporters to discuss experiences of racism, physical assault, sexual harassment, and mental-health crises. 13 of the resident doctors were asked to rate the service out of 100 for usefulness, giving it a median score of 74.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06176-6>

## Motivation, stress, and achievement

**Source:** BMC Medical Education

**In a nutshell:** Venn diagrams can be put to a wide variety of purposes analysing the world around us. Most Prime Ministers since 1979, for instance, can be covered by overlapping circles representing mad, charismatic, and rabbit in headlights. Builders proverbially tell their clients that building projects can be two out of the three of good, on-time, and cheap, but can medical students achieve low levels of stress, high levels of motivation and academic achievement simultaneously? In this study a team of researchers, led by Nina Triebner, from Friedrich Alexander University in Erlangen attempted to find out. They developed an intervention based on self-determination theory which holds that everyone strives for autonomy, competence, and connectedness. The method included team building, “exclusively positive feedback,” group discussions, and choices about which students did which task. The researchers found that compared to a control group the group taught using the new method had more motivation/interest, and felt greater choice/autonomy, as well as feeling lower levels of stress. However, the students in the group taught using the new technique did less well in their exams; something the researchers attributed to the lack of critical feedback.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06181-9>

## Practice questions and real students

**Source:** BMC Medical Education

**In a nutshell:** In the days when my brain was a sponge eagerly soaking up information rather than a chunk of granite on Cape Wrath – impermeable and surveying a bleak, featureless expanse of nothingness – I regularly used to do practice tests and exams like a pedigree racehorse sprinting over the gallops in preparation for Ascot. In their intellectual prime of life medical students often do practice questions and in this study a team of researchers, led by Ryan Sheehy from the University of Kansas, interviewed some of them about it. Three themes emerged from the interviews which were:

* Medical students use practice questions for primary learning
* Medical students place more importance on the rationale of a practice question, compared to selecting the right answer
* Medical students view practice questions as being designed to be used one, or having a single use

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06168-6>

## Dishonesty, distress, and moral intelligence

**Source:** BMC Medical Education

**In a nutshell:** In this study a team of researchers – led by Hamid Reihani from Shiraz University in Iran – investigated the links between clinical dishonesty, psychological distress, and “low moral intelligence,” among 317 medical students. They found that there was “a direct and significant statistical correlation between clinical dishonesty and students’ [psychological] distress.” There was also a “statistically-significant inverse correlation between clinical dishonesty and moral intelligence.” There was a high rate of clinical dishonesty among senior medical students. The most common dishonest clinical behaviours were:

* Disclosure of patient information in public or with non-medical personnel (76%)
* Incorrect examination of vital signs and physical examinations (69.4%)
* Not reporting incidents or errors of others involving patients (41.6%)

Most of the students had experienced engaging in “at least one clinically dishonest behaviour.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06231-2>

## When Teams is hardly brain surgery

**Source:** BMC Medical Education

**In a nutshell:** Evolution moves slowly. Which is just as well as most of us will be spared the spectacle of humans involving into a cross between a fly and an octopus; multiple eyes and eight hands thus allowing us to be across any number of platforms as we strap ourselves into our office chairs every day. One pedagogical straw on the camel’s back of learners’ attention spans is the video lecture, and in this study Raquel Gutiérrez-González from Puerta di Hierro University Hospital in Madrid led a team of researchers studying their use in a flipped classroom aimed at teaching brain surgery to 109 medical students. The mean video-viewing rate of the students was 41%. Videos linked to lessons earlier in the course were viewed more often than those at the end. “With mandatory classroom assistance and homework assignments, the seminar videos were viewed more but retained less audience. Shorter videos were associated with higher viewing and audience adhesion, but the presence of questions embedded throughout the clip did not significantly engage students. No significant difference was observed regarding lesson topics.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06228-x>

## When a Week on the Wards works wonders

**Source:** BMC Medical Education

**In a nutshell:** In this study a team of researchers, led by Ashley Russell, from Rowan University in New Jersey, attempted to find out. They studied 72 students who had taken part in a Week on the Wards programme in which first-year medical students spent two weeks work shadowing and second-year students spent a week work shadowing. The students pointed to the following benefits of the scheme:

* Highlighting the importance of teamwork in medicine (80.6%)
* Helping them to learn to apply medical knowledge (77.8%)
* Influencing their decision to about which specialty they chose (72.2%)
* Providing an example of where teamwork in medicine was necessary for patient safety and effective care (66.6%)
* Increasing their confidence in their networking skills (66.6%)

93.1% of the students said that the Week on the Wards programme was a useful part of their medical-school education, and that it should be continued for students in the future.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06167-7>

## Helping doctors deal with PPIs

**Source:** BMC Medical Education

**In a nutshell:** Rather like those restaurants where the service is quick and attentive – “yes, I’m *still* enjoying my meal, thank you” – but staff seem curiously reluctant to allow you to pay the bill and leave, some doctors do all the hard work of seeing patients and prescribing them drugs, but neglect to facilitate them stopping taking them. Proton-pump inhibitors (PPIs) (designed to treat gastric reflux) are one drug particularly affected by this and in this study Laure Esparbes, from Paul Sabatier University in Toulouse, led a team of researchers evaluating the effectiveness of “a continuous medical education programme focused on PPI describing for GPs in rural settings.” The programme was made up of “an interactive training session featuring clinical cases, an open discussion, and distribution of educational materials.” 33 GPs took part in the training. They said they were highly satisfied with their training. 92.9% of them reported changes in practice, including increased awareness of inappropriate PPI prescriptions. The sessions led to an increased reassessment rate of PPI prescriptions; using more than one consultation to deprescribe the drugs; and a more systematic use of a gradual cessation of PPI. Those who had done the course were more likely to prescribe alternative medication, primarily antacids.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06215-2>

## Simulation and communication

**Source:** BMC Medical Education

**In a nutshell:** In this study Asta Kristiina Antila, from the University of Helsinki, led a team of researchers who analysed the reflective writing of 208 fourth-year medical students all of whom had taken part in a communication-skills course involving people pretending to be patients. Six themes emerged which were:

* Practising in a safe learning environment
* Valuing feedback
* Gaining new perspectives
* Finding simulations valuable and enjoyable
* Boosting confidence and self-knowledge
* Viewing simulations as authentic and engaging learning experiences

Some of the students were more critical and said they did not learning anything new but, overall, the researchers concluded “Throughout the course, students learned diverse aspects of patient care, emotional and behavioural communication dynamics, and lessons from medical errors.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06184-6>

## Case-based learning, flipped classrooms, and peer instruction

**Source:** BMC Medical Education

**In a nutshell:** A a team of researchers, led by Maryam Alizadeh, from Tehran University of Medical Sciences studied 258 medical students. 128 of them took part in “virtual case-based learning sessions,” which were designed as a series of webinars on various topics. Clinical scenarios were designed by a team of basic scientists and clinical educators. The other 130 formed a control group. The virtual case-based learning sessions had a “significant impact on the learning motivation of basic-science students … the most notable motivational consequences of CBL (case-based learning) sessions were basic sciences applicability and its interestingness.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06229-w>

## Paediatric registrars – helping doctors make the step up

**Source:** BMC Medical Education

**In a nutshell:** It’s hard to put your finger on what makes a good paediatrician although a good supply of knock-knock jokes and some lively socks are usually a good start. In this study Sarah A. Long, from the Noah’s Ark Children’s Hospital for Wales in Cardiff, led a team of researchers interviewing resident doctors “undergoing transition to registrar.” The skills seen as necessary were divided into two groups *clinical* and *leadership and management*.

* Clinical
  + Child protection procedures
  + Difficult communication with relatives
  + Emergencies
  + Childhood death
  + Difficult procedures
  + Tertiary-level neonatal care
  + Managing family anxiety and expectations
  + Dealing with uncertainty
  + Running clinics
* Leadership and management
  + Clinical decision-making
  + Leading ward rounds
  + Managing workload
  + Leading a team
  + Supervising junior colleagues

Six “educational interventions,” the doctors thought would be useful were:

* Acting up as a Senior House Officer
* Seniors providing feedback
* Seniors providing support
* Staff providing support
* Trainee familiarization with the new registrar placement
* Trainees making the most of learning opportunities as SHOs

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06210-7>

# Nurse Education

## WhatsApp with the genome?

**Source:** Nurse Education Today

**In a nutshell:** Having started out in medical librarianship at the turn of the century I remember my then boss suggesting we needed to buy more books on the “g-nome.” Casting aside brief visions of garden ornaments and David Bowie [novelty songs](https://en.wikipedia.org/wiki/The_Laughing_Gnome), we both came to terms with the genome and duly ordered loads of books about it. A lot’s changed since then, including IT, and in this study a team of researchers, led by Hatice Ceylan, from Burdur Mehmet Akif Ersoy University in Turkey, studied the effectiveness of WhatsApp-based training on nurses’ genetic knowledge levels and awareness. 121 nurses took part in the study which found that “WhatsApp-based educational programmes have the potential to improve nurses’ genetic knowledge and awareness.”

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2024.106442>

## When teaching is learning

**Source:** Nurse Education Today

**In a nutshell:** You can learn a lot from primary-school children: the plot lines of Scooby Doo; the ins and outs of Pokemon; building castles in Minecraft, and so forth. Pharmacy isn’t necessarily the first thing that springs to mind, but in this study Manuel Jesús Pérez-Baena, from the University of Salamanca, led a team of researchers studying the effectiveness of a service-learning project in which nursing students went into primary schools to teach children about pharmacology. 76 nursing students took part in the project, teaching 69 primary-school children. The nursing students scored “significantly higher,” after the project. 98.7% of them found the experience beneficial for learning, and 94.7% of them reported increased social awareness.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2024.106449>

## E-learning and catheter confidence

**Source:** Nurse Education Today

**In a nutshell:** Imagine a cross between a [fairground grabber](https://en.wikipedia.org/wiki/Claw_machine), threading a needle, and the wilder excesses of the [Marquis de Sade](https://en.wikipedia.org/wiki/Marquis_de_Sade) and you’re halfway there when it comes to urinary catheterization. In this study a team of researchers, led by Joby Alex from the University of Wollongong, studied the effectiveness of a co-designed e-learning module called Qstream. The researchers found that the “eLearning module was effective in transforming participants' clinical practice, towards improving patient outcomes.” The researchers concluded that the “co-designed eLearning module effectively addressed the learning needs of nurses, enhancing their knowledge and skills in urinary catheter management.”

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2024.106448>

## Simulation and triage

**Source:** Nurse Education in Practice

**In a nutshell:** In this study Li-Hsiang Wang, from China Medical University in Taiwan, led a team of researchers studying the effectiveness of virtual-reality simulation triage in a study of 164 nursing students. Compared to a control group the nursing students who took part in the virtual-reality programme showed significant improvement in motivational learning with increases in satisfaction, confidence, and attention. Interviews with 30 of the students yielded four main themes: *Reflecting a real-world clinical environment; Enabling the internalization of knowledge; Enhancing clinical skills proficiency* and *Cultivating a positive attitude toward patient care*.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.104161>

## Nursing students and digital literacy

**Source:** BMC Medical Education

**In a nutshell:** In this study Linfeng Liu, from Sichuan Nursing Vocational College, led a team of researchers investigating digital literacy in a sample of 407 nursing students. They found that there were significant and positive correlations between healthy lifestyles, digital health literacy, and psychological resilience. Volunteering, academic performance, and physical fitness were all found to predict digital health literacy with excellent academic performance and good physical fitness being the strongest predictors.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06075-w>

## Teaching nurses transfusion

**Source:** Nurse Education in Practice

**In a nutshell:** Transfusion is the transfer of blood products from one person to another and in this study Atefeh Falakdami, from Guilan University of Medical Sciences in Iran, led a team of researchers comparing two different ways of teaching nursing students about it. 82 students took part in the study and were randomly assigned to three groups. One group were taught using a mobile app; one group were taught using task-based learning; and the third formed a control group. Both the task-based learning and the app group showed a significant improvement in clinical decision-making compared to the control group. The taught groups showed an improvement in knowledge, but this was not significant and there was no difference between the mobile app group and the task-based learning group in either knowledge or clinical decision-making.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.104154>

## The ABC of BCG

**Source:** Nurse Education Today

**In a nutshell:** The arrival of the BCG nurse was one of those surprising stones thrown into the tranquil pool of schoolboy existence; disturbing the hitherto placid currents of lost PE kits, playground football, *Top of the Pops*,and low-level insubordination. In this study Eda Unal, from Bursa Uludag University in Turkey, led a team of researchers investigated the effectiveness of simulation training using a standardized patient at teaching nursing students about BCG jabs. The researchers found that the standardized patients significantly increased the students’ knowledge, skills, confidence, and satisfaction, compared to a control group.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.104159>

## What do sessional teaching staff make of it all?

**Source:** Nurse Education Today

**In a nutshell:** Sessional teachers are people not on the permanent teaching staff who are brought in to teach students; either to pass on particular expertise on a certain subject area, or when Professor Baker is stuck in traffic/detained by customs/recovering from a hen-night in Leamington Spa. But what do they make of it all? In this study a team of researchers, led by Thomas Aaron Ricks, from the Australian Catholic University, reviewed the evidence on this subject. They found five studies which met their quality criteria from which three themes emerged:

* Lack of a sense of belonging
* Working experience and support
* Clinical recency

The researchers concluded that “sessional teaching staff enjoy teaching nursing students as they feel a sense of responsibility to pass on their knowledge to future generations of nurses. They appreciate a supportive working environment and culture including professional development, feedback, mentorship and growth opportunities to increase job satisfaction.”

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2024.106457>

## Teaching nurses to battle the resistance

**Source:** Nurse Education Today

**In a nutshell:** If we could see bacteria many people would spend their whole lives curled up in the foetal position, or donning a hazmat suit and wielding a Dettol spray. Most of them coexist with us harmlessly – well that’s what I tell myself when I pick up a tea-towel from the kitchen floor for the 18th time – but a few can develop resistance to antibiotics and become a serious problem for healthcare workers. In this study Michiko Saito from Dokkyo Medical University, and Kumi Mikuni from the Health Science University of Hokkaido, investigated the effectiveness of a new programme designed to teach nurses about the psychological care of people infected with multi-drug-resistant organisms (MDROs). The researchers used the five steps of the ADDIE instructional model – analysis, design, development, implementation, and evaluation – to design the programme. The researchers found that the education programme “increased the understanding of the psychological state of patients with MDROs and the observation of physiological and psychological reactions.”

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2024.106461>

## Individuals, innovation, and interest

**Source:** Nurse Education Today

**In a nutshell:** Whilst many of us would have regarded the arrival of the steam engine as a step too far – “what’s the rush? The canal’s a much more relaxing way to get around” – others are more enamoured of “progress.” In this study Asli Akdeniz Kudubes and Hülya Saray Kiliç, from Bilecik Şeyh Edebali University in Turkey, studied the links between nursing students’ attitudes to scientific research and their innovativeness in a sample of 375 nursing students. They found that the students’ attitudes to scientific research were responsible for 22.9% of the variation in their innovativeness. Nurses with better computer skills, “a sense of competence in research conduct,” a proclivity for engaging in research, and a penchant for “monitoring Turkish publications,” had higher average scores for innovation.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2024.106462>

## Cooperation and simulation

**Source:** Nurse Education Today

**In a nutshell:** When I’m called upon to work in a group, I find myself veering erratically between being frustrated by everyone else’s obtuseness and being painfully aware that I’m the least competent, and most inadequate to the task in hand, person in the room. More well-balanced people than I am thrive on cooperation – so I’m told – and in this study Pei-Ling Wu, from Chung Shan Medical University in Taiwan, studied the effect of cooperative learning and “situational simulation,” on “nursing competence in clinical practice among nursing students.” 142 second-year nursing students took part in the study. They were divided into two groups. One group took part in cooperative learning and situational simulation, whereas the other group had cooperative learning without situational simulation. The group who had situational simulation scored more highly for technical performance and fundamental nursing competence but there was no difference in stress levels or knowledge scores between the two groups.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2024.106464>

## What makes a successful nursing student?

**Source:** Nurse Education Today

**In a nutshell:** One of the many joys of having young children is that you’re never short of a Christmas-cracker joke. “I only know 25 letters of the alphabet,” goes one “I don’t know why.” In much the same vein only a few letters separate “success,” from “sucks why?” a divide explored by a team of researchers, led by Valeria Caponnetto from the University of L’Aquila in this study. They interviewed 22 successful nursing graduates about their experience as students and found five themes were key to success:

* Single-minded determination
* Versatile and evolutionary learning strategies
* Strong supportive relationships
* Strategies for emotional regulation
* Seeing oneself as the heartbeat of education

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2024.106465>

## I’ll have seven Es please Bob

**Source:** BMC Medical Education

**In a nutshell:** Those of us of a certain age can remember the TV game show [*Blockbusters*](https://en.wikipedia.org/wiki/Blockbusters_(British_game_show))in which contestants answered general-knowledge questions based on letters on a grid. Much hilarity ensued when contestants said “I’ll have an E please Bob,” whereupon Mr Holness, ever the pro, nobly resisted the urge to batter them. Not content with one E, in this study Liping Cui, from the Shanxi Academy of Medical Sciences in China, led a team of researchers who asked for seven of them – studying the seven Es instructional model in “the teaching of nursing students.” 330 nursing students took part in the study. 151 studied using a traditional teaching model with the rest being taught via the seven Es – elicit, engagement, exploration, explain, elaborate, evaluate, and extend. They found that the students taught using the seven Es approach had better scores for:

* Theoretical knowledge
* Practical skills
* Total course scores
* Total scores for learning motivation
* Learning cooperation ability
* Information literacy
* Self-regulated learning

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06157-9>

## What should new nurses be able to do?

**Source:** Nurse Education in Practice

**In a nutshell:** In this study Zhang Meng, from Peking University First Hospital, led a team of researchers attempting to draw up a list of entrustable professional activities for newly-qualified nurses. After literature reviews and consultations with experts the researchers came up with a dozen entrustable professional activities which were:

* Manage admission and discharge
* Provide basic care
* Collect specimens
* Administer medications
* Perform non-medication therapies
* Monitor conditions
* Respond to emergencies
* Educate patients
* Prevent adverse events
* Conduct handovers
* Document care
* Operate equipment

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.104181>

## Can virtual reality make you a better nurse?

**Source:** Nurse Education in Practice

**In a nutshell:** I have vertigo which gets triggered when I put my head in certain positions; something that makes appreciating fan-vaulting in cathedrals quite difficult, but does get me out of painting ceilings when we decorate. You win some, you lose some, I suppose. Between that and Mr Magoo eyesight I’m not a natural fan of virtual reality. Others are keener though and in this article Mei-Yu Lin, from Tzu Chi University in Taiwan, led a team of researchers reviewing the evidence on virtual reality in nurse education. They found that virtual reality nursing training “enriches students’ cognitive, emotional, and psychomotor skills; provides a secure setting for honing critical skills, thus boosting student confidence; and increases students' overall learning satisfaction, but shows limited impact on improving self-efficacy.” They concluded “integrating virtual reality into pre-departure nursing technology education and training can enhance students' understanding of the nursing process, improve the accuracy of technical operations and promote overall learning effectiveness.”

You can read the abstract of this article at

<https://doi.org/10.1016/j.nepr.2024.104182>

# Occupational Therapy Education

## A+ for PEO?

**Source:** BMC Medical Education

**In a nutshell:** Academics love a good model; certainly a paper one might be deemed preferable to the instructions on the flat-pack variety, mystifying to all but potential Nobel-prize laureates. PEO is near the top of the catwalk when it comes to occupational-therapy models and stands for Person Environment Occupation. In this study a team of researchers, led by Zhizhuo Wang, from Fujian Medical University in China, studied the effectiveness of the PEO model “applied to rehabilitation therapy students.” 101 students took part in the study. They said that the teaching content was highly professional and valuable; that the course was “extensively expounded,” that it had strengthened their clinical reasoning, that it had developed their problem-solving ability and that it had improved their communication and teamworking skills.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-06196-2>