



Joint Education and Training Library



# Education Bulletin – June 2024

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## Contents

General Healthcare Education .....	4
Cognitive flexibility and academic achievement .....	4
If I see your abs, you'll like the app .....	4
Interprofessional Education .....	4
Upping the game in primary care .....	4
Medical Education.....	5
Reviewing the evidence on empathy .....	5
Can alphabet spaghetti cure leaking bodies? .....	5
Career choices in Pakistan – it's not exactly brain surgery.....	6
HoloLens. Holo crown or hatful of hollow? .....	6
Three cheers for 3D?.....	7
When the G in GP stands for green .....	7
Problem-based learning. What's your problem?.....	8
Lumbar punctures – does the needle make a difference? .....	8
Are hot cases hot stuff? .....	9
Could ChatGPT make you a better doctor? .....	9
When the auscultation game goes digital.....	10
When the 3D of hearts is a winning hand .....	10
Can on-your-own and online come up with the goods?.....	11
Going operating? Bring a sandwich (feedback) .....	11
Nurse Education.....	12
Learning styles and nursing success.....	12
Does peer mentoring make a difference? .....	12
Broke my spleen and broke my knee, and then he really laid into me. Friday night in outpatients. ....	12
Transition mettle in China.....	13
Taking action on CPD .....	13
Nurses and spiritual care. Blithe or sinking spirits? .....	14
Stress and the nursing student .....	14
Can action research make nurses better researchers? .....	15
Artificial intelligence. Are nurses worried, ready, or both? .....	15
Nurturing male nurses.....	16
Digital storytelling in midwifery education.....	16
Embedding (simulated) patients in lectures .....	16

Physiotherapy Education ..... 17  
Can thinking aloud stop you being a pain in the neck? ..... 17  
Print 1, Digital 0: has the comeback started? ..... 17

## General Healthcare Education

### Cognitive flexibility and academic achievement

**Source:** Current Psychology

**In a nutshell:** Cognitive flexibility refers to the ability to switch between thinking about two different concepts, or to think about multiple concepts simultaneously; for instance by making an important political speech while remembering it's hosing down outside, or by not trusting 16-year-olds to drink alcohol while extending the franchise to them. In this study Semirhan Gökce, from Niğde Ömer Halisdemir University and Pinar Güner, from Istanbul University-Cerrahpaşa (both in Turkey) studied the effect of cognitive flexibility on academic achievement in a sample of 662 university students. They found that first-year students reaped the greatest benefit from cognitive flexibility, with second years experiencing the least benefit. Cognitive flexibility was found to lead to more critical thinking, which, in turn, led to higher academic achievement.

You can read the abstract of this article at

<https://doi.org/10.1007/s12144-024-05642-0>

### If I see your abs, you'll like the app

**Source:** Nurse Education Today

**In a nutshell:** I have two devices to keep me in trim. A car, which I hate driving and am constitutionally incapable of parking in a space smaller than Andorra, and a bicycle which I use to get me to work instead of the car. Some people use a phone instead, either to support them or nag them into physical movement. In this study a team of researchers, led by Meggy Hayotte, from the University of the Côte d'Azur in France studied 502 healthcare students' attitudes to recommending apps, and how this was influenced by the weight of the people they were recommending them to. The students were given hypothetical scenarios, featuring both a person of normal weight, and a person who was obese. Those students who were given the scenario featuring the obese person thought that they would find the app less acceptable and were more inclined to recommend a "naggy," app than an encouraging one.

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2024.106236>

## Interprofessional Education

### Upping the game in primary care

**Source:** BMC Medical Education

**In a nutshell:** A combination of luck, stoicism, and apathy mean I rarely darken the doors of our local GP's practice. On the few occasions I nip in to pick up a prescription the scene is rather more reminiscent of *Waiting for Godot* than *Doctor Finlay's Casebook*. In this study William G. Weppner, from the University of

Washington School of Medicine, in Seattle, led a team of researchers reviewing the effectiveness of a “multi-site demonstration project transforming traditional silo-model training to interprofessional team-based primary care.” The researchers used an iterative (tune it up as you go along) QI-project approach with sites evaluating and adjusting curricula based on learner, teacher, and staff feedback. More than 1,600 people took part in the project including trainees in medicine, nursing, pharmacy, psychology, social work, and physiotherapy and the initiative took place in seven “academic university-affiliated Veterans Affairs primary-care clinics.” The researchers found that “each site developed innovative design and curricula using common competencies of shared decision-making, sustained relationships, performance improvement, and interprofessional collaboration.” Evaluation of the training programme showed that there were improvements in the trainees’ clinical knowledge, team-based approaches to care, and interest in primary-care careers. “Improved patient outcomes were seen in the quality of chronic-disease management, reduction in polypharmacy, and reduced emergency-department [use] and hospitalizations.”

You can read the whole of this article at

<https://bmcomeduc.biomedcentral.com/articles/10.1186/s12909-024-05390-6>

## Medical Education

### Reviewing the evidence on empathy

**Source:** BMC Medical Education

**In a nutshell:** As a firm believer in the virtues of [negative politeness](#) I loathe interrupting people in supermarkets, busy stacking the shelves, with my footling inquiries about tinned fish or Heinz Sandwich Spread. It’s my attempt at manifesting empathy, slightly marred, you could say, by my inability to envisage the thought that others might actually enjoy helping people. In this study Hao Chen, from Harbin Medical University in China, led a team of researchers reviewing the evidence on empathy and medical students. They found that high empathy was a positive factor for mental health but that students with “high affective empathy,” were more likely to suffer from depression, anxiety, and burnout. Empathy was unrelated to academic performance but positively correlated with clinical competence, particularly in terms of communication skills and medical students with higher levels of empathy tended to prefer “people-oriented,” specialties.

You can read the whole of this article at

<https://bmcomeduc.biomedcentral.com/articles/10.1186/s12909-024-05448-5>

### Can alphabet spaghetti cure leaking bodies?

**Source:** BMC Medical Education

**In a nutshell:** Given the amount of fluid sloshing around the human body and the complexity of the piping carrying it all round it's a wonder more of us don't spring a leak from time to time. When we do doctors are called upon to play the part of 24-hour plumbers, with the added bonus of no teeth-sucking or awkward small talk. In the US a campaign called Stop the Bleed was launched by the White House to minimize haemorrhagic deaths and in this study Wanchen Zhao, from Central South University in China, led a team of researchers investigating techniques for teaching it in China. 153 medical students took part in the study. Half of them were taught traditionally and the other half were taught using problem-, team- and evidence-based learning (PTEBL); a pedagogical version of alphabet spaghetti, but with blood instead of tomato sauce. The researchers found that the students taught with PTEBL were more adept at direct finger compression, packing, and tourniquet placement. They felt better-equipped to help out in an emergency and reported improved teamwork skills compared to the traditionally-taught group. The researchers also found a positive correlation between improved clinical-thinking skills and improved teamwork skills.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05457-4>

### Career choices in Pakistan – it's not exactly brain surgery

**Source:** BMC Medical Education

**In a nutshell:** Given the fact that a misplaced cough or sneeze, or a momentary confusion of left and right can leave somebody eating their meals through a straw for the rest of their life it's perhaps not surprising that not everyone jumps at the chance to become a brain surgeon. Pakistan "grapples with the issue of an inadequate neurosurgery workforce," and in this study Muhammad Shakir, from Aga Khan University Hospital in Karachi, led a team of researchers attempting to get to the bottom of this issue. They surveyed 2,618 medical students and junior doctors. Only 13.6% were interested in pursuing neurosurgery as a career, with more women than men being interested. Most of those interested in becoming brain surgeons were in the early years of medical school, and those from public-sector institutions were more interested than those from private-sector ones. The main deterrents for choosing neurosurgery were: the intense training (42.2%); work-life balance (39.9%); limited training posts (56.7%); medical knowledge (34.1%); and surgical skills (36.6%).

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05452-9>

### HoloLens. Holo crown or hatful of hollow?

**Source:** BMC Medical Education

**In a nutshell:** Those people wishing to combine the experiences of wearing a Second World War gas mask, feeling travel sick, and a sensation of the sands of time

slipping pointlessly through their fingers could do worse than use a Microsoft HoloLens to engage with virtual reality. In this study a team of researchers, led by Murray Connolly, from University College Cork, studied the use of Microsoft HoloLenses to deliver clinical tutorials to medical students. The students' tutor interacted face-to-face with a patient and "two-way audio-visual interaction was facilitated using the HoloLens2 and Microsoft Teams with groups of students who were located in a separate tutorial room." 12 patients and 78 students participated across 12 separate tutorials. The students' feedback contained 90 positive comments, including the technology's ability to broadcast the tutor's point-of-vision, and 62 negative comments, where students noted issues with the audio-visual quality, and concerns that the tutorial was not as beneficial as traditional in-person clinical tutorials. "The technology and tutorial structure were viewed favourably by the tutor, facilitator and patients," and the students showed significant improvements in their scores on a multiple-choice test.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05475-2>

### Three cheers for 3D?

**Source:** BMC Medical Education

**In a nutshell:** Given the unsatisfactory nature of the existing candidates it's surely only a matter of time before somebody combines AI and 3D printing to produce a Prime Ministerial candidate. At least there might be a little entertainment on offer as it malfunctioned and threw yogurt over D-day veterans, repatriated nurses to Rwanda, and promised a small modular reactor for every primary school in the country operated by 18-year-olds on national service. 3D printing has some good uses though, and in this study Qi Gao, from Xi'an Children's Hospital in China, led a team of researchers studying the use of 3D printed models to teach medical students about congenital malformations. The students were divided into two groups. One group were taught using traditional methods, while the other group received the traditional teaching, supplemented by demonstrations involving the 3D models and "hands-on model operation." The researchers found no difference between the two groups on a theory test but that the 3D group did significantly better on a practical test. Both groups showed similar levels of interest, classroom interaction, learning enthusiasm, and disease awareness but the 3D group were more satisfied with their teaching and had greater confidence about performing an operation.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05506-y>

### When the G in GP stands for green

**Source:** The Clinical Teacher

**In a nutshell:** Given the parlous state of the service as a whole sustainability in GP's surgeries can – to the cynic at least – seem a little akin to not just rearranging the deck chairs on RMS Titanic, but checking to see whether they are made of

responsibly-sourced timber at the same time. Still, people have a touching faith in the power of turning their PC monitor off before they drive home for a night in their hot tub and in this study a team of researchers – led by Jenna Chambers from Newcastle University – established a new sustainable healthcare curriculum, spiralling through the overall medical curriculum. As part of this final-year students took part in a sustainable quality-improvement project in their final-year GP assistantships. Four themes emerged from subsequent interviews with the students:

1. Sustainable quality improvement was enjoyed and valuable
2. Sustainable QI allowed meaningful participation
3. Sustainable QI created a co-learning environment
4. Timing and curriculum placement are important when integrating sustainable QI

You can read the abstract of this article at  
<https://doi.org/10.1111/tct.13776>

### Problem-based learning. What's your problem?

**Source:** BMC Medical Education

**In a nutshell:** Problem-based learning generally gets a good press although some might argue that the biggest problem students might raise is “why am I doing all this work, while you're sat behind your desk with a Danielle Steel/Frederick Forsyth when I'm paying £9K a year?” In this study Aklile Semu Tefera, from Debre Berhan University in Ethiopia, led a team of researchers investigating the barriers to problem-based learning among a sample of lecturers and medical students. Barriers included:

- Work overload for both students and tutors
- Lack of training and experience among tutors
- Student reluctance
- Absence of standardized case scenarios
- Subjectivity of assessment methods
- On-the-spot assessment of students

You can read the whole of this article at  
<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05252-1>

### Lumbar punctures – does the needle make a difference?

**Source:** BMC Medical Education

**In a nutshell:** Whilst it might still be preferable to *Call the Midwife* or *Question Time* having a lumbar puncture is – other than for masochists – not likely to appear on anybody's bucket list. It can't be much fun – other than for sadists – being the one carrying it out, either, and in this study Helmiine Lilja, from Tampere University in



Finland, led a team of researchers who looked at whether using a different type of needle could help medical students get to grips with this tricky medical procedure. The 60 second- and third-year medical students were divided into two groups. One group practised lumbar puncture on an anatomical model with a conventional needle, while the other group practised with a bioimpedance needle. With a conventional needle the students had a 40% success rate, whereas with the bioimpedance needle they had a 90% success rate. Only five out of 30 students were successful first time with the conventional needle, compared to half of the students with the bioimpedance needle. The students found the bioimpedance needle “more useful and felt more confident using it.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-05505-z>

### Are hot cases hot stuff?

**Source:** BMC Medical Education

**In a nutshell:** Those aiming to become members of the College of Intensive Care Medicine of Australia and New Zealand are required to take an exam featuring a couple of “hot cases.” Sadly this does not consist of applying sun cream to “hard to reach” areas of 20-something surfers (or giving them hot chocolate and a blanket in New Zealand) but a couple of realistic patient-care scenarios where candidates are expected to make diagnoses and come up with recommendations for treatment. In this study a team of researchers, led by Kenneth R. Hoffman, from The Alfred Hospital in Melbourne, led a team of researchers assessing the accuracy of assessments of hot cases. The researchers found that the reliability of the hot cases was “below the generally-accepted value for a high-stakes exam.” Sources of inaccuracy included: candidate’s proficiency; case difficulty and case specificity; examiner stringency; and “other error.” To come up with an accurate assessment the researchers found that each candidate would have had to do 11 hot cases.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-05516-w>

### Could ChatGPT make you a better doctor?

**Source:** BMC Medical Education

**In a nutshell:** Stories of the reintroduction of National Service and a shortage of GPs could lead one to the conclusion that armies of eighteen-year-olds will soon be marching (not necessarily in step) into surgeries armed with the all-purpose phrase “take some Ibuprofen and come back in two weeks if it hasn’t cleared up.” Where teenagers go, chatbots are sure to follow – being cheaper, less temperamental, and better conversationalists – and in this study Hongjun Ba, from the First Affiliated Hospital of Sun Yat-sen University in China, led a team of researchers assessing their use in training 77 paediatric trainees. The trainees were divided into two groups. One group received ChatGPT-assisted training, whereas the other received more conventional instruction, both over two weeks. The researchers found that both

groups performed similarly in theoretical exams but that the ChatGPT group showed a statistically-significant improvement in a mini-clinical evaluation exercise, particularly when it came to patient communication and clinical judgement. “The AI-teaching approach received positive feedback from the majority of trainees, highlighting the perceived benefits in interactive learning and skill acquisition.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05565-1>

### When the auscultation game goes digital

**Source:** BMC Medical Education

**In a nutshell:** Auscultation can sound something of an alarming prospect, particularly when sprung suddenly on the uninitiated; guaranteed to get anyone’s heart racing one might say. In this study Georges Bediang, from the University of Yaoundé in Cameroon, led a team of researchers studying the effect of digital audio-recordings in teaching 27 medical students the ins and outs of auscultation. 27 students had their classes and clinical internships topped up with digital recordings of heart sounds, whilst 22 students simply had their classes and internships. The researchers found that the group which listened to the digital heart sounds showed a statistically-significant difference in “knowledge progression,” compared to the other group, although there was no difference in “skills progression.” Satisfaction was also higher in the group given the chance to listen to the digital recordings.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05501-3>

### When the 3D of hearts is a winning hand

**Source:** BMC Medical Education

**In a nutshell:** It’s surely only a matter of time before Madonna and Cher – long may they live and prosper – are reclassified as plastic waste and have to be disposed of in a recycling facility instead of being given the customary funeral rites. The trouble with real organs, as far as medical students are concerned, is that they often come with a side order of alcohol (if pickled) or blood (if fresh) which can make it hard to discern the underlying structures. Luckily 3D printers are now able to produce plastic versions of almost anything and in this study a team of researchers, led by Jian Zhao, from Wannan Medical College in China, researched the use of 3D print outs and case-based learning in a study of 60 “senior clinical medical undergraduates.” The students were learning about the [tetralogy of Fallot](#) and were divided into two groups. One group were taught using case-based learning, and the other group was taught using a 3D print out of a heart affected by the condition. The group which used the 3D print out showed improved performance in “post-class examinations, particularly in pathological anatomy and ... imaging data analysis.” They were happier with the method of teaching, promotion of diagnostic skills, “bolstering of self-assurance in managing ... cases, and cultivation of clinical reasoning abilities.”

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05583-z>

### Can on-your-own and online come up with the goods?

**Source:** BMC Medical Education

**In a nutshell:** Like using a telephone box, or sorting out a stool sample, studying is usually best done on one's own. People like the sound of their own voices though, and in this study a team of researchers, led by Maliwan Oofuvong from Prince of Songkla University in Thailand, attempted to combine self-study using video lectures and case-based discussion with an "online interactive case-based discussion class," facilitated by experienced anaesthetists. The new interactive learning method improved the knowledge of the students who "were satisfied with the new learning method and gave insightful comments, which were subsequently implemented," the year after.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05578-w>

### Going operating? Bring a sandwich (feedback)

**Source:** BMC Medical Education

**In a nutshell:** People often talk – somewhat pretentiously perhaps – about gastronomic epiphanies: salmon fresh from the Tay; caviar on toast; unpasteurised milk from a Swiss smallholding etc. Growing up in Hereford in the mid 70s – a gastronomic hotspot only a few degrees above absolute zero – mine came as a small child when I experienced the thrill of a cheese sandwich *with Branston Pickle* for the first time, a choice which, with only a few upgrades in quality, I still cleave to today. HR professionals talk about a sh-t sandwich when it comes to appraisals, interspersing an element of criticism between two slices of praise. In this study Azam Hosseinpour, from Qom University of Medical Sciences in Iran, led a team of researchers investigating the effectiveness of sandwich feedback on "the perioperative competence and performance of operating-room technology students." 30 students took part in the study. One group "experienced feedback-based learning using a sandwich model," whilst the other group took part in "traditional-based training," in six five-hour sessions, weekly for three weeks in a row. The researchers found that the students who had received the sandwich feedback did better on a test of procedural skills, improved more, and did better under observation than the other group.

You can read the whole of this article at

<https://bmcmmededuc.biomedcentral.com/articles/10.1186/s12909-024-05598-6>

## Nurse Education

### Learning styles and nursing success

**Source:** BMC Medical Education

**In a nutshell:** According to David Kolb people have four learning styles: Diverging (feeling and watching); Assimilating (watching and thinking); Converging (doing and thinking) and Accommodating (doing and feeling). In this study a team of researchers, led by Seyed Kazem Mousavi, from Zanjan University in Iran, studied the links between learning styles and nursing competencies. 276 nursing students took part in the study which found that the most-common learning style was divergent (31.2%), and the least-common was convergent (18.4%). The researchers also found that “the clinical competency of students with accommodative and converging learning styles was higher.”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-05432-z>

### Does peer mentoring make a difference?

**Source:** Nurse Education Today

**In a nutshell:** As we travel down the path of life, those we look up to can be a little like obelisks on hillsides. Top-year juniors, secondary-school fifth formers, and third-year students can all loom large and impressive for a while before disappearing into risible insignificance as time passes by. They can still be useful though, even if only making sure the infants run in the right direction at sports day. In this study a team of researchers, led by Rose Cuesto-Martínez from Virgili University in Spain, interviewed first- and third-year nursing students about their experiences of a peer-mentoring programme. The first years said that the support received from their mentors had been “very important both academically and personally,” whilst the mentors “also acknowledged having improved their teaching and leadership skills.”

You can read the abstract of this article at

<https://doi.org/10.1016/j.nedt.2024.106234>

### Broke my spleen and broke my knee, and then he really laid into me. Friday night in outpatients.

**Source:** Nurse Education Today

**In a nutshell:** Human virtue is like a Ming vase; lovely to think about, it often crumbles at the first sign of pressure. Nowhere is this more the case than in hospitals where stress, low-blood sugar, illness, frustration, alcohol, and mental illness can all form a toxic cocktail for doctors and nurses. In this study Fatma Aksoy, from Karadeniz Technical University Institute of Health Sciences, led a team of researchers studying 512 nursing students from two universities in Turkey. Only 17.4% of them felt competent in managing violence and 94.3% were concerned about being exposed to violence at various levels. 20.5% had been exposed to violence during their clinical placement, 60.9% of whom had experienced verbal violence and

52.3% psychological violence. Fourth-year students with a good track record of academic success, and those who had received training on coping with violence were statistically-significantly more competent at coping with violence. Receiving training in how to operate the hospital's alarm system was also associated with a higher score for competence in dealing with violence.

You can read the abstract of this article at  
<https://doi.org/10.1016/j.nedt.2024.106237>

### Transition mettle in China

**Source:** Nurse Education in Practice

**In a nutshell:** Whether it's Kafka's *Metamorphosis*, *Dr Jekyll and Mr Hyde*, or princesses kissing frogs, literary transformations tend to be more or less instantaneous. Changing from a nursing student to a full-blown nurse is a rather more gradual process, more akin to *The Very Hungry Caterpillar* perhaps. In this study Jia Wang, from the Chinese Academy of Medical Sciences, assessed the "transition status," of 1,261 newly-graduated nurses. "Competence for nursing work," was rated the highest among the items measured, with work-life balance being the lowest. Mentorship by senior nurses; being on the night shift; the attributes of the hospital they worked at; educational background; having done a placement in the same department; and working in a tertiary general hospital all affected the transition status of the new nurses.

You can read the abstract of this article at  
<https://doi.org/10.1016/j.nepr.2024.103992>

### Taking action on CPD

**Source:** Nurse Education Today

**In a nutshell:** If, as Shakespeare asserted, "all the world's a stage," I can't help feeling I'd be one of the members of *Van Halen* rather keener on M&Ms than actually playing a concert. In much the same way continuing professional development is all well and good if you get coffee, biscuits, and a chat with your mates; not so much if you have to sit in front of a screen and learn about your job. In this study Mary Ryder and Freda Browne, from University College Dublin, carried out an "action research project... to change the design and delivery of continuing professional education in a large Irish academic teaching hospital." Focus groups with the nurses taking part in the study revealed four themes:

- Underestimated time
- The process of change
- Teaching and learning styles
- Acceptance and integration

20 of the nurses completed the evaluation and they “reported a positive synergy between e-learning and clinical workshops.” The nurses saw e-learning as time-consuming. 75% said they were motivated to learn; 90% said they had gained new knowledge and skills; 84% reported the clinical area benefited from the education; and 80% identified a direct improvement in the clinical skills in the specialist area.

You can read the abstract of this article at <https://doi.org/10.1016/j.nedt.2024.106248>

### Nurses and spiritual care. Blithe or sinking spirits?

**Source:** Nurse Education Today

**In a nutshell:** Spirituality bears much the same relation to religion as [Top Deck Shandy](#) does to Harvey’s Best Bitter; still in these depressingly materialist times those of us drawn to the transcendent should be grateful for what we can get, I suppose. In this study a team of researchers, led by Mohammad Al Qadire, from Sultan Qaboos University in Oman, investigated spirituality and spiritual care in a sample of 785 nursing students from five universities. The researchers found that the students had positive attitudes towards spirituality, but that their competence in providing spiritual care to patients was “low to moderate.” There were significant relationships between the students’ spiritual-care competence and their sex, their previous exposure to spirituality education; their willingness to undergo spirituality training, and their “total spirituality score.” Significant predictors of higher spiritual competence included: prior spiritual education; willingness to undergo spiritual-care training; and higher personal spirituality scores.

You can read the abstract of this article at <https://doi.org/10.1016/j.nedt.2024.106249>

### Stress and the nursing student

**Source:** Nurse Education Today

**In a nutshell:** One of the many things one learns as a parent is that just because things aren’t serious it doesn’t mean that children aren’t suffering. A lost teddy-bear, quarrels over seating arrangements, or a stolen piece of birthday cake can be just as traumatic as a missed deadline, marital row, or forfeited no-claims bonus. In the same way student life – easily seen, in retrospect, as a blissful period of small responsibilities, like minds and plentiful time – can feel stressful at the time; even more so in the absence of grants, and the presence of tuition fees. In this study Ma Eugenia Visier-Alfonso, from the University of Castilla-La Mancha in Spain, led a team of researchers investigating stress among a sample of 370 first- and fourth-year nursing students. The researchers found that first-year students had higher levels of academic stress than those in their fourth year. Clinical stress, anxiety, depression, and emotional coping all predicted increased academic stress whereas academic stress, depression, and coping skills all predicted psychological wellbeing. The researchers concluded that “coping strategies and resilience may be protective

factors that should be encouraged in interventions designed to improve psychological wellbeing.”

You can read the abstract of this article at  
<https://doi.org/10.1016/j.nedt.2024.106258>

### Can action research make nurses better researchers?

**Source:** Nurse Education Today

**In a nutshell:** In 1747 James Lind discovered that citrus fruits could prevent sailors doing down with scurvy. Such was the leisurely pace of the C18th publishing industry that his blockbuster *Treatise of the Scurvy* didn't hit the shelves until 1753 and it took another 42 years for the Admiralty to issue an order that lemon juice should be distributed to sailors. Research moves into practice a little quicker in the C21st, but not much; not helped by the fact that most academics know as much about writing well as walrus know about ballroom dancing. Action research is an attempt to cut out the middleman, with research being used to modify practice during the course of the research itself, and in this study a team of researchers, led by Jinseon Yi, from Seoul National University, studied how it affected the “research competency,” of 19 fourth-year undergraduate nursing students. The students had 10 sessions of action learning-based nursing research classes which were a mixture of lectures and team activities. The students showed significant improvements in their communication skills, critical-thinking tendencies, and problem-solving abilities. The researchers analysed journals kept by the nursing students from which four main themes emerged: organized team projects; dynamics of learning goal achievement; extended application of learning outcomes; and recommendations for better action-learning-based classes.

### Artificial intelligence. Are nurses worried, ready, or both?

**Source:** Nurse Education in Practice

**In a nutshell:** If medicine used the same algorithms as YouTube or Amazon one kidney transplant would inevitably be followed by blandishments for another nephrectomy, and vasectomies would lead to patients being given the chance to become a latter-day [Farinelli](#). Like it or not artificial intelligence is here to stay though – as long as Ed Miliband can keep the National Grid running – and in this study a team of researchers, led by Zeliha Demir-Kaymak, from Sakarya University in Turkey, studied 480 nursing and midwifery students' attitudes towards it. The researchers found that the students' medical artificial intelligence readiness and their artificial-intelligence anxiety were both at a “moderate level.” Artificial-intelligence knowledge and using artificial intelligence in daily life were both predictors of medical artificial-intelligence readiness. Using artificial-intelligence in daily life, occupational threat, and artificial-intelligence trust were all predictors of artificial-intelligence anxiety.

You can read the abstract of this article at  
<https://doi.org/10.1016/j.nepr.2024.103994>

### Nurturing male nurses

**Source:** Nurse Education in Practice

**In a nutshell:** Despite Charlie Fairhead’s character in *Casualty* lasting longer than most marriages there is still something of a shortage of male nurses. In this study Maura Lindenfeld, from Texas Christian University, studied 252 male nursing students and found that their efficacy (their confidence in their ability to complete the tasks set before them) was correlated with their intent to complete their studies. Lindenfeld concluded that male nursing students “could demonstrate improved persistence in their nursing programmes if effective interventions targeting efficacy were undertaken.”

You can read the abstract of this article at  
<https://doi.org/10.1016/j.nepr.2024.103997>

### Digital storytelling in midwifery education

**Source:** Nurse Education Today

**In a nutshell:** The human race has come a long way from Juliet’s “What’s in a name? That which we call a rose by any other name would smell as sweet?” to 16-year-olds droning on about mascara on TikTok; not necessarily in the right direction, some might say. In this study Feyza Aktaş Reyhan, from Kütahya University of Health Sciences and Elif Dağlı, from Cukurova University (both in Turkey) investigated what midwifery students made of digital storytelling as a pedagogical technique. They found that the students’ opinions reflected three main themes:

- Benefits of the digital-storytelling method
- Difficulties in preparing digital stories
- The place of digital storytelling technique in midwifery education

When they started their courses the students did not think that digital storytelling would be effective, but they did change their minds. The researchers evaluated the students’ digital stories and “it was determined that the content ... was sufficient.”

You can read the abstract of this article at  
<https://doi.org/10.1016/j.nedt.2024.106262>

### Embedding (simulated) patients in lectures

**Source:** BMC Medical Education

**In a nutshell:** Embedding conjures up at best the kind of thing erstwhile celebrity librarian Casanova used to get up to, and at worst the incorporation of informants into motorway flyovers. It’s a word – along with framework – people with office jobs love to use; perhaps it takes away the sting of not having a proper job involving a hi-vis jacket. In this study Violeth [sic] E. Singano, from Dodoma University in



Tanzania, led a team of researchers investigating an intervention in which a simulated patient (for nursing students to perform a mental status examination on) was incorporated into a lecture. The researchers found that embedding a simulated patient into lectures led to significantly superior results, compared to lectures alone.

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-05562-4>

## Physiotherapy Education

### Can thinking aloud stop you being a pain in the neck?

**Source:** BMC Medical Education

**In a nutshell:** Thinking aloud is not always to be encouraged; certainly I suspect there is a limited market for my musings on the iniquities of the [1972 Local Government Act](#); the evils of sans-serif fonts; and the desirability of King Charles staging a military coup before July 4<sup>th</sup>. It can be useful when you want to find out how students are approaching a health problem though, and in this study Katie L. Kowalski, from Western University in Canada, led a team of researchers investigating the thought processes of eight postgraduate musculoskeletal physiotherapy students as they assessed two cases of neck pain. The researchers were particularly interested in how the students got to grips with not the neck, but the International Federation of Orthopaedic Manipulative Physical Therapists Cervical Framework; a framework which is particularly important as it is designed to help physiotherapists work out what is really a musculoskeletal problem and what might be a more serious case involving vascular pathology. As they looked at the two hypothetical cases the students were encouraged to talk aloud so the researchers could study their clinical reasoning. For all of the participants the framework “supported clinical reasoning using primarily hypothetico-deductive processes. It informed vascular hypothesis generation in the patient history and testing the vascular hypothesis through patient history questions and selection of physical examination tests, to inform clarity and support for diagnosis and management. Most participant’s clinical reasoning processes were characterized by high-level features (e.g., prioritization), however there was a continuum of proficiency. Clinical reasoning processes were informed by deep knowledge of the Framework integrated with a breadth of wider knowledge and supported by a range of personal characteristics (e.g., reflection).”

You can read the whole of this article at

<https://bmcmededuc.biomedcentral.com/articles/10.1186/s12909-024-05399-x>

### Print 1, Digital 0: has the comeback started?

**Source:** BMC Medical Education

**In a nutshell:** Two of the greatest comebacks in British footballing history were Manchester United’s 2-1 triumph over Bayern Munich in 1999 and Liverpool’s even-more amazing comeback against AC Milan in 2005. Both must have seen more than

a few fans switch off and/or leave the stadium only to find out the outcome the day after with a mixture of shame, regret, and incredulity. Print has staged something of a comeback against digital when it comes to leisure reading, but could it do the same in an academic context? For lovers of books this interesting study – from a team of researchers, led by Larissa Pagels, from the University of Lubeck – suggests that it might not be completely impossible. They studied the reactions of 30 students to an anatomy atlas and an anatomy app. They found that the group who prepared using an atlas showed a significantly better outcome on questions on the knee when tested than the group that used the anatomy app, although there was no difference in their scores on a test on the shoulder. The students who used the atlas were more satisfied than those who used the app with 93.34% of those who used the atlas rating their experiences as at least “somewhat satisfied,” compared to 72.67% of those saying the same about using the app.

You can read the abstract of this article at  
<https://doi.org/10.1016/j.nedt.2024.106260>