

Staff Library & Knowledge Service

Mid Yorkshire Medical Education Teaching, Training Update



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Trust

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A.I. focused articles

Virtual Reality focused articles

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1. Research on Medical Education Discussed by a Researcher at University of Warwick (Designing an Interdisciplinary Health Course: A Qualitative Study of Undergraduate Students' Experience of Interdisciplinary Curriculum Design and Learning ...)

Item Type: Generic

Research on Medical Education Discussed by a Researcher at University of Warwick (Designing an Interdisciplinary Health Course: A Qualitative Study of Undergraduate Students' Experience of Interdisciplinary Curriculum Design and Learning ...)

Publication Date: 2024

Publication Details: Education Letter, pp.407. NewsRX LLC.

Abstract: 2024 AUG 28 (VerticalNews) -- By a News Reporter-Staff News Editor at Education Letter -- Investigators discuss new findings in medical education. According to news reporting out of Coventry, United ...]

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2. Exploring the facilitators and barriers to addressing social media's impact on anxiety within primary care: a qualitative study

Item Type: Journal Article

Authors: Anto, Ailin;Asif, Rafey Omar;Basu, Arunima;Kanapathipillai, Dylan;Salam, Haadi;Selim, Rania;Zaman, Jahed and Eisingerich, Andreas Benedikt

Publication Date: 2024

Journal: BJGP Open 8(2), pp. 1–12

Abstract: Background: Several researchers and policymakers have acknowledged the alarming association between social media (SM) usage and anxiety symptoms in young adults. While primary care holds a crucial role in the improvement of health outcomes for those presenting with anxiety, there has been no research on GPs' perceptions of the impact of SM on anxiety. Furthermore, there has been little discussion of SM as a risk factor in anxiety-related consultations. This study is the first to use empirical research to inform how primary care can adapt to address SM's impact on anxiety within young adults. Aim: To identify the facilitators and barriers within primary care to addressing SM's impact on anxiety among young adults. Design & setting: A qualitative study of GPs in the UK. Method: Following an exploratory pilot interview, semi-structured interviews with GPs (n = 7) were transcribed and thematically analysed, following an inductive approach. Results: The following six facilitators were identified: a framework to facilitate discussion; open GP attitudes; GP training; referral pathways; larger stakeholder influence; and young adult education of social media's impact on anxiety. The following three barriers were identified: a lack of GP awareness of SM's impact on anxiety; cautious GP attitudes; and increased pressure on the health service. Conclusion: This qualitative study revealed a diversity of perceptions, and these novel findings are instructive in the adaptation of primary care services to meet the current mental health needs of young adults, as well as better assisting GPs in engaging in these conversations, especially within university practice. ABSTRACT FROM AUTHOR]; Copyright of BJGP Open is the property of Royal College of General Practitioners and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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3. Moving the Needle: Using Guidelines on Diversity, Equity, and Inclusion to Uplift a Stronger Medical Education Community

Item Type: Journal Article

Authors: Buery-Joyner, Samantha;Baecher-Lind, Laura and Katz, Nadine T.

Publication Date: 2024

Journal: Clinical Obstetrics and Gynecology 67(3), pp. 493–498

Abstract: The Association of Professors of Gynecology and Obstetrics created the Diversity, Equity, and Inclusion Guidelines Task Force to develop best practices to establish a diverse physician workforce and eliminate racism in medical education. Using the guidelines, educators are impacting their communities and, in some areas, leading their institutions toward greater diversity and inclusion. The guidelines are organized by 4 domains: learning environment, grading and assessment, pathway programs, and metrics. This manuscript uses that framework to highlight the work of individual educators who are moving the needle towards racism-free health care and aims to inspire others contemplating incorporation into their programs. (Copyright © 2024 Wolters Kluwer Health, Inc. All rights reserved.)

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4. Students' learning in theory-based simulation: A socio-material study

Item Type: Journal Article

Authors: Chan, Engle Angela;Chung, Betty;Chang, Katherine;Hui, Alison and Rafferty, Anne Marie

Publication Date: 2024

Journal: Medical Education 58(4), pp. 405–414

Abstract: Background: Simulation-based education (SBE) is crucial to prepare nursing students prior to their clinical learning experience. Theory-based simulation learning is increasingly important for analysing how students learn. This study describes and analyses how nursing students learn through simulation in the context of palliative care communication under a socio-material approach and explores the transfer of their knowledge and skills from simulation to clinical practice. Methods: Twenty-seven final-year nursing students in six groups participated in two simulated scenarios, followed by a debriefing and post-clinical focus groups to capture their reflections and learning. Fourteen of them joined the post-clinical focus groups after completing their clinical placements. Video recordings of the simulation, and the audio recordings from the debriefing, and post-clinical focus groups were transcribed and coded based on the human and non-human elements that were observed. These were triangulated with data collected through team participant observations, an analysis of the existing syllabi and curriculum, and a participant mapping exercise after the simulation. These various data sources illustrate how student learning and reflections took place. Results: The three themes of student learning derived from the results and analysis were (1) students' expanded learning of health care communication through a socio-material approach in the context of palliative care; 2) students' discovery of the diverse and complex relations and interactions between humans and materials and (3) students' new perspectives on health care communication and the

transfer of knowledge and skills through a socio-material approach in clinical practice. Conclusions: This study highlights how SBE can be further expanded using a socio-material approach to prepare students to learn beyond standardised and cognitively driven approaches and procedures. Student learning demonstrates that SBE may develop beyond high fidelity and standardisation to leave room for emergent learning and increased awareness in learning for students and teachers to optimise learning outcomes and competence. This study uses sociomateriality to advance understanding of complex human-material interactions and explain how simulation can evolve beyond standardization to yield better learning. ABSTRACT FROM AUTHOR]; Copyright of Medical Education is the property of Wiley-Blackwell and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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5. The impact of empathy on medical students: an integrative review

Item Type: Journal Article

Authors: Chen, Hao;Xuan, Hanwen;Cai, Jinquan;Liu, Meichen and Shi, Lei

Publication Date: 2024

Journal: BMC Medical Education 24(1), pp. 1–15

Abstract: Introduction: Empathy is considered the ability to understand or feel others emotions or experiences. As an important part of medical education, empathy can affect medical students in many ways. It is still lacking a comprehensive evaluation of the existing articles on empathy's impact on medical students, despite the existence of many articles on the topic. Objectives: To summarize the impact of empathy on medical students during medical education from four perspectives: mental health, academic performance, clinical competence, and specialty preference. Methods: The search terms used for retrieval were "empathy", "medical student", "mental health", "depression", "anxiety", "burnout", "examinations", "academic performance", "clinical competence", "specialty preference" on PubMed, EBSCO, and Web of Science before January 2024. The search was carried out by two reviewers. Titles and abstracts were screened independently and reviewed based on inclusion/exclusion criteria. A consensus was drawn on which articles were included. Results: Our results indicated that high empathy was a positive factor for mental health, However, students with high affective empathy were more likely to suffer from depression, anxiety, and burnout. Empathy was found to be unrelated to academic performance, but positively correlated with clinical competence, particularly in terms of communication skills. Medical students with high levels of empathy tended to prefer people-oriented majors. Conclusions: Medical students who score higher on the self-reported empathy scales often have better mental health, better communication skills, and tend to choose people-oriented specialties. But empathy is not related to academic performance. Additionally, the different dimensions of empathy have different impacts on medical students. It is necessary to design targeted courses and training for medical students to enhance their empathy. ABSTRACT FROM AUTHOR]; Copyright of BMC Medical Education is the property of BioMed Central and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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6. Novel training approach to improve a cohort of radiographers' image interpretation skills of trauma chest radiographs

Item Type: Journal Article

Authors: Chilambe, Ethel; Muller, Henra and du Plessis, Jeanette

Publication Date: 2024

Journal: Journal of Medical Imaging & Radiation Sciences 55(2), pp. 244–257

Abstract: Zambia is experiencing a critical shortage of radiologists responsible for interpreting X-ray images. Nine radiologists serve the entire population of over 18 million people. Consequently, referring physicians can receive reports late and often receive X-ray images without radiological reports attached, which may lead to delayed diagnoses and treatment of critically injured patients. This challenge could be alleviated if radiographers could assist with interpreting X-ray images. This study was undertaken to subject a cohort of Zambian radiographers to a training intervention, however, the COVID-19 pandemic necessitated using a novel approach to the intervention by delivering the training mainly through social media but also through face-to-face lectures. A cohort of 27 radiographers employed at eight public hospitals in the Copperbelt Province of Zambia undertook a training intervention using face-to-face training and image discussions on the social media WhatsApp® platform. The participants underwent a pre-and post-test in which they were asked to interpret 20 adult trauma CXR images. For the training intervention, the radiographers attended a face-to-face image interpretation lecture, after which they received training images with a radiologist report weekly for eight weeks via the WhatsApp® platform. Participants were encouraged to discuss and pose questions via the platform. The cohort of radiographers (n = 27) showed an improvement in their interpretation skills for trauma CXR images. The interpretation median scores ranged from approximately 82% to 93% in the pre-test and 85% to 97% in the post-test. The Wilcoxon signed-rank tests revealed significant differences in the interpretation ability skills for 12 of the 20 CXR images after the 8-week training, demonstrating the successful implementation of the program. When comparing three categories of radiographers' years of experience (1–5; >5–10; and >10 years), the Kruskal Wallis test could not identify significant differences in the CXR image interpretation skills among the different categories of experience (P = 0.1616). When comparing the interpretation skills of radiographers working at the three different hospital levels (Level 3 with a full-time radiologist and more than ten radiographers; Level 1 and 2 without a full-time radiologist; Level 2 with six to ten radiographers; and Level 1 with five or less radiographers), the Kruskal Wallis test revealed that the level of the hospital where the radiographers were employed significantly influenced their skills to interpret the CXR images (P = 0.0323). This type of novel training intervention is urgently required in the Copperbelt Province of Zambia. The results show that the training process was implemented successfully to improve radiographers' image interpretation skills of adult trauma CXR images. Promoting radiographers' involvement in image interpretation will likely improve imaging services in Zambia, considering the critical shortage of radiologists. (English) ABSTRACT FROM AUTHOR]; La Zambie connaît une grave pénurie de radiologues chargés d'interpréter les images radiographiques. Neuf radiologues desservent une population de plus de 18 millions d'habitants. Par conséquent, les médecins traitants peuvent recevoir les rapports en retard et reçoivent souvent des images radiologiques sans rapport radiologique joint, ce qui peut entraîner des retards dans le diagnostic et le traitement des patients gravement blessés. Ce problème pourrait être résolu si les radiographes pouvaient aider à interpréter les images radiologiques. Cette étude a été entreprise pour soumettre une cohorte de radiographes zambiens à une intervention de formation. Cependant, la pandémie de COVID-19 a nécessité l'utilisation d'une nouvelle approche de l'intervention en dispensant la formation principalement par le biais des médias sociaux, mais aussi par des conférences en face-à-face. Une cohorte de 27 radiographes employés dans huit hôpitaux publics de ceinture du cuivre en Zambie a suivi une formation en face-à-face et des discussions sur les images sur la plateforme de médias sociaux WhatsApp®. Les participants ont été soumis à un pré-test et à un post-test au cours desquels il leur a été demandé d'interpréter 20 images CXR de traumatismes chez l'adulte. Pour l'intervention de formation, les radiographes ont assisté à un cours d'interprétation d'images en face à face, après quoi ils ont reçu des images de formation avec un rapport de radiologue chaque semaine pendant huit semaines via la plateforme WhatsApp®. Les participants ont été encouragés à discuter et à poser des questions via la plateforme. La cohorte de radiographes (n = 27) a montré une amélioration de ses compétences en matière d'interprétation des images CXR de traumatismes. Les scores médians d'interprétation variaient d'environ 82% à 93% dans le pré-test et de 85% à 97% dans le post-test. Les tests de Wilcoxon ont révélé des

différences significatives dans les compétences d'interprétation pour 12 des 20 images CXR après la formation de 8 semaines, ce qui démontre la réussite de la mise en œuvre du programme. En comparant trois catégories d'années d'expérience des radiographes (1–5; >5–10; et >10 ans), le test de Kruskal Wallis n'a pas permis d'identifier de différences significatives dans les compétences d'interprétation des images CXR entre les différentes catégories d'expérience (P = 0,1616). En comparant les compétences d'interprétation des radiographes travaillant dans les trois différents niveaux d'hôpital (niveau 3 avec un radiologue à temps plein et plus de dix radiographes ; niveaux 1 et 2 sans radiologue à temps plein ; niveau 2 avec six à dix radiographes; et niveau 1 avec cinq radiographes ou moins), le test de Kruskal Wallis a révélé que le niveau de l'hôpital où les radiographes étaient employés influençait de manière significative leurs compétences d'interprétation des images CXR (P = 0,0323). Ce type d'intervention de formation novatrice est nécessaire de toute urgence dans le ceinture du cuivre de Zambie. Les résultats montrent que le processus de formation a été mis en œuvre avec succès pour améliorer les compétences des radiographes en matière d'interprétation des images CXR de traumatismes chez l'adulte. (French) ABSTRACT FROM AUTHOR]; Copyright of Journal of Medical Imaging & Radiation Sciences is the property of Elsevier B.V. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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7. Evaluating the perceived impact and legacy of master's degree level research in the allied health professions: a UK-wide cross-sectional survey

Item Type: Journal Article

Authors: Cordrey, Terry;Thomas, Amanda;King, Elizabeth and Gustafson, Owen

Publication Date: 2024

Journal: BMC Medical Education 24(1)

Abstract: Background Post graduate master's degree qualifications are increasingly required to advance allied health profession careers in education, clinical practice, leadership, and research. Successful awards are dependent on completion of a research dissertation project. Despite the high volume of experience gained and research undertaken at this level, the benefits and impact are not well understood. Our study aimed to evaluate the perceived impact and legacy of master's degree training and research on allied health profession practice and research activity. Methods A cross-sectional online survey design was used to collect data from allied health professionals working in the United Kingdom who had completed a postgraduate master's degree. Participants were recruited voluntarily using social media and clinical interest group advertisement. Data was collected between October and December 2022 and was analysed using descriptive statistics and narrative content analysis. Informed consent was gained, and the study was approved by the university research ethics committee. Results Eighty-four responses were received from nine allied health professions with paramedics and physiotherapists forming the majority (57%) of respondents. Primary motivation for completion of the master's degree was for clinical career progression (n = 44, 52.4%) and formation of the research dissertation question was predominantly sourced from individual ideas (n = 58, 69%). Formal research output was low with 27.4% (n = 23) of projects published in peer reviewed journal and a third of projects reporting no output or dissemination at all. Perceived impact was rated highest in individual learning outcomes, such as improving confidence and capability in clinical practice and research skills. Ongoing research engagement and activity was high with over two thirds (n = 57, 67.9%) involved in formal research projects. Conclusion The focus of master's degree level research was largely self-generated with the highest perceived impact on individual outcomes rather than broader clinical service and organisation influence. Formal output from master's research was low, but ongoing research engagement and activity was high suggesting master's degree training is an under-recognised source for AHP research capacity building. Future

research should investigate the potential benefits of better coordinated and prioritised research at master's degree level on professional and organisational impact. Keywords: Master's degree, Research training, Allied health professions, Survey, Research capacity, Research impact; Author(s): Terry Cordrey^{1,2]}, Amanda Thomass^{3]}, Elizabeth Kings^{1,2]} and Owen Gustafson^{1,2]} Background Higher levels of research engagement by healthcare organisations and clinicians are associated with improved organisational performance and ...]

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8. Recent Advances in Medical Image Classification

Item Type: Journal Article

Authors: Dao, Loan and Ngoc, Quoc Ly

Publication Date: 2024

Journal: International Journal of Advanced Computer Science & Applications 15(7), pp. 266–285

DOI: 10.14569/ijacsa.2024.0150727

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=178870109&site=eds-live>

9. Re-conceptualizing medical education in the post-COVID era

Item Type: Journal Article

Authors: Dimassi, Zakia;Chaiban, Lea;Zgheib, Nathalie K. and Sabra, Ramzi

Publication Date: 2024a

Journal: Medical Teacher 46(8), pp. 1084–1091

Abstract: The COVID-19 pandemic has forced changes in the delivery of medical education. We aimed to explore these changes and determine whether they will impact the future of medical education in any way. We invited leaders in medical education from all accessible US-based medical schools to participate in an online individual semi-structured interview. Representatives of 16 medical schools participated. They commented on the adequacy of online education for knowledge transfer, and the logistical advantages it offered, but decried its negative influence on social learning, interpersonal relationships and professional development of students, and its ineffectiveness for clinical education. Most participants indicated that they would maintain online learning for didactic purposes in the context of flipped classrooms but that a return to in-person education was essential for most other educational goals. Novel content will be introduced, especially in telemedicine and social medicine, and the students' roles and responsibilities in patient care and in curricular development may evolve in the future. This study is the first to document the practical steps that will be adopted by US medical schools in delivering medical education, which were prompted and reinforced by their experience during the COVID-19 pandemic. ABSTRACT FROM AUTHOR]; Copyright of Medical Teacher is the property of Taylor & Francis Ltd and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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10. Evaluation framework for conversational agents with artificial intelligence in health interventions: a systematic scoping review

Item Type: Journal Article

Authors: Ding, Hang;Simmich, Joshua;Vaezipour, Atiyeh;Andrews, Nicole and Russell, Trevor

Publication Date: 2024

Journal: Journal of the American Medical Informatics Association 31(3), pp. 746–761

Abstract: Objectives Conversational agents (CAs) with emerging artificial intelligence present new opportunities to assist in health interventions but are difficult to evaluate, deterring their applications in the real world. We aimed to synthesize existing evidence and knowledge and outline an evaluation framework for CA interventions. Materials and Methods We conducted a systematic scoping review to investigate designs and outcome measures used in the studies that evaluated CAs for health interventions. We then nested the results into an overarching digital health framework proposed by the World Health Organization (WHO). Results The review included 81 studies evaluating CAs in experimental (n = 59), observational (n = 15) trials, and other research designs (n = 7). Most studies (n = 72, 89%) were published in the past 5 years. The proposed CA-evaluation framework includes 4 evaluation stages: (1) feasibility/usability, (2) efficacy, (3) effectiveness, and (4) implementation, aligning with WHO's stepwise evaluation strategy. Across these stages, this article presents the essential evidence of different study designs (n = 8), sample sizes, and main evaluation categories (n = 7) with subcategories (n = 40). The main evaluation categories included (1) functionality, (2) safety and information quality, (3) user experience, (4) clinical and health outcomes, (5) costs and cost benefits, (6) usage, adherence, and uptake, and (7) user characteristics for implementation research. Furthermore, the framework highlighted the essential evaluation areas (potential primary outcomes) and gaps across the evaluation stages. Discussion and Conclusion This review presents a new framework with practical design details to support the evaluation of CA interventions in healthcare research. Protocol registration The Open Science Framework (<https://osf.io/9hq2v>) on March 22, 2021. ABSTRACT FROM AUTHOR]; Copyright of Journal of the American Medical Informatics Association is the property of Oxford University Press / USA and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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11. A Medical Education Research Library: key research topics and associated experts

Item Type: Journal Article

Authors: Eady, Kaylee and Moreau, Katherine A.

Publication Date: 2024

Journal: Medical Education Online 29(1)

Abstract: ABSTRACTWhen clinician-educators and medical education researchers use and discuss medical education research, they can advance innovation in medical education as well as improve its quality. To facilitate the use and discussions of medical education research, we created a prefatory visual representation of key medical education research topics and associated experts. We conducted one-on-one virtual interviews with medical education journal editorial board members to identify what they perceived as key medical education research topics as well as who they associated, as experts, with each of the identified topics. We used content analysis to create categories representing key topics and noted occurrences of named experts. Twenty-one editorial board members, representing nine of the top medical education journals, participated. From the data we created a figure entitled, Medical Education Research Library. The library includes 13 research topics, with assessment as the most prevalent. It also notes recognized experts, including van der Vleuten, ten Cate, and Norman. The key medical education research topics identified and included in the library align with what others have identified as trends in the literature. Selected topics, including workplace-based learning, equity, diversity, and inclusion, physician wellbeing and burnout, and social accountability, are emerging. Once transformed into an open educational resource, clinician-educators and medical education researchers can use and contribute to the functional library. Such continuous expansion will generate better awareness and recognition of diverse perspectives. The functional library will help to innovate and improve the quality of medical education through evidence-informed practices and scholarship.

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12. Reflecting on Experiences of Senior Medical Students' External Clinical Teaching Visits in General Practice Placements: A Pilot Study

Item Type: Journal Article

Authors: Feng, S.;Yang, D.;Zhang, K.;Findlay, D. J.;Kuang, M.;Xiao, H. and Xu, D.

Publication Date: 2024

Journal: Advances in Medical Education and Practice ume 15, pp. 207–216

Abstract: Shaoting Feng,1,*; Daya Yang,1,*; Kunsong Zhang,1,*; Denise Joy Findlay,2 Ming Kuang,1 Haipeng Xiao,2 Dan Xu1,2 1Department of Medical Education, First Affiliated Hospital, Sun Yat-Sen University, Guangzhou, People's Republic of China; 2General Practice Research, Curtin Medical School, Faculty of Health Sciences, Curtin University, Perth, Australia*These authors contributed equally to this workCorrespondence: Dan Xu; Ming Kuang, Email daniel.xu@curtin.edu.au; kuangm@mail.sysu.edu.cnPurpose: Australian general practice training uses external clinical teaching (ECT) visits for formative work-based assessments. ECT visits appoint senior general-practitioners (GPs) observe trainee GPs' consultations, provide feedback, and make performance-enhancing recommendations. As ECT visits are one of the best assessment tools in Australian GP training, there is limited evidence of its use in undergraduate teaching. This study aims to introduce ECT visits and evaluate assessment tools during senior medical students' GP placement.Methods: This study included external and internal GP supervisors and twenty-five Chinese and

Australian students during GP placements. The supervisors provided structured in-person feedback, while the ECT assessment tool used a standardised, validated feedback platform to assess every component of a consultation. Students' feedback was recorded and collected by both internal and external supervisors, and then semantically analysed by external supervisors. Results: Twenty-five ECT visit feedbacks were collected and analysed semantically. All participating students rated ECT visits excellently and confirmed the relevance of assessment tools for discussions with supervisors to achieve the designed learning outcomes. Chinese students rated the assessment tools as innovative from a cultural perspective and recommended the ECT visit teaching model and assessment tools to their home university, whereas Australian students suggested more ECT visits during GP placements. Time management was a limitation for both the students and supervisors. Conclusion: ECT visit is an innovative placement teaching model and work-based assessment tool for senior medical students' GP placements, and is rated as the most preferred formative assessment tool. The limitations of this study include small group of students/supervisors and lack of patient feedback; however, all of these limitations can be overcome by involving multiple GP clinics in ongoing large-scale study. ECT visits can be introduced quantitatively into students' GP placement curricula to improve clinical reasoning, learning, and quality assurance with assessments during clinical placements. Keywords: external clinical teaching, general practice placement, senior medical students placement learning, clinical reasoning learning, work-based assessment

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edsdoj&AN=edsdoj.66687cd8a39a4c649522160da12e9590&site=eds-live>

13. Exploring BAME Student Experiences in Healthcare Courses in the United Kingdom: A Systematic Review

Item Type: Journal Article

Authors: GREWAL, CALLUM; KHAN, MOHAMMED; PANESAR, JASMIN; ASHER, SIMAL and MEHAN, NAVJYOT

Publication Date: 2024

Journal: Journal of Advances in Medical Education and Professionalism 12(1), pp. 8–17

Abstract: Introduction: Black, Asian, and Minority Ethnic (BAME) students in healthcare-related courses are exposed to various challenging experiences compared to their White counterparts, not only in the UK (United Kingdom) but across the globe. Underachieving, stereotyping, racial bias, and cultural differences, among other experiences, hinder their medical education, practice, and attainment. This review aimed to explore and understand the experiences of BAME students enrolled in healthcare related courses in the United Kingdom. Methods: Computerised bibliographic search was carried out using MeSH and free text descriptors via PubMed, Cochrane, Google Scholar, and Science Direct for eligible English-published studies exploring BAME experiences in the U.K from 2010-2023. Results: A cumulative total of 813 studies were obtained from the literature search, of which five met the inclusion criteria. Quality assessment for risk of bias was assessed using the NewcastleOttawa scale, yielding one study of satisfactory quality, while four were deemed to be of good quality. Conclusion: BAME students pursuing health-related courses across the UK. face a range of experiences, including racial discrimination, unconscious bias, and a lack of representation and support. Additionally, BAME students are more likely to report incidents of racial harassment and withdraw from their respective courses as well as experiencing mental health issues due to their experiences.

DOI: 10.30476/jamp.2023.98882.1825

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edsdoj&AN=edsdoj.85cb638b2f524a2d96c5810b481ecac6&site=eds-live>

14. Virtual Training of Medical Students to Promote the Comfort and Cooperation of Patients with Neurodevelopmental Disabilities

Item Type: Journal Article

Authors: Hoang, Andrea Q.;Lerman, Dorothea C. and Nguyen, Jennifer Trang

Publication Date: 2024

Journal: Journal of Autism & Developmental Disorders 54(4), pp. 1249–1263

Abstract: Patients with neurodevelopmental disabilities generally have less access to necessary medical care compared to those without disabilities. Barriers to adequate care include patient fear and uncooperative behavior during routine medical procedures and inadequate preparation of medical professionals to treat this population. Researchers have identified multiple behavior-analytic procedures for promoting comfort and cooperation during medical treatments. Efficient, cost-effective training programs are needed to widely disseminate behavior-analytic procedures to medical students and professionals. The purpose of this study was to assess the efficacy of a virtual training to prepare medical students to implement behavioral procedures that could be easily incorporated into typical wellness examinations. Seven medical students received behavioral skills training (BST) delivered remotely via the Internet. Results showed that the training successfully increased students' correct implementation of the procedures in roleplay with the experimenter and with patients with neurodevelopmental disabilities. Responding also maintained at high levels 2 weeks after the training. These findings suggest that virtual BST is an efficient, practical approach for training health care professionals to implement general behavior management strategies to increase the comfort and cooperation of patients with NDD. ABSTRACT FROM AUTHOR]; Copyright of Journal of Autism & Developmental Disorders is the property of Springer Nature and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.1007/s10803-023-05896-w

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=pbh&AN=177351489&site=eds-live>

15. A scoping review on bolstering concussion knowledge in medical education

Item Type: Journal Article

Authors: Husain, Aisha

Publication Date: 2024a

Journal: Discover Education 3(1), pp. 1–22

Abstract: Background: Concussions are a public health concern. Underdiagnosis and mismanagement negatively impact patients, risking in persistent symptoms and permanent disability. Objective: This scoping review consolidates the heterogeneous and inconsistent concussion research and identifies key areas for medical education curriculum design to focus on for effective knowledge acquisition and bolstering competency in family physician residency. We analyze the literature on concussion education spanning various healthcare disciplines in North America. Methods: PRISMA-Sc was followed and MEDLINE and EMBASE Classic + EMBASE in the OvidSP search platform were used to find terms for brain concussion AND medical education OR specific education until 2021. Results: There are significant knowledge gaps about concussions, increased clinical exposure is required for competency which bolster physical examination skills and streamlined concussion guidelines are required for family medicine

specialists that filter undifferentiated symptoms 25% of participants improved adherence to concussion guidelines after an educational intervention and knowledge increased after concussion workshop and clinics. Conclusions: Multifaceted teaching improves concussion diagnosis and management. More research is needed to examine concussion competency and, more importantly, whether these interventions improve patient outcomes. ABSTRACT FROM AUTHOR]; Copyright of Discover Education is the property of Springer Nature and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.1007/s44217-024-00191-x

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=178594053&site=eds-live>

16. Twelve tips to leverage AI for efficient and effective medical question generation: A guide for educators using Chat GPT

Item Type: Journal Article

Authors: Indran, Inthrani Raja; Paranthaman, Priya; Gupta, Neelima and Mustafa, Nurulhuda

Publication Date: 2024

Journal: Medical Teacher 46(8), pp. 1021–1026

Abstract: Crafting quality assessment questions in medical education is a crucial yet time-consuming, expertise-driven undertaking that calls for innovative solutions. Large language models (LLMs), such as ChatGPT (Chat Generative Pre-Trained Transformer), present a promising yet underexplored avenue for such innovations. This study explores the utility of ChatGPT to generate diverse, high-quality medical questions, focusing on multiple-choice questions (MCQs) as an illustrative example, to increase educator's productivity and enable self-directed learning for students. Leveraging 12 strategies, we demonstrate how ChatGPT can be effectively used to generate assessment questions aligned with Bloom's taxonomy and core knowledge domains while promoting best practices in assessment design. Integrating LLM tools like ChatGPT into generating medical assessment questions like MCQs augments but does not replace human expertise. With continual instruction refinement, AI can produce high-standard questions. Yet, the onus of ensuring ultimate quality and accuracy remains with subject matter experts, affirming the irreplaceable value of human involvement in the artificial intelligence-driven education paradigm. ABSTRACT FROM AUTHOR]; Copyright of Medical Teacher is the property of Taylor & Francis Ltd and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.1080/0142159X.2023.2294703

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=asx&AN=178881185&site=eds-live>

17. Body donation for medical education and training: the importance of cadavers in teaching anatomy

Item Type: Journal Article

Authors: Jacques, Steve

Publication Date: 2024

Journal: Bulletin of the Royal College of Surgeons of England 106(5), pp. 286–289

Abstract: With increased scarcity of cadavers as part of anatomy teaching in surgical training, are trainees missing out on valuable hands-on education? ABSTRACT FROM AUTHOR]; Copyright of Bulletin of The Royal College of Surgeons of England is the property of Royal College of Surgeons of England and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.1308/rcsbull.2024.93

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=178163765&site=eds-live>

18. Mitigating Microaggressions in Medical Education Through the TRAUMA Framework

Item Type: Journal Article

Authors: Johnson, Christen D.;Mike, Elise V. and Jean-Charles, Antoinette

Publication Date: 2024

Journal: Academic Medicine : Journal of the Association of American Medical Colleges 99(6), pp. 599–604

Abstract: Abstract: Microaggressions are defined as brief communications directed at members of a stigmatized group that are received as derogatory but are unrecognized by the offender. Studies show that microaggressions are detrimental to those of all identities who endure them. Given that microaggressions can result in specific emotional, psychological, and physical challenges for underrepresented medical students from minoritized backgrounds, it is imperative that the medical education community focus efforts on reducing them and their impact through appropriate responses. The TRAUMA framework was developed by the authors and can be used to organize a thorough response to the threat that microaggressions create for all students. The framework includes improved student support, guidelines for faculty and institutional responses to microaggressions, improved faculty development for addressing microaggressions, recommendations to improve classroom environments, and interventions both to create and measure culture change in medical education. (Copyright © 2024 the Association of American Medical Colleges.)

DOI: 10.1097/ACM.0000000000005676

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=cmedm&AN=38466608&site=eds-live>

19. Rethinking Evidence-Based Practice in Education: A Critical Literature Review of the 'What Works' Approach

Item Type: Journal Article

Authors: Jones, Andrew B.

Publication Date: 2024

Journal: International Journal of Educational Researchers (IJERs) 15(2), pp. 37–51

Abstract: This literature review critically examines the concept of 'evidence-based practice' (EBP) in education, particularly its implementation in England. EBP, which advocates using scientific research to inform teaching, enjoys widespread support from policymakers and educators. However, concerns exist regarding its emphasis on quantitative evidence, particularly findings from laboratory experiments and randomised controlled trials (RCTs). Critics argue that this approach can reduce teacher autonomy and struggles to adapt to diverse educational contexts. By analysing a broad range of literature, this review explores the current 'what works' approach within EBP and highlights its challenges, such as neglecting qualitative data and the complexities of real-world classrooms. The review concludes by advocating for a more balanced approach that integrates both quantitative and qualitative research methods, while fostering collaboration between researchers and practitioners. ABSTRACT FROM AUTHOR]; Copyright of International Journal of Educational Researchers (IJERs) is the property of Turkish Educational Research Association (TERA) and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.29329/ijer.2024.1041.3

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=178374461&site=eds-live>

20. How well do UK assistantships equip medical students for graduate practice? Think EPAs

Item Type: Journal Article

Authors: Kinston, Ruth;Gay, Simon;McKinley, R. K.;Sam, Sreya;Yardley, Sarah and Lefroy, Janet

Publication Date: 2024

Journal: Advances in Health Sciences Education 29(1), pp. 173–198

Abstract: The goal of better medical student preparation for clinical practice drives curricular initiatives worldwide. Learning theory underpins Entrustable Professional Activities (EPAs) as a means of safe transition to independent practice. Regulators mandate senior assistantships to improve practice readiness. It is important to know whether meaningful EPAs occur in assistantships, and with what impact. Final year students at one UK medical school kept learning logs and audio-diaries for six one-week periods during a year-long assistantship. Further data were also obtained through interviewing participants when students and after three months as junior doctors. This was combined with data from new doctors from 17 other UK schools. Realist methods explored what worked for whom and why. 32 medical students and 70 junior doctors participated. All assistantship students reported engaging with EPAs but gaps in the types of EPAs undertaken exist, with level of entrustment and frequency of access depending on the context. Engagement is enhanced by integration into the team and shared understanding of what constitutes

legitimate activities. Improving the shared understanding between student and supervisor of what constitutes important assistantship activity may result in an increase in the amount and/or quality of EPAs achieved. ABSTRACT FROM AUTHOR]; Copyright of Advances in Health Sciences Education is the property of Springer Nature and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=175982050&site=eds-live>

21. To be or not to be supervisors for medical students in general practice clinical placements: a questionnaire study from Norway

Item Type: Journal Article

Authors: Knutsen, Julie Solberg;Bondevik, Gunnar Tschudi and Hunskaar, Steinar

Publication Date: 2024a

Journal: Scandinavian Journal of Primary Health Care 42(3), pp. 442–449

Abstract: Objective: Many countries experience challenges in recruiting and retaining general practitioners (GPs) as supervisors for medical students in clinical placements. We aimed to investigate the opportunities, capacities and limitations of Norwegian GPs to become supervisors. Design: Web-based cross-sectional questionnaire study. Setting: Norwegian general practice. Subjects: All GPs in Norway, including locums and those on leave, both active supervisors, and GPs who are not presently supervising medical students. Main outcome measures: GPs' terms of salary, office facilities, limiting factors, capacity and needs for becoming or continuing as supervisors. Results: Among 5145 GPs, 1466 responded (29%), of whom 498 (34%) were active supervisors. Lack of a dedicated student office was the most reported limitation for both active supervisors (75%) and other GPs (81%). A high proportion (67%) of active supervisors reported that they could host more students per year, given financial support for equipped offices and higher salaries. With this kind of support, 48% (n = 461) of the GPs who were not supervisors for medical students were positive about a future supervisor role. By adjusted regression analysis, female GPs had lower likelihood of being supervisors, OR (95% CI) 0.75 (0.59–0.95) than male colleagues. GPs in the North, Mid and West regions had higher odds (OR 3.89, 3.10 and 2.42, respectively) than those in the South-East region. Teaching experience also increased the odds (2.31 (1.74–3.05)). Conclusions: There seems to be capacity among both active and potential supervisors if increased salaries and financial support for office facilities are made available. KEY POINTS: Undergraduate training by clinical placements is important for the recruitment of doctors to general practice, and depends on a sufficient number of GPs as supervisors. The study shows that there is sufficient capacity among Norwegian GPs to host medical students in clinical placements. Many potential supervisors among Norwegian GPs report that they have not been approached by a university to supervise medical students. Many supervisors state that they need increased salaries and financial support for facilities and expenses in order to supervise medical students. ABSTRACT FROM AUTHOR]; Copyright of Scandinavian Journal of Primary Health Care is the property of Taylor & Francis Ltd and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.1080/02813432.2024.2337063

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=pbh&AN=179069774&site=eds-live>

22. Adaptation and validation of the evidence-based practice profile (EBP2) questionnaire in a Norwegian primary healthcare setting

Item Type: Journal Article

Authors: Landsverk, Nils Gunnar;Olsen, Nina Rydland;Titlestad, Kristine Berg;Pripp, Are Hugo and Brovold, Therese

Publication Date: 2024a

Journal: BMC Medical Education 24(1), pp. 1–11

Abstract: Background: Access to valid and reliable instruments is essential in the field of implementation science, where the measurement of factors associated with healthcare professionals' uptake of EBP is central. The Norwegian version of the Evidence-based practice profile questionnaire (EBP2-N) measures EBP constructs, such as EBP knowledge, confidence, attitudes, and behavior. Despite its potential utility, the EBP2-N requires further validation before being used in a cross-sectional survey targeting different healthcare professionals in Norwegian primary healthcare. This study assessed the content validity, construct validity, and internal consistency of the EBP2-N among Norwegian primary healthcare professionals. Methods: To evaluate the content validity of the EBP2-N, we conducted qualitative individual interviews with eight healthcare professionals in primary healthcare from different disciplines. Qualitative data was analyzed using the "text summary" model, followed by panel group discussions, minor linguistic changes, and a pilot test of the revised version. To evaluate construct validity (structural validity) and internal consistency, we used data from a web-based cross-sectional survey among nurses, assistant nurses, physical therapists, occupational therapists, medical doctors, and other professionals (n = 313). Structural validity was tested using a confirmatory factor analysis (CFA) on the original five-factor structure, and Cronbach's alpha was calculated to assess internal consistency. Results: The qualitative interviews with primary healthcare professionals indicated that the content of the EBP2-N was perceived to reflect the constructs intended to be measured by the instrument. However, interviews revealed concerns regarding the formulation of some items, leading to minor linguistic revisions. In addition, several participants expressed that some of the most specific research terms in the terminology domain felt less relevant to them in clinical practice. CFA results exposed partial alignment with the original five-factor model, with the following model fit indices: CFI = 0.749, RMSEA = 0.074, and SRMR = 0.075. Cronbach's alphas ranged between 0.82 and 0.95 for all domains except for the Sympathy domain (0.69), indicating good internal consistency in four out of five domains. Conclusion: The EBP2-N is a suitable instrument for measuring Norwegian primary healthcare professionals' EBP knowledge, attitudes, confidence, and behavior. Although EBP2-N seems to be an adequate instrument in its current form, we recommend that future research focuses on further assessing the factor structure, evaluating the relevance of the items, and the number of items needed. Registration: Retrospectively registered (prior to data analysis) in OSF Preregistration. Registration DOI: <https://doi.org/10.17605/OSF.IO/428RP>. ABSTRACT FROM AUTHOR]; Copyright of BMC Medical Education is the property of BioMed Central and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.1186/s12909-024-05842-z

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=178855794&site=eds-live>

23. Narrative Medicine: The Power of Shared Stories to Enhance Inclusive Clinical Care, Clinician Well-Being, and Medical Education

Item Type: Journal Article

Authors: Loy, Michelle and Kowalsky, Rachel

Publication Date: 2024

Journal: Permanente Journal 28(2), pp. 93–101

Abstract: The COVID-19 pandemic exacerbated the problem of secondary trauma and moral injury for health care workers. This reality, together with the epidemic of social isolation and loneliness, has brought the mental health of health care practitioners and patients to the forefront of the national conversation. Narrative medicine is an accessible, diversity-honoring, low-cost, underutilized pedagogical framework with potentially revolutionary benefits for enhancing patient care, supporting the underserved, mitigating clinician burnout, and improving team dynamics. Herein, the authors review the literature on these benefits and then discuss methods for integrating narrative medicine into clinical care and medical education at the undergraduate and graduate levels as well as continuing medical education. ABSTRACT FROM AUTHOR]; Copyright of Permanente Journal is the property of Permanente Journal and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.7812/TPP/23.116

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24. Professionalisation and specialisation in the practice of anaesthesia in the UK

Item Type: Journal Article

Authors: McKenzie, Alistair G. and Connor, Henry

Publication Date: 2024

Journal: BJA: The British Journal of Anaesthesia 133(2), pp. 255–259

Abstract: The year 2024 marks 70 years since graduation of the first candidates in revised examinations for Fellowship of the Faculty of Anaesthetists of the Royal College of Surgeons (FFARCS). Here we review the progress of specialisation and professionalisation of anaesthesia in the UK. ABSTRACT FROM AUTHOR]; Copyright of BJA: The British Journal of Anaesthesia is the property of Elsevier B.V. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=asx&AN=178425246&site=eds-live>

25. Reviewing the current state of virtual reality integration in medical education - a scoping review

Item Type: Journal Article

Authors: Mergen, Marvin;Graf, Norbert and Meyerheim, Marcel

Publication Date: 2024

Journal: BMC Medical Education 24(1)

Abstract: Background In medical education, new technologies like Virtual Reality (VR) are increasingly integrated to enhance digital learning. Originally used to train surgical procedures, now use cases also cover emergency scenarios and non-technical skills like clinical decision-making. This scoping review aims to provide an overview of VR in medical education, including requirements, advantages, disadvantages, as well as evaluation methods and respective study results to establish a foundation for future VR integration into medical curricula. Methods This review follows the updated JBI methodology for scoping reviews and adheres to the respective PRISMA extension. We included reviews in English or German language from 2012 to March 2022 that examine the use of VR in education for medical and nursing students, registered nurses, and qualified physicians. Data extraction focused on medical specialties, subjects, curricula, technical/didactic requirements, evaluation methods and study outcomes as well as advantages and disadvantages of VR. Results A total of 763 records were identified. After eligibility assessment, 69 studies were included. Nearly half of them were published between 2021 and 2022, predominantly from high-income countries. Most reviews focused on surgical training in laparoscopic and minimally invasive procedures (43.5%) and included studies with qualified physicians as participants (43.5%). Technical, didactic and organisational requirements were highlighted and evaluations covering performance time and quality, skills acquisition and validity, often showed positive outcomes. Accessibility, repeatability, cost-effectiveness, and improved skill development were reported as advantages, while financial challenges, technical limitations, lack of scientific evidence, and potential user discomfort were cited as disadvantages. Discussion Despite a high potential of VR in medical education, there are mandatory requirements for its integration into medical curricula addressing challenges related to finances, technical limitations, and didactic aspects. The reported lack of standardised and validated guidelines for evaluating VR training must be overcome to enable high-quality evidence for VR usage in medical education. Interdisciplinary teams of software developers, AI experts, designers, medical didactics experts and end users are required to design useful VR courses. Technical issues and compromised realism can be mitigated by further technological advancements. Keywords: Digitalisation, Medical Education, Medical School, Medical training, Virtual reality; Author(s): Marvin Mergensup.1] , Norbert Graf^{sup.1]} and Marcel Meyerheimsup.1] Introduction The focus of medical education is gradually shifting towards digital learning methods, with an increasing emphasis on incorporating new technologies ...]

DOI: 10.1186/s12909-024-05777-5

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edsgih&AN=edsgcl.802411841&site=eds-live>

26. The State of Mastery Learning in Pediatric Graduate Medical Education: A Scoping Review

Item Type: Journal Article

Authors: Mills-Rudy, Michaela;Thorvilson, Megan;Chelf, Cynthia and Mavis, Stephanie

Publication Date: 2024

Journal: Advances in Medical Education & Practice 15, pp. 637–648

DOI: 10.2147/AMEP.S463382

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=178859611&site=eds-live>

27. Artificial intelligence in medical education: Typologies and ethical approaches

Item Type: Journal Article

Authors: Pregowska, Agnieszka and Perkins, Mark

Publication Date: 2024

Journal: Ethics & Bioethics 14(1), pp. 96–113

Abstract: Artificial Intelligence (AI) has an increasing role to play in medical education and has great potential to revolutionize health professional education systems overall. However, this is accompanied by substantial questions concerning technical and ethical risks which are of particular importance because the quality of medical education has a direct effect on physical and psychological health and wellbeing. This article establishes an overarching distinction of AI across two typological dimensions, functional and humanistic. As indispensable foundations, these are then related to medical practice overall, and forms of implementation with examples are described in both general and medical education. Increasingly, the conditions for successful medical education will depend on an understanding of AI and the ethical issues surrounding its implementation, as well as the formulation of appropriate guidelines by regulatory and other authorities. Within that discussion, the limits of both narrow or Routine AI (RAI) and artificial general intelligence or Decision AI (DAI) are examined particularly in view of the ethical need for Trustworthy AI (TAI) as part of the humanistic dimension. All stakeholders, from patients to medical practitioners, managers, and institutions, need to be able to trust AI, and loss of confidence could be catastrophic in some cases. ABSTRACT FROM AUTHOR]; Copyright of Ethics & Bioethics is the property of Sciendo and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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28. Evidence-based practice – implementation level and attitude among physical, occupational, and speech and language therapists in Germany: status quo

Item Type: Journal Article

Authors: Reinecke, Sarah;Mijic, Marko;Gerhard, Janina;Jung, Andrés;Ernst, Kathrin;Dreher, Christian;Lohmann, Marieke;Koch, Maren;Jahjah, Akram;Fichtemüller, Andrea and Balzer, Julia

Publication Date: 2024

Journal: JBI Evidence Implementation 22(2), pp. 205–217

Abstract: Introduction: Evidence-based practice (EBP) is an important component of clinical practice in public health. Its implementation involves interpreting scientific studies and then applying this knowledge to clinical decision-making. In Germany, the therapy professions are often trained in non-academic medical schools, and only a small number of therapists are university graduates. Aims: This study assessed the current status of EBP among physiotherapists, occupational therapists, and speech and language

therapists and to determine whether academization influences the implementation of EBP in Germany. Methods: To assess the EBP implementation level and therapists' attitudes toward EBP, a cross-sectional study was conducted using the German version of the Evidence-Based Practice Inventory (EBPI), which consists of five dimensions: attitude; subjective norm; perceived behavioral control; decision-making; and intention and behavior. The structural validity and internal consistency of the EBPI survey were also tested. Results: Of the 2,412 responses, only 557 were eligible. There were statistically significant differences between academically educated vs. non-academically educated therapists in four of the five EBPI dimensions. Furthermore, four of the five dimensions had sufficient unidimensionality and internal consistency. Conclusion: There are differences between academically educated and non-academically educated therapists regarding EBP knowledge, attitudes, and implementation. Academically educated therapists are more likely to use EBP than non-academically educated therapists. There are still barriers to clinical application that need to be addressed. <http://links.lww.com/IJEBH/A195> ABSTRACT FROM AUTHOR]; Copyright of JBI Evidence Implementation is the property of Lippincott Williams & Wilkins and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.1097/XEB.0000000000000420

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=177197670&site=eds-live>

29. Medical students' perceptions of an artificial intelligence (AI) assisted diagnosing program

Item Type: Journal Article

Authors: Robleto, Emely;Habashi, Ali;Kaplan, Mary-Ann Benites;Riley, Richard L.;Zhang, Chi;Bianchi, Laura and Shehadeh, Lina A.

Publication Date: 2024a

Journal: Medical Teacher 46(9), pp. 1180–1186

Abstract: As artificial intelligence (AI) assisted diagnosing systems become accessible and user-friendly, evaluating how first-year medical students perceive such systems holds substantial importance in medical education. This study aimed to assess medical students' perceptions of an AI-assisted diagnostic tool known as 'Glass AI.' Data was collected from first year medical students enrolled in a 1.5-week Cell Physiology pre-clerkship unit. Students voluntarily participated in an activity that involved implementation of Glass AI to solve a clinical case. A questionnaire was designed using 3 domains: 1) immediate experience with Glass AI, 2) potential for Glass AI utilization in medical education, and 3) student deliberations of AI-assisted diagnostic systems for future healthcare environments. 73/202 (36.10%) of students completed the survey. 96% of the participants noted that Glass AI increased confidence in the diagnosis, 43% thought Glass AI lacked sufficient explanation, and 68% expressed risk concerns for the physician workforce. Students expressed future positive outlooks involving AI-assisted diagnosing systems in healthcare, provided strict regulations, are set to protect patient privacy and safety, address legal liability, remove system biases, and improve quality of patient care. In conclusion, first year medical students are aware that AI will play a role in their careers as students and future physicians. ABSTRACT FROM AUTHOR]; Copyright of Medical Teacher is the property of Taylor & Francis Ltd and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.1080/0142159X.2024.2305369

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=asx&AN=179273303&site=>

30. The die-hards, negotiators and migrants: Portraits of doctors' career pathways through specialisation

Item Type: Journal Article

Authors: Rozario, Shemona Y.;Farlie, Melanie K.;Sarkar, Mahbub and Lazarus, Michelle D.

Publication Date: 2024a

Journal: Medical Education 58(9), pp. 1071–1085

Abstract: Introduction: Global workforce shortages in medical specialties strain healthcare systems, jeopardising patient outcomes. Enhancing recruitment strategies by supporting professional identity (PI) development may be one way to address this workforce gap—yet little research has explored this topic. The goal of the current study was to explore specialty-specific recruitment through considering PI. As proposed causes of workforce shortages in anatomical pathology (AP) bear similarities to many other specialties, this study uses the field of AP as a model for specialist PI development and asks: (1) why, how and when do doctors choose to pursue AP training and (2) what can be learned from this for recruitment to AP and other specialties? Methods: A qualitative research approach was undertaken using narrative inquiry. Interviews with junior doctors interested in AP, AP registrars and AP consultants from Australia and New Zealand were interpreted as stories via 're-storying'. Narrative synthesis of participants' collective stories identified chronological key events (i.e. 'turning points') in choosing AP. Results: Narrative synthesis resulted in identification of three portraits entering medical specialist training: (1) die-hards, deciding upon initial exposure; (2) negotiators, choosing after comparing specialties; and (3) migrants, seeking to move away from non-pathology specialties. The negotiators and migrants cemented their decision to pursue AP as a postgraduate doctor, whereas the die-hards made this decision during medical school. Conclusions: Given the similarities in portrait traits between AP and other specialties across the literature, our results suggest ways to support specialty recruitment using PI development. We propose a medical specialist recruitment framework to support the PI development of doctors with die-hard, negotiator and migrant traits. Use of this framework could enhance current specialty-specific recruitment approaches, particularly in fields challenged by workforce shortages. Want to know more about doctors' decision-making processes when choosing a specialty? Check out this article!

DOI: 10.1111/medu.15368

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=cin20&AN=179046211&site=eds-live>

31. Relationships between medical student wellness, self-efficacy, and academic performance during the "post-COVID" period

Item Type: Journal Article

Authors: Ruiz, Jonathan;Kaminnik, Phillip;Kibble, Jonathan and Kauffman, Christine

Publication Date: 2024

Journal: Advances in Physiology Education 48(1), pp. 137–146

Abstract: This study was a part of a longitudinal study investigating the relationships between medical student wellness, self-efficacy, and performance. Eighty-two eligible students were asked to complete online surveys during their second (M2) and third (M3) years. Performance outcomes included scores on various summative assessments during the M.D. program. Wellness survey results indicated that the

sample of 38 M2 and 28 M3 students were overall well and self-efficacious, and they broadly maintained similar wellness characteristics across their medical education despite COVID-19 disruptions. Twentythree students completed both surveys, and a paired analysis for this subgroup showed modest increases in stress and burnout in the M3 year. Notable correlations were observed between self-efficacy for academic work and a whole range of wellness variables for M2 students. M2 academic performance was modestly correlated to self-efficacy ($r_s = 0.38$, $P = 0.02$, $n = 38$) and student burnout ($r_s = -0.34$, $P = 0.04$, $n = 38$). In contrast, for the M3 students there was little correlation between wellness, clinical self-efficacy, and clinical performance, with the only significant relationships observed to be between overall clinical self-efficacy and the strength of social networks ($r_s = 0.41$, $P = 0.03$, $n = 28$) and between scores for postencounter notes during Objective Structure Clinical Examinations (OSCEs) and self-efficacy in evidence-based medicine ($r_s = 0.44$, $P = 0.02$, $n = 28$). In conclusion, 1) students remained generally well throughout the post-COVID period, and 2) self-efficacy for academic work is a good predictor of student wellness and performance during the preclerkship period but not during clinical training. ABSTRACT FROM AUTHOR]; Copyright of Advances in Physiology Education is the property of American Physiological Society and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.1152/advan.00190.2023

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=176284341&site=eds-live>

32. AI chatbots show promise but limitations on UK medical exam questions: a comparative performance study

Item Type: Journal Article

Authors: Sadeq, Mohammed Ahmed;Ghorab, Reem Mohamed Farouk;Ashry, Mohamed Hady;Abozaid, Ahmed Mohamed;Banihani, Haneen A.;Salem, Moustafa;Aisheh, Mohammed Tawfiq Abu;Abuzahra, Saad;Mourid, Marina Ramzy;Assker, Mohamad Monif;Ayyad, Mohammed and Moawad, Mostafa Hossam El Din

Publication Date: 2024

Journal: Scientific Reports 14(1), pp. 1–11

Abstract: Large language models (LLMs) like ChatGPT have potential applications in medical education such as helping students study for their licensing exams by discussing unclear questions with them. However, they require evaluation on these complex tasks. The purpose of this study was to evaluate how well publicly accessible LLMs performed on simulated UK medical board exam questions. 423 board-style questions from 9 UK exams (MRCS, MRCP, etc.) were answered by seven LLMs (ChatGPT-3.5, ChatGPT-4, Bard, Perplexity, Claude, Bing, Claude Instant). There were 406 multiple-choice, 13 true/false, and 4 "choose N" questions covering topics in surgery, pediatrics, and other disciplines. The accuracy of the output was graded. Statistics were used to analyze differences among LLMs. Leaked questions were excluded from the primary analysis. ChatGPT 4.0 scored (78.2%), Bing (67.2%), Claude (64.4%), and Claude Instant (62.9%). Perplexity scored the lowest (56.1%). Scores differed significantly between LLMs overall ($p < 0.001$) and in pairwise comparisons. All LLMs scored higher on multiple-choice vs true/false or "choose N" questions. LLMs demonstrated limitations in answering certain questions, indicating refinements needed before primary reliance in medical education. However, their expanding capabilities suggest a potential to improve training if thoughtfully implemented. Further research should explore specialty specific LLMs and optimal integration into medical curricula. ABSTRACT FROM AUTHOR]; Copyright of Scientific Reports is the property of Springer Nature and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=179040638&site=eds-live>

33. How professional and academic pre-qualifications relate to success in medical education: Results of a multicentre study in Germany

Item Type: Journal Article

Authors: Schröpel, Carla;Festl-Wietek, Teresa;Herrmann-Werner, Anne;Wittenberg, Tim;Schüttpelz-Brauns, Katrin;Heinzmann, Andrea;Keis, Oliver;Listunova, Lena;Kunz, Kevin;Böckers, Tobias;Herpertz, Sabine C.;Zipfel, Stephan and Erschens, Rebecca

Publication Date: 2024

Journal: PLoS ONE 19(3), pp. 1–22

Abstract: Objective: Every year, many applicants want to study medicine. Appropriate selection procedures are needed to identify suitable candidates for the demanding curriculum. Although research on medical school admissions has shown good predictive validity for cognitive selection methods (undergraduate GPA, aptitude tests), the literature on applicants with professional and/or academic experience prior to entering medical school remains slim. In our study, we therefore aimed to examine the association between academic success in medical school and having previously completed vocational training in the medical field, voluntary service (≥ 11 months) or an academic degree. Methods: Data were collected in a multicentre, cross-sectional study at five medical schools in Germany (Baden-Wuerttemberg) from students during medical school (i.e. 3rd-, 6th-, and 10th-semester and final-year students). Academic success was assessed according to scores on the first and second state examinations, the total number of examinations repeated and the number of semesters beyond the standard period of study. For the analysis we calculated ordinal logistic regression models for each outcome variable of academic success. Results: A total of $N = 2,370$ participants (response rate: $RR = 47\%$) participated in the study. Having completed vocational training was associated with a higher amount of repeated examinations (small effect), while having an academic degree was associated with worse scores on the second state examination (medium effect). No significant association emerged between voluntary service and academic success. Conclusion: The results indicate that professional and academic pre-qualifications pose no advantage for academic success. Possible associations with the financing of study and living conditions of students with pre-qualifications were analysed and discussed in an exploratory manner. However, the operationalisation of academic success from objective and cognitive data should be critically discussed, as the benefits of prior experience may be captured by personal qualities rather than examination results. ABSTRACT FROM AUTHOR]; Copyright of PLoS ONE is the property of Public Library of Science and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

DOI: 10.1371/journal.pone.0296982

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=175940049&site=eds-live>

34. Embracing the (r)evolution of social media and digital scholarship in pediatric nephrology education

Item Type: Journal Article

Authors: Shah, Shweta S.;Zangla, Emily;Qader, Md Abdul;Chaturvedi, Swasti and Mannemuddhu, Sai Sudha

Publication Date: 2024

Journal: Pediatric Nephrology 39(7), pp. 2061–2077

Abstract: Free Open-Access Medical Education (FOAMed) has transformed medical education in the past decade by complementing and substituting for traditional medical education when needed. The attractiveness of FOAMed resources is due to their inexpensive nature, wide availability, and user ability to access on demand across a variety of devices, making it easy to create, share, and participate. The subject of nephrology is complex, fascinating, and challenging. Traditional didactic lectures can be passive and ineffective in uncovering these difficult concepts and may need frequent revisions. Active teaching methods like flipped classrooms have shown some benefits, and these benefits can only be multifold with current social media tools. Social media will inspire the involvement of students and allow them to create and share educational content in a "trendy way," encouraging the participation of their peers and thus building an educational environment more conducive to them while promoting revision and retainment. FOAMed also promotes asynchronous learning, spaced learning, microlearning, and multimodal presentation with a meaningful variation. This article discusses the evolution of digital education, social media platforms, tools for creating and developing FOAMed resources, and digital scholarship.

DOI: 10.1007/s00467-023-06251-y

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=cin20&AN=177623336&site=eds-live>

35. The initial validation of an Evidence-informed, competency-based, Applied Compassion Training (EnACT) program: a multimethod study

Item Type: Journal Article

Authors: Sinclair, Shane;Dhingra, Swati;Shelley, Raffin Bouchal;MacInnis, Cara;Harris, Daranne;Amanda Roze, des Ordons and Pesut, Barbara

Publication Date: 2024

Journal: BMC Medical Education 24(1), pp. 1–14

Abstract: Abstract Introduction Compassion is positively associated with improved patient outcomes, quality care ratings, and healthcare provider wellbeing. Supporting and cultivating healthcare providers' compassion through robust and meaningful educational initiatives has been impeded by a lack of conceptual clarity, inadequate content coverage across the domains of compassion, and the lack of validated evaluation tools. The EnACT program aims to address these gaps through an Evidence-informed, competency-based, Applied, Compassion Training program delivered to healthcare providers working in various clinical settings. In this study, we describe the development and initial validation of the program, which will inform and be further evaluated in a forthcoming Randomised Controlled feasibility Trial (RCfT). Method A multimethod design was used to explore learner needs, experiences, and outcomes associated with the program. Pre- and post-training surveys and qualitative interviews (1 month post training) were conducted among twenty-six healthcare provider learners working in acute care and hospice. Quantitative measures assessed professional fulfillment/burnout, self-confidence in providing compassion, learner satisfaction, and compassion competence. Qualitative interviews explored learners' experiences of the program, integration of learnings into their professional practice, and program recommendations. Results Learners exhibited relatively high self-assessed compassion competence and professional fulfillment pre-training and low levels of burnout. Post-training, learners demonstrated high levels of compassion confidence and satisfaction with the training program. Despite high levels of reported compassion competence pre-training, a statistically significant increase in post-training compassion competence was noted. Thematic analysis identified five key themes associated with learners' overall experience of the training day and integration of the learnings and resources into their professional practice: (1) A beginner's mind: Learner baseline attitudes and assumptions about the necessity and feasibility of compassion

training; (2) Learners' experiences of the training program; (3) Learner outcomes: integrating theory into practice; (4) Creating cultures of compassion; and (5) Learner feedback. Conclusion Findings suggest that the EnACT program is a feasible, rigorous, and effective training program for enhancing healthcare provider compassion. Its evidence-based, patient-informed, clinically relevant content; interactive in class exercises; learner toolkit; along with its contextualized approach aimed at improving the clinical culture learners practice holds promise for sustaining learnings and clinical impact over time—which will be further evaluated in a Randomized Controlled feasibility Trial (RCFT).

DOI: 10.1186/s12909-024-05663-0

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edsdoj&AN=edsdoj.b57d4839ff77417f8daaf48368df7b5e&site=eds-live>

36. Examining the pedagogical practices that support cultural proficiency development in graduate health science students

Item Type: Journal Article

Authors: Speer, Julie E. and Conley, Quincy

Publication Date: 2024

Journal: BMC Medical Education 24(1), pp. 1–16

Abstract: Background: Health disparities are often a function of systemic discrimination and healthcare providers' biases. In recognition of this, health science programs have begun to offer training to foster cultural proficiency (CP) in future professionals. However, there is not yet consensus about the best ways to integrate CP into didactic and clinical education, and little is known about the role of clinical rotations in fostering CP. Methods: Here, a mixed-methods approach was used to survey students (n = 131) from a private all-graduate level osteopathic health sciences university to gain insight into the training approaches students encountered related to CP and how these may vary as a function of academic progression. The research survey included instruments designed to quantify students' implicit associations, beliefs, and experiences related to the CP training they encountered through the use of validated instruments, including Implicit Association Tests and the Ethnocultural Empathy Inventory, and custom-designed questions. Results: The data revealed that most students (73%) had received CP training during graduate school which primarily occurred via discussions, lectures, and readings; however, the duration and students' perception of the training varied substantially (e.g., training range = 1–100 hours). In addition, while students largely indicated that they valued CP and sought to provide empathetic care to their patients, they also expressed personal understandings of CP that often fell short of advocacy and addressing personal and societal biases. The results further suggested that clinical rotations may help students attenuate implicit biases but did not appear to be synergistic with pre-clinical courses in fostering other CP knowledge, skills, and attitudes. Conclusions: These findings highlight the need to utilize evidence-based pedagogical practices to design intentional, integrated, and holistic CP training throughout health science programs that employ an intersectional lens and empowers learners to serve as advocates for their patients and address systemic challenges. ABSTRACT FROM AUTHOR]; Copyright of BMC Medical Education is the property of BioMed Central and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=175359061&site=eds-live>

37. Proficiency Levels and Validity Evidence for Scoring Metrics for a Virtual Reality and Inanimate Robotic Surgery Simulation Curriculum

Item Type: Journal Article

Authors: Tellez, Juan C.;Radi, Imad;Alterio, Rodrigo E.;Nagaraj, Madhuri B.;Baker, Haley B.;Scott, Daniel J.;Zeh, Herbert J. and Polanco, Patricio M.

Publication Date: 2024

Journal: Journal of Surgical Education 81(4), pp. 589–596

DOI: 10.1016/j.jsurg.2024.01.004

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edselp&AN=S1931720424000035&site=eds-live>

38. Mentoring as a complex adaptive system – a systematic scoping review of prevailing mentoring theories in medical education

Item Type: Journal Article

Authors: Teo, Mac Yu Kai;Ibrahim, Halah;Lin, Casper Keegan Ronggui;Hamid, Nur Amira Binte Abdul;Govindasamy, Ranitha;Somasundaram, Nagavalli;Lim, Crystal;Goh, Jia Ling;Zhou, Yi;Tay, Kuang Teck;Ong, Ryan Rui Song;Tan, Vanessa;Toh, Youru;Pisupati, Anushka;Raveendran, Vijayprasanth;Chua, Keith Zi Yuan;Quah, Elaine Li Ying;Sivakumar, Jeevasuba;Senthilkumar, Samyuktha Dhanalakshmi and Suresh, Keerthana

Publication Date: 2024

Journal: BMC Medical Education 24(1), pp. 1–17

Abstract: Background: Effective mentorship is an important component of medical education with benefits to all stakeholders. In recent years, conceptualization of mentorship has gone beyond the traditional dyadic experienced mentor-novice mentee relationship to include group and peer mentoring. Existing theories of mentorship do not recognize mentoring's personalized, evolving, goal-driven, and context-specific nature. Evidencing the limitations of traditional cause-and-effect concepts, the purpose of this review was to systematically search the literature to determine if mentoring can be viewed as a complex adaptive system (CAS). Methods: A systematic scoping review using Krishna's Systematic Evidence-Based Approach was employed to study medical student and resident accounts of mentoring and CAS in general internal medicine and related subspecialties in articles published between 1 January 2000 and 31 December 2023 in PubMed, Embase, PsycINFO, ERIC, Google Scholar, and Scopus databases. The included articles underwent thematic and content analysis, with the themes identified and combined to create domains, which framed the discussion. Results: Of 5,704 abstracts reviewed, 134 full-text articles were evaluated, and 216 articles were included. The domains described how mentoring relationships and mentoring approaches embody characteristics of CAS and that mentorship often behaves as a community of practice (CoP). Mentoring's CAS-like features are displayed through CoPs, with distinct boundaries, a spiral mentoring trajectory, and longitudinal mentoring support and assessment processes. Conclusion: Recognizing mentorship as a CAS demands the rethinking of the design, support, assessment, and oversight of mentorship and the role of mentors. Further study is required to better assess the mentoring process and to provide optimal training and support to mentors. ABSTRACT FROM AUTHOR]; Copyright of BMC Medical Education is the property of BioMed Central and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edb&AN=178294759&site=eds-live>

39. Developing a Virtual Reality Simulation System for Preoperative Planning of Robotic-Assisted Thoracic Surgery

Item Type: Journal Article

Authors: Ujiie, Hideki;Chiba, Ryohei;Yamaguchi, Aogu;Nomura, Shunsuke;Shiia, Haruhiko;Fujiwara-Kuroda, Aki;Kaga, Kichizo;Eitel, Chad;Clapp, Tod R. and Kato, Tatsuya

Publication Date: 2024

Journal: Journal of Clinical Medicine 13(2)

Abstract: Author(s): Hideki Ujiie (corresponding author) 1,*]; Ryohei Chiba 1]; Aogu Yamaguchi 2]; Shunsuke Nomura 1]; Haruhiko Shiia 1]; Aki Fujiwara-Kuroda 1]; Kichizo Kaga 1]; Chad Eitel 3]; Tod R. Clapp ...]; Background. Robotic-assisted thoracic surgery (RATS) is now standard for lung cancer treatment, offering advantages over traditional methods. However, RATS's minimally invasive approach poses challenges like limited visibility and tactile feedback, affecting surgeons' navigation through complex anatomy. To enhance preoperative familiarization with patient-specific anatomy, we developed a virtual reality (VR) surgical navigation system. Using head-mounted displays (HMDs), this system provides a comprehensive, interactive view of the patient's anatomy pre-surgery, aiming to improve preoperative simulation and intraoperative navigation. Methods. We integrated 3D data from preoperative CT scans into Perspectus VR Education software, displayed via HMDs for interactive 3D reconstruction of pulmonary structures. This detailed visualization aids in tailored preoperative resection simulations. During RATS, surgeons access these 3D images through Tile-Prosop.TM] multi-display for real-time guidance. Results. The VR system enabled precise visualization of pulmonary structures and lesion relations, enhancing surgical safety and accuracy. The HMDs offered true 3D interaction with patient data, facilitating surgical planning. Conclusions. VR simulation with HMDs, akin to a robotic 3D viewer, offers a novel approach to developing robotic surgical skills. Integrated with routine imaging, it improves preoperative planning, safety, and accuracy of anatomical resections. This technology particularly aids in lesion identification in RATS, optimizing surgical outcomes.

DOI: 10.3390/jcm13020611

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=edsgih&AN=edsgcl.780877445&site=eds-live>

40. When Play Reveals the Ache: Introducing Co-constructive Patient Simulation for Narrative Practitioners in Medical Education

Item Type: Journal Article

Authors: Weller, Indigo;Spiegel, Maura;de Carvalho Filho, Marco Antonio and Martin, Andrés

Publication Date: 2024

Journal: The Journal of Medical Humanities 45(3), pp. 243–265

Abstract: Despite the ubiquity of healthcare simulation and the humanities in medical education, the two domains of learning remain unintegrated. The stories suffused within healthcare simulation have thus remained unshaped by the developments of narrative medicine and the health humanities. Healthcare simulation, in turn, has yet to utilize concepts like co-construction and narrative competence to enrich

learners' understanding of patient experience alongside their clinical competencies. To create a conceptual bridge between these two fields (including narrative-based inquiry more broadly), we redescribe narrative competence via Ronald Heifetz's distinction of "technical" and "adaptive" challenges outlined in his adaptive leadership model. Heifetz, we argue, enriches learners' self-understanding of the unique demands of cultivating narrative competence, which can be both elucidated on the page and tested within the charged yet supportive simulation environment. We introduce Co-constructive Patient Simulation (CCPS) to demonstrate how working with simulated patients can support narrative work by drawing on the clinical vicissitudes of learners in the formulation and enactment of case studies. The three movements of CCPS—resensing, retelling, and retooling—told through learner experiences, describe the affinities and divergences between narrative medicine's sequence of attention, representation, and affiliation; Montello's three forms of narrative competence (departure, performance, change), and Heifetz's three steps (observe, interpret, and intervene) of adaptive leadership. (© 2024. The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature.)

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URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=cmedm&AN=38635152&site=eds-live>

41. Designing and Evaluating an Emotionally Responsive Virtual Patient Simulation

Item Type: Journal Article

Authors: Xu, Jiayi; Yang, Lei and Guo, Meng

Publication Date: 2024a

Journal: Simulation in Healthcare : Journal of the Society for Simulation in Healthcare 19(3), pp. 196–203

Abstract: Introduction: Virtual patient (VP) simulations have been widely used for healthcare training, education, and assessment. However, few VP systems have integrated emotion sensing and analyzed how a user's emotions may influence the overall training experience. This article presents a VP that can recognize and respond to 5 human emotions (anger, disgust, fear, joy, and sadness), as well as 2 facial expressions (smiling and eye contact).; Methods: The VP was developed by combining the capabilities of a facial recognition system, a tone analyzer, a cloud-based artificial intelligence chatbot, and interactive 3-dimensional avatars created in a high-fidelity game engine (Unity). The system was tested with healthcare professionals at Changzhou Traditional Chinese Medicine Hospital.; Results: A total of 65 participants (38 females and 27 males) aged between 23 and 57 years (mean = 38.35, SD = 11.48) completed the survey, and 19 participants were interviewed. Most participants perceived that the VP was useful in improving their communication skills, particularly their nonverbal communication skills. They also reported that adding users' affective states as an additional interaction increased engagement of the VP and helped them build connections with the VP.; Conclusions: The emotionally responsive VP seemed to be functionally complete and usable. However, some technical limitations need to be addressed before the system's official implementation in real-world clinical practice. Future development will include improving the accuracy of the speech recognition system, using more sophisticated emotion sensing software, and developing a natural user interface.; Competing Interests: The authors declare no conflict of interest. (Copyright © 2023 Society for Simulation in Healthcare.)

DOI: 10.1097/SIH.0000000000000730

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=cmedm&AN=37651599&site=eds-live>

42. Who Pays the High Price of Failing to Integrate Evidence-Based Feedback Processes in Medical Education?

Item Type: Journal Article

Authors: Zetkulic, Marygrace and Sargeant, Joan

Publication Date: 2024

Journal: Academic Medicine : Journal of the Association of American Medical Colleges 99(8), pp. 819

DOI: 10.1097/ACM.0000000000005768

URL: <https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=cmedm&AN=38739732&site=eds-live>

43. Unveiling the Evolution of Virtual Reality in Medicine: A Bibliometric Analysis of Research Hotspots and Trends over the Past 12 Years

Item Type: Journal Article

Authors: Zuo, Guangxi;Wang, Ruoyu;Wan, Cheng;Zhang, Zhe;Zhang, Shaochong and Yang, Weihua

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Abstract: Background: Virtual reality (VR), widely used in the medical field, may affect future medical training and treatment. Therefore, this study examined VR's potential uses and research directions in medicine. Methods: Citation data were downloaded from the Web of Science Core Collection database (WoSCC) to evaluate VR in medicine in articles published between 1 January 2012 and 31 December 2023. These data were analyzed using CiteSpace 6.2. R2 software. Present limitations and future opportunities were summarized based on the data. Results: A total of 2143 related publications from 86 countries and regions were analyzed. The country with the highest number of publications is the USA, with 461 articles. The University of London has the most publications among institutions, with 43 articles. The burst keywords represent the research frontier from 2020 to 2023, such as "task analysis", "deep learning", and "machine learning". Conclusion: The number of publications on VR applications in the medical field has been steadily increasing year by year. The USA is the leading country in this area, while the University of London stands out as the most published, and most influential institution. Currently, there is a strong focus on integrating VR and AI to address complex issues such as medical education and training, rehabilitation, and surgical navigation. Looking ahead, the future trend involves integrating VR, augmented reality (AR), and mixed reality (MR) with the Internet of Things (IoT), wireless sensor networks (WSNs), big data analysis (BDA), and cloud computing (CC) technologies to develop intelligent healthcare systems within hospitals or medical centers. ABSTRACT FROM AUTHOR]; Copyright of Healthcare (2227-9032) is the property of MDPI and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use. This abstract may be abridged. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material for the full abstract. (Copyright applies to all Abstracts.)

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