

Session L2

L2.1 Evaluation of the impact of dementia education on student diagnostic radiographers' knowledge, confidence and attitudes towards dementia

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Background: Radiographers lack confidence in caring for people with dementia, and people with dementia report negative experiences during imaging (Challen et al 2018). The incidence of dementia is increasing but there is a lack of Radiography-specific dementia training, and there is no standardised approach amongst pre-registration programmes in the UK (Higgins et al 2023).

We designed, implemented and evaluated a bespoke dementia education package for undergraduate diagnostic radiography students, comprising of a lecture and authentic clinical simulation and co-produced with people living with dementia.

Method: The sample was 2nd year undergraduate Diagnostic Radiography students at a UK HEI who undertook the education package as part of one of their modules. Pre and post intervention survey with closed and open-ended questions were used to evaluate the efficacy of the radiography dementia education package, including pre-defined knowledge, confidence and attitudes scales.

Results: Prior to the education students reported a lack of knowledge and confidence when imaging people with dementia, highlighting a lack of training and experience. Students reported increased confidence in working with people with dementia after the education. Most preferred the simulation, giving reasons such as liking the opportunity to interact with real people with dementia and receive feedback about their practice.

Conclusion: Students benefit from authentic training on dementia care. We developed an effective educational intervention which was rated positively by students. Co-production with service users was crucial to developing student's interpersonal skills. A similar model could be adopted in other diagnostic radiography and healthcare programmes.

References

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L2.2 The perceived confidence of diagnostic radiography students in providing preliminary clinical evaluation: a mixed method, single institution study

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Background: The Society and College of Radiographers recommend preliminary clinical evaluation (PCE) to reduce image interpretation errors within emergency departments. The uptake of PCE has been slow, leading to disparity in the clinical experience student radiographers receive. This study aimed to explore the confidence of diagnostic radiography students in producing PCE and to provide the rationale behind their ratings of perceived confidence.

Method: A convergent mixed methods design was utilised. Data collection was via an online cross-sectional questionnaire and in-person focus groups. Quantitative data were analysed descriptively and via non-parametric methods. Qualitative data were analysed using thematic analysis.

Results: 43 participants completed the questionnaire (37%) with 9 participating in the focus groups. Confidence was consistently highest for fracture identification and lowest for PCE across all radiograph types. Confidence was highest for appendicular radiographs, then axial and lowest for paediatric across fracture identification, red dot, and PCE. Those with PCE experience were significantly readier to participate in a PCE system than those without ($p=0.002$). Confidence was significantly lower in the clinical environment compared to the university for all conditions ($p<0.006$). Four main themes were identified: Confidence aligns with experience; Confidence suffers due to environmental pressures; Challenges with image interpretation and writing PCE; Unsatisfactory PCE exposure and education.

Conclusion: Diagnostic radiography students at this institution are generally confident in their fracture identification abilities, however, they are considerably less confident in their PCE ability. PCE confidence is affected by clinical and university experience, anatomy location, and environmental pressures.

L2.3 As clinical supervisors are you doing enough? Understanding student radiographers' first experience of encountering open wounds

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Background Student radiographers find working with trauma patients difficult, yet clinical staff perceive students' abilities differently, expecting them to rise to the challenge (Shiner 2019; Hyde, 2015). The dissonance between this perception and students' experiences can alter the support delivered. Understanding first-year students' experiences when seeing open wounds and sharing this knowledge with clinical partners serves to strengthen relationships, offering a cohesive support network for the students.

Method First year diagnostic radiography students (n=97) completed visual analogue scales to record their emotions when seeing their first open wound, analysed using SPSS. Seven students attended an interview to further evaluate their experiences. Interviews were analysed using an interpretative phenomenological approach. Merging of the quantitative and qualitative data using a convergent design generated meta-inferences.

Results Five master superordinate themes were developed from the interviews: experiencing a new environment, navigating new relationships, preparation, engagement with wound and emotional management. Further analysis led to the development of three meta-inferences: simulation to reality, knowledge is power, and emotional support. The latter two will be the focus of the presentation.

Conclusion Students suffered from increased anxiety and a lack of closure due to limited debriefing. Students were left working through their emotions individually, feeling more comfortable 'offloading' with peers. There is a risk if emotional support and knowledge are insubstantial, first-year students may be on a journey to emotional exhaustion, leading to burnout and ultimately reducing the level of care received by the patient.

References

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2) Shiner N. (2019) Can Simulation impact on first year diagnostic radiography students' emotional preparedness to encounter open wounds on their first clinical placement: A pilot study. *Radiography*. Vol. 25 (4) pp. 294-300. <https://doi.org/10.1016/j.radi.2019.04.009>

L2.4 Find the gap - the potential perils of self-reported training needs in the clinical environment

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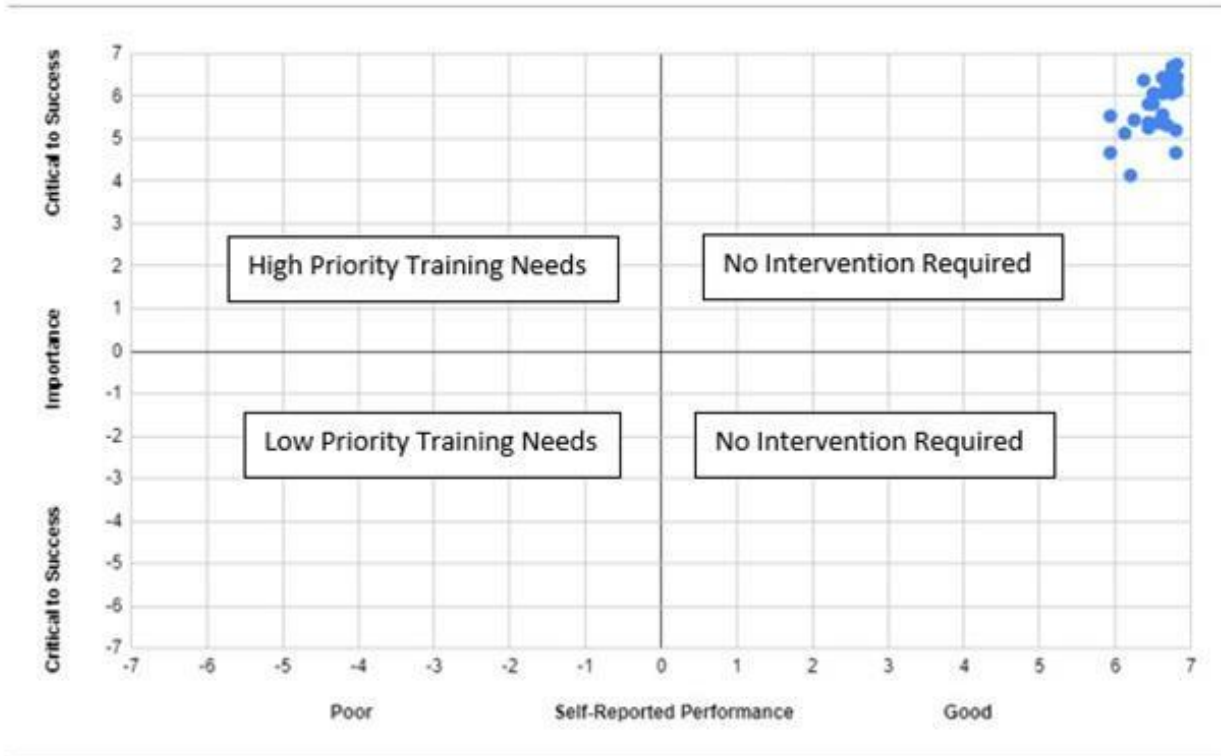
Background: Healthcare professionals often work between areas that require distinct knowledge, skills and competence [1]. In radiotherapy, one of these areas is pre-treatment CT. IR(ME)R stipulates that employers must ensure that staff carrying out an exposure are "adequately trained [4]." So, when anecdotal evidence suggested training needs on CT, a working group was formed with the aim of formally capturing these needs.

Method: The pre-validated WHO Hennessy-Hicks Training Needs Analysis Questionnaire was adapted for local use. It was piloted with staff of different grades for clarity and suitability. It asked respondents to rate both the importance of a range of CT tasks and their own ability to perform each task on a scale of 1-7. Self-assessment is a cornerstone of professional practice. The GMC, NMC, HCPC, IPEM and SOR all require registrants/members to recognise the limits of their own competence [2,3,5,6,9]. Results were analysed as per the Hennessy-Hicks Training Needs Analysis Questionnaire and Manual [7].

Results: Gaps were noted. However, when plotted as the questionnaire developers suggest, results showed no intervention was required. This was unexpected and led to a further evaluation of the literature. Studies suggest that self-reported confidence is rarely a predictor of clinical competence [8]. However, we routinely depend on self-reported data as a time and resource efficient way to identify gaps in knowledge.

Conclusion: Although limited as a single-institution study with a small sample size (n=16), in the context of the literature our experience demonstrates the potential for self-reported training needs to mis-represent actual training needs.

Table



References

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L2.5 The student perspective of a research-informed teaching activity using simulation

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Background: The opening of our new £3 million Centre for Medical Imaging offered a novel opportunity for students to undertake a research-informed teaching activity to design a survey tool and collect data that compared the two new X-ray imaging rooms while wearing sensory equipment to simulate what a person living with dementia might experience in each room. One of the imaging rooms has been designed to be dementia-friendly, with the other being a standard clinical design.

This presentation reports the evaluation of the student perspective of this group-based, research-informed teaching activity that used simulation.

Method: This was a multi-method, two-phase (online survey followed by an asynchronous focus group) qualitative research study. The New World Kirkpatrick Model formed the theoretical framework to evaluate the student experience.

Findings and Discussion: 21 out of 71 students completed the survey, with 7 students participating in the asynchronous online focus group.

We found that students overwhelmingly agreed that this activity had enhanced their learning and developed their self-efficacy with research skills. The use of simulation was seen as a key attribute in their learning and as part of their professional practice in optimising person-centered dementia care within the imaging department. Being able to undertake the research as a group was also identified as a key factor in supporting student learning.

According to Jenkins and Healy [1], all undergraduate students should experience learning about research. The introduction of learning activities that combine research and teaching can have a positive impact on student learning and employability skills.

References

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L2.6 Building autonomy - evaluating the impact of a simulated placement for final year diagnostic radiography students

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Background Simulated practice education has been demonstrated to effectively prepare students for the transition from student to qualified practitioner (Hough et al., 2019) and is a valuable pedagogical approach for diagnostic radiography (DRAD) education. This approach ensures a secure and consistent learning environment, fostering active learning and competency building without compromising patient safety, (Tuttle and Horan 2019). Previous research acknowledges the efficacy of simulated placements in enhancing preparedness of first-year DRAD students for clinical practice (Partner et al 2022). A gap remains in understanding the impact of such placements for final-year students on their transition to autonomous practitioner.

Method Final-year DRAD students completed a two-week simulated placement involving clinical scenarios with actors, e-learning and reflective activities. Debriefing played a crucial role in enriching the learning experience (Zhang et al. 2019). Students completed an evaluation questionnaire. A Likert scale and open-ended questions for qualitative insights were used. Data was analysed using descriptive and thematic analyses.

Results Fifteen students from a cohort of 49, completed the questionnaire. The majority of respondents recognised the value of the simulated placement in enhancing their development as radiographers. Participants found the simulation weeks engaging and interesting, with positive impacts on their clinical skills, communication and reflective skills. Participants felt the experience contributed to a deeper understanding of professional behaviours and expectations, and had enhanced their confidence for autonomous practice.

Conclusion Despite a small number of respondents, findings suggest that a well-structured simulated placement for final-year DRAD students can significantly contribute to their development as autonomous practitioners.

References

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