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Comparison of student radiographers abilities to estimate distance, accurately collimate the x-ray beam and their knowledge of equipment in a real x-ray room after training with a screen based computer simulator

Submission date 28/07/2009	**Recruitment status** No longer recruiting	[_] Prospectively registered [_] Protocol [_] Statistical analysis plan [_] Results [_] Individual participant data [_] Record updated in last year
Registration date 26/10/2009	**Overall study status** Completed	
Last Edited 21/07/2016	**Condition category** Other	

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
128/08

Study information

Scientific Title
Prospective monocentric blinded randomised controlled trial of a tutor-facilitated screen-based computer simulated virtual radiographic environment compared with tutor-supported groupwork in a radiography skills lab

Acronym
SIMXRAY

Study objectives
Training in a screen based computer simulated virtual radiographic environment improves participants distance estimation, collimation accuracy and equipment knowledge as measured in a real x-ray room.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Teesside University School of Health and Social Care Research Governance and Ethics Committee, 29/07/2008, ref: 128/08

Study design
Prospective single centre single blinded randomised within-subject repeated measures experimental trial

Primary study design
Interventional

Study type(s)
Diagnostic

Health condition(s) or problem(s) studied
Radiography skills training

Interventions
The intervention group will attend eight hours of screen-based computer simulation workshops (n = 20) facilitated by a tutor. There will be sessions, split into three 45-minute labs, once a week for three weeks (the simuation is a commercially available product, ProjectionVR 3.3, offered by Shaderware Ltd, UK).

The control group will participate in nine hours of small group skills labs in a real radiography room (n = 6) facilitated by a tutor. There will be an initial one hour introduction, followed by two four hour labs; session frequency varies due to individual small group timetables. All three sessions will be completed within four weeks.

During this trial period, both groups will attend all other lectures on the course as normal, but this will not include any further time in the radiography room or in clinical placement.

Intervention Type

Other

Phase
Not Applicable

Primary outcome(s)
1. Ability to name five parts of real radiography equipment as indicated by the assessor
2. Skill in using equipment in a real radiography room, measured by time taken to complete two standardised tasks
3. Ability to estimate source to image distance and collimate to specific standard sizes, observed by measuring set areas and distances against the target areas and distances

These observations will be repeated before and after the interventions. Participants will be given the opportunity to provide a written comment on both methods of learning at the end of the trial, this will not exceed 200 words.

Key secondary outcome(s))
No secondary outcome measures

Completion date
11/11/2010

Eligibility

Key inclusion criteria
Two cohorts (approximately 40 students each) enrolled on a pre-registration diagnostic radiography course will be offered the chance to volunteer. All aged 18 - 50 years, both male and female.

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex
All

Key exclusion criteria
1. No previous experience in a radiographic environment
2. Capable of giving informed consent

Date of first enrolment
22/09/2009

Date of final enrolment
11/11/2010

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Teesside University
Borough Road
Middlesbrough
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Sponsor information

Organisation
Teesside University (UK)

ROR
https://ror.org/03z28gk75

Funder(s)

Funder type
University/education

Funder Name
Teesside University (UK)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes