Design and Evaluation of a Simulation-Based Clinical Correlation Pedagogy in an Anatomy Curriculum for First Year Medical Students in Malaysia

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Abstract Author Details

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Needs & Objectives

The launch of Perdana University Graduate School of Medicine (PUGSOM) in Malaysia necessitated development of a curriculum for the instruction of anatomy, the introductory course taught to the inaugural class of first year medical students. It is a non-cadaveric course, teaching surgical and radiologic approaches to anatomy. We designed and implemented 5 weekly simulation-based clinical correlations as part of the anatomy curriculum to emphasize and reinforce the clinical relevance of anatomy.

Setting & Participants

The simulation-based clinical correlation anatomy curriculum non-cadaver anatomy was developed and instructed to the PUGSOM inaugural class of 2015. Twenty-four students comprised this first class. There were five core faculty members and two invited guest lecturers from JHUSOM.

Description

Students rotate through three stations utilizing high fidelity mannequins and partial task trainers designed around major anatomical regions being taught in anatomy. Curriculum evaluation for each session includes pre- and post-tests and qualitative evaluations of curricular efficacy using questions based on five-point Likert scales and open-ended questions. An overall curriculum evaluation consisting of questions based on five-point Likert scales and open-ended questions was also administered and collected.

Evaluation

An average of 23.6 of the 24 students completed each of the 5 sessions. Overall, the mean pre-test score was 49.6% versus 90.5% on the post-test. For each of the 73 learning objectives associated with the 15 different stations, a mean of 96.10% of the students either agreed or strongly agreed that station met the stated objective. In terms of the final evaluation all 24 students either agreed or strongly agreed that the clinical correlation curriculum improved their understanding of anatomy, demonstrated how anatomy is relevant to clinic medicine, was an engaging way to learn anatomy, was a useful component of the course, and should be included as part of next year's anatomy.

Lessons Learned

Simulation-based clinical correlate modules can teach students key anatomical concepts and demonstrate clinical relevance of anatomy in a format that is well received by students. Simulation represents an effective teaching modality within pre-clinical curricula.