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Effectiveness of conducting Online Objective Structured Practical Examination (OSPE) in Anatomy among 1st Year Medical Undergraduates of University of Peradeniya

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Abstract

With the Covid 19 pandemic, along with the world, the Faculty of Medicine, University of Peradeniya transferred to online methods of teaching Anatomy. As the next challenge was conducting online examinations, experimentally, 222 first-year medical undergraduates who had undergone exclusively online learning for one semester where foundation to human anatomy and anatomy of limbs were taught, were subjected to an online OSPE (Objective Structured Practical Examination). This was conducted as a cross-sectional study with descriptive and analytical components. Following a 2-week prior notice, an OSPE prepared by the academic staff members was conducted via a conferencing platform. Subsequently, student feedback was obtained via a google form regarding accessibility, preparedness, content, questions, images, and exam experience. SPSS Version 25 was used for descriptive analysis and one-sample T-test was used to compare the results with a previous batch that underwent onsite face-to-face teaching and examinations. Most students used laptop computers and personal Wi-Fi connections. More than half (63.1%) were comfortable taking the test via their personal devices. Satisfaction with images of gross anatomy specimens, radiographs, and histology slides were 48.2%, 90.5%, and 76.6% respectively. A majority agreed that the OSPE helped them to improve their knowledge (92.8%) and intrigued interest in the subject, motivating them to study (83.8%). Compared to a previous batch that underwent onsite teaching and examination, the performance of the students in this group was significantly lower ($p<0.001$). This may be due to learning anatomy only using online platforms hindering the three-dimensional understanding of Anatomy, short preparation time, and inexperience at facing online examinations. Even though technology-based learning and examination techniques have developed with the recent COVID 19 pandemic, it cannot yet replace the traditional methods in teaching and examination in Anatomy which agrees with recent studies in other countries (Sadeesh et al., 2021, Hanafy et al., 2021). However, this study shows that conducting online examinations is feasible with only 34.7% of students reporting minor technical difficulties. To our knowledge, this experiment is the first to evaluate online anatomy OSPE examinations in Sri Lanka and was a success since it helped us motivate students and identify the drawbacks and problems in conducting online examinations.

Keywords: *Anatomy learning, online examinations, medical education*

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