Satisfaction Among Preclinical Medical Students with Low-Fidelity Simulation-Based Learning

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Abstract : Simulation is defined as a technique that replaces or expands real experiences with guided experiences that interactively imitate real-world processes or systems. Simulation enables learners to train in a safe and non-threatening environment. For decades, simulation has been considered an integral part of clinical teaching and learning strategy in medical education. The several types of simulation used in medical education and the clinical environment can be applied to several models, including full-body mannequins, task trainers, standardized simulated patients, virtual or computer-generated simulation, or Hybrid simulation that can be used to facilitate learning. Simulation allows healthcare practitioners to acquire skills and experience while taking care of patient safety. The recent COVID pandemic has also led to an increase in simulation use, as there were limitations on medical student placements in hospitals and clinics. The learning is tailored according to the educational needs of students to make the learning experience more valuable. Simulation in the pre-clinical years has challenges with resource constraints, effective curricular integration, student engagement and motivation, and evidence of educational impact, to mention a few. As instructors, we may have more reliance on the use of simulation for pre-clinical students while the students' confidence levels and perceived competence are to be evaluated. Our research question was whether the implementation of simulation-based learning positively influences preclinical medical students' confidence levels and perceived competence. This study was done to align the teaching activities with the student's learning experience to introduce more low-fidelity simulation-based teaching sessions for pre-clinical years and to obtain students' input into the curriculum development as part of inclusivity. The study was carried out at International Medical University, involving pre-clinical year (Medical) students who were started with low-fidelity simulation-based medical education from their first semester and were gradually introduced to medium fidelity, too. The Student Satisfaction and Self-Confidence in Learning Scale questionnaire from the National League of Nursing was employed to collect the responses. The internal consistency reliability for the survey items was tested with Cronbach's alpha using an Excel file. IBM SPSS for Windows version 28.0 was used to analyze the data. Spearman's rank correlation was used to analyze the correlation between students' satisfaction and self-confidence in learning. The significance level was set at p value less than 0.05. The results from this study have prompted the researchers to undertake a larger-scale evaluation, which is currently underway. The current results show that 70% of students agreed that the teaching methods used in the simulation were helpful and effective. The sessions are dependent on the learning materials that are provided and how the facilitators engage the students and make the session more enjoyable. The feedback provided inputs on the following areas to focus on while designing simulations for pre-clinical students. There are quality learning materials, an interactive environment, motivating content, skills and knowledge of the facilitator, and effective feedback.