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Empowering Nursing through Virtual Simulation for Enhanced Learning and Care Quality (ENViSion Project)

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ABSTRACT

Virtual simulation technologies are emerging as essential tools in nursing education, offering safe and interactive environments to support clinical training. This study explored and characterized the use of the BodyInteract virtual simulator in nursing education and assessed students' perceptions of its role in learning. Using a mixed-methods design, the study analyzed data from 328 final-year nursing students actively using the platform, with 75 completing an online questionnaire comprising Likert-scale items and open-ended questions. Platform usage reports, including metrics such as simulation completion rates and time spent, were also reviewed. Students perceived the simulator as a valuable tool for bridging theoretical and practical knowledge, particularly in enhancing their confidence and understanding of clinical scenarios. The qualitative analysis highlighted positive feedback on the simulator's interactivity and alignment with real-world care situations, while also identifying areas for improvement, such as more seamless integration into existing curricula. This study provides valuable insights into the application of virtual simulation in nursing education and emphasizes the importance of incorporating student feedback to optimize its pedagogical impact. Future work should focus on refining simulator-based learning frameworks and exploring its long-term benefits for developing clinical competencies and care quality.

Keywords: Education; technology; nursing students; digital pedagogy; student perceptions.