Mindful Moments—Enhancing Deliberate Practice in Simulation Learning

Stress is a significant factor in the effectiveness of simulated learning experiences (Cantrell, Meyer, & Mosack, 2017; Shearer, 2016). Affected by stressors, students' mental energies are drawn away from actively engaging in deliberate practice opportunities. By decreasing students' overall stress levels, we theorized that their performance would improve. Examples of improved performance included increased engagement in deliberate practice activities, improved critical thinking, and improved time management skills within a simulation learning environment. We also believed that if students could focus more intentionally on the simulations, the overall learning experience could be enhanced.

A quasi-experimental approach was used to evaluate the effectiveness of a presimulation mindfulness activity in relation to student stress and performance. Mindfulness calls for purposeful attention, being present in the moment, and being non-judgmental to the experience around us (Kabat-Zinn, 2003). For our study, a 2-minute guided mindfulness activity was used to decrease stress and increase engagement. At the onset of each simulation learning experience, during the prebrief exercises, students were invited to participate in a guided mindfulness activity. Faculty facilitating the prebriefing used a standardized script, which was created by a faculty member with expertise in guided meditation. The meditation activity invited participants to close their eyes, or lower their gaze, and led them through a period of relaxation and focus, calling for them to turn their attention to their breathing and bodily sensations. After the activity was completed, students were given 1 minute to open their eyes and gather themselves before transitioning into the simulation learning activities.

A convenience sample of approximately 120 students was drawn from a fourth-year undergraduate nursing course that included weekly simulation learning activities. Students were assigned into control or intervention groups based on their class section registration. The mindfulness activity was offered to all students in the intervention groups. After introducing meditation into the prebriefing, faculty reported that students transitioned into the simulation learning activity visibly more relaxed, engaged, and demonstrated enhanced deliberate learning practices. Students also described feeling more relaxed following the mindfulness activity. Students reported that distractions from stressors external to the simulation learning experience were also reduced. As the course progressed, students would spontaneously begin to prepare for meditation by dimming the lights and getting settled.

After completion of the simulation, the NASA Taskload Index was administered. This is a self-reporting tool that measures mental, physical, and temporal demands, performance, effort and frustration experiences on a Likert scale from 1 (*lowest demand*) to 10 (*highest demand*). Intervention group responses demonstrated statistically significant results with decreases in temporal demands ($p < .05$) and effort ($p < .01$) in all simulations. Frustration levels were reduced ($p < .01$) in the conflict resolution simulation.

In addition to the quantitative data from the NASA Taskload Index, faculty also were able to compare their observations of these students to those in previous classes who did not have a mindfulness activity as part of their simulation learning prebriefings. Previous student groups demonstrated nonpurposeful behaviors indicative of high levels of unfocused energy and an almost palpable buzz in the room prior to simulation. During this time, students would repeatedly ask similar questions, express nervousness, and have side conversations about other courses and various aspects of their personal lives.

Once the initial script was written, this strategy required a minimal investment of time and energy. The strategy of using a mindfulness technique in the prebriefing period of simulation has shown great benefit to our students. Although guided mindfulness may not be appropriate or effective in all courses or for all participants, its inclusion in prebriefing activities for potentially high-stress simulation activities may have positive effects with minimal investment. We believe the use of mindfulness has strong promise in simulation and potentially other areas of postsecondary education.

References

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