

Evaluating the Efficacy of a Mindfulness Mobile Application for Stress Reduction in Nurses in 2 Community Hospitals

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Purpose & Background: Purpose: Test the efficacy of the Whil App programs for stress reduction among practicing nurses. Study aim: To determine whether there was a change in the Nurse Stress Scale (NSS) over time after using the Whil app and determine whether there was a change in the Mindful Attention Awareness Scale (MAAS) over time after using the Whil app.

Research questions: 1). Does participating in the Whil 8-week mindfulness training program utilizing a mobile App geared towards health care providers decrease stress in nurses as measured by the Nurse Stress Scale (NSS)? 2). Does participating in an 8-week mindfulness training program utilizing a mobile App geared towards health care providers increase mindfulness as measured by the Mindfulness Attention Awareness Scale (MAAS)? 3). Will the decrease in stress level and the increase in mindfulness be maintained at the 3-month post intervention point? Rationale: Nursing is a notoriously high stress, emotionally taxing and physically draining profession with a high incidence of burnout. Work-related stress among nurses is estimated to be the biggest occupational health problem after musculoskeletal disorders.

Methods: This is a multi-site study utilizing quasi-experimental design. The sample size (n=71 for each hospital) consideration was based on primary outcome, nurse stress score, and an estimated potential 50% drop out rate and 17.5% ineligible respondent rate. The statistical method was linear mixed model. The secondary outcome was mindfulness score. Participants stress level was measured using Nurse Stress Scale at 3 points, baseline prior to, 4 weeks after receiving access, 8 weeks after receiving access and 3 months after access was closed. The participants level of mindfulness was measured using the Mindful Attention Awareness Scale.

Results: Results showed a decrease in stress level in nurses at 2 community hospitals. The “P” Hospital’s NSS score decreased from 1.85 ± 0.36 at baseline to 1.80 ± 0.37 at follow-up. The “S” Hospital’s NSS score decreased from 1.77 ± 0.46 at baseline to 1.72 ± 0.31 at follow-up.

The results showed an increased mindfulness at 2 hospitals after staff participation in the 8-week training program utilizing the mindfulness application. The “P” hospital’s MAAS score increased from 3.94 ± 1.16 at baseline to 4.23 ± 1.07 at follow-up. The “S” hospital’s MAAS increased from 4.34 ± 0.97 at baseline to 4.41 ± 0.94 at follow-up. The decrease in stress level and increased mindfulness was maintained at a 3-month post intervention point at each community hospital.

Discussion/Conclusion: A mindfulness mobile app can be an effective tool used for stress reduction in nurses. When correlating the findings with the demographics we found that longer shift increased nurse stress. Some NSS Subscales found to be significant in Linear regression Model.

Next steps: Recommend for the future an experimental design with a control group and randomized sample to move this descriptive study to a more rigorous one. Study was carried out during the COVID pandemic, and we found a large drop out and attrition rate.