Resilience Building Through Stress Management for Staff Nurses

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Purpose: Nursing is not only physical work, but emotionally stressful. Stressful work environments have been shown to lead to burnout and high turnover in nurses (Adriaenssens, De Gucht, & Maes, 2015). Emotional labor imbues all aspect of nursing work including communications with patients, patients’ family members, and inter- and intra-professional colleagues (Delgado, Upton, Ranse, Furness, & Foster, 2017). Emotional dissonance from denying one’s distress and acting calmly during emotional situations can lead to stress and burnout (Delgado, et. Al, 2017). Increased resilience may protect nurses against the effects of stress. While resilience is the ability to recover quickly from a challenging situation, stress management is being able to cope with an acutely stressful situation. Resilience has been shown to both prevent the development of burnout by relieving work stress, and to directly relieve work stress; it is a moderating factor between stress and burnout (Hao, Hong, Xu, Zhou & Xie, 2015). Therefore, interventions were selected that were meant to manage immediate stress levels. Stress reduction interventions supported by literature include guided meditation (Delgado et al., 2017), deep breathing (Varvogli & Darviri, 2011), gaming (Kappil & Sathiayaseelan 2015), Sudoku (Danesi, 2009), lavender aromatherapy (Chen & Fang, 2015) and adult coloring books (Beck, 2015). The purposes of this multi-site study were to determine if nurses using a toolkit of stress reduction activities increased in resiliency over a 4 week period, and to identify activities that were used most often.

Methods: A quasi-experimental pre- and post- test interventional study using within subjects design was used. Interventions in the toolkit included: guided meditation smartphone app, deep breathing smartphone app, gaming smartphone apps, Sudoku and mind game book, lavender aromatherapy, and an adult coloring book with pencils. IRB approval was granted. A sample of 142 registered nurses on staff at four hospitals in a southern US city was recruited using posted flyers on their units, and informed consents were obtained. Nurses were all from low acuity units, and most worked full-time. The intervention consisted of a toolkit including a) guided meditation smartphone app, b) deep breathing smartphone app, c) gaming smartphone apps, d) Sudoku and mind game book, e) lavender aromatherapy, and f) adult coloring book with pencils. Data were collected in late 2017 and early 2018 using Qualtrics survey software. Participants accessed their survey using a unique link. Demographics and a Connor-Davidson Resiliency Scale (CDRISC) (Connor & Davidson, 2003) were obtained at baseline. Once an intervention was used, participants completed an investigator created survey for each shift for a total of 10 shifts within a 6-week period. After 10 shift surveys were completed, the participants completed a CDRISC post-test.

Results: Ninety subjects completed all 10 shift surveys, with 70 also completing the post-test. The majority of participants worked during the day shift (60.4%), and were BSN graduates (55%). A paired t-test on the pre/post CDRISC scores showed a significant difference after the use of the tools (p<0.02, df 72, t -2.37). Outside stressors and other variables, including demographics, were not related to the CDRISC scores. Subjects used the interventions more frequently and spent more time using them as the study progressed. Further, 97.1% reported a desire to continue using the interventions. The top four activities were: deep breathing 83.1%, lavender aromatherapy 57.7%, guided meditation 29.6% and gaming (Bejeweled) 28.2%

Conclusions: The two most accessible and expeditious interventions were also the most popular (breathing exercises and a lavender inhaler). Having stress management activities readily available during work hours was shown to increase resiliency scores in a six week period. Stress and burnout have been shown to cause loss of nursing staff (Adriaenssens, De Gucht, & Maes, 2015; Delgado et. al, 2017).
Offering a means of addressing stress during work hours appears to lead to increased resiliency which may decrease burnout. Making a culture change in hospitals to not only acknowledge but address work place stress may result in higher retention rates and a healthier workplace environment.

Title:
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References:


Hao, S., Hong, W., Xu, H., Zhou, L., Xie, Z. (September, 2015). Relationship between resilience, stress and burnout among civil servants in Beijing, China: Mediating and moderating effect analysis. Personality and Individual Differences, 83, 65-71. [https://doi.org/10.1016/j.paid.2015.03.048](https://doi.org/10.1016/j.paid.2015.03.048)


Abstract Summary:
This study provided 240 staff nurses in low acuity settings with a tool kit of items they could use when feeling stressed at work. Subjects reported decreased stress after using the tools. Over time, resilience scores increased, subjects used the tools more frequently and for longer periods of time.

Content Outline:

1. Background
   - Impact of stress
     - On people
     - On nurses
     - Relationship to burnout and nurse retention
     - Relationship to resilience
   - Review of literature
     - Interventions
2. Aims
   - To determine if a toolkit of stress reduction activities increased resiliency over a 6 week period.
   - To identify activities that were used most often.
3. Sample
1. 142 registered nurses on staff at four hospitals in a southern US city.
   Recruited from low acuity units

4. Methods
   A quasi-experimental pre- and post- test interventional study using within subjects design was used.
   - Interventions
     - guided meditation smartphone app,
     - deep breathing smartphone app,
     - gaming smartphone apps,
     - Sudoku and mind game book,
     - lavender aromatherapy, and
     - adult coloring book with pencils.
   - Data collected in late 2017-early 2018 using Qualtrics survey software.
   - Demographics and Conner-Davidson Resiliency Scale (CDRISC; Conner & Davidson, 2003) collected at T1
   - 10 shift surveys collected
   - Final CDRISC post-test at T12

5. Results
   70 subjects completed the post-test
   - A paired t-test on the pre/post resiliency scores showed a significant difference after the use of the tools (p<0.02, df 72, t-2.37).
   - Outside stressors and demographics/variables were not related to the CDRISC scores.
   - Subjects used the interventions more frequently and spent more time using them as the study progressed.
   - 97% reported a desire to continue using the interventions.
   - The top four activities were: deep breathing 83.1%, lavender aromatherapy7%, guided meditation 29.6% and gaming (Bejeweled) 28.2%.

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