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Effectiveness of Using an App to Teach Mindfulness Meditation to Nurse Residents

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Stress and burnout are recognized as common problems for those working in today's challenging healthcare environment. With nurses being the largest component of healthcare workers these problems are of particular concern for the nursing profession. Although research has been limited in the area of mindful practices and safety in healthcare, there is growing evidence that cultivating mindfulness can reduce stress, improve communication and outcomes and lead to less errors and an overall safer patient care environment.

Understandably, transition to practice in their first nursing job can be an exciting yet sometimes stressful time for newly licensed registered nurses. Role conflict, stress, burnout, emotional exhaustion and incivility can be problems for new nurses and can lead to turnover or even flight from the profession. To help facilitate this transition, nurse residency programs have been developed. These programs provide a structured orientation and preceptorship program with educational and supportive activities. They typically last longer than other new employee orientations, from 6 months to a year. A search of the literature regarding integration of mindfulness education and practice into these programs revealed little existing literature.

Purpose:

The purpose of this study is to evaluate the feasibility and acceptability of using mindful meditation app as part of nurse residency program. The primary aims/hypotheses are 1. To examine feasibility of using a meditation app as assessed by overall participation rate in this research study on mindfulness meditation. 2. To examine acceptability of this meditation program over two months, based on number of days per week that participants record at least one meditation session. For these primary aims, feasibility is defined as $\geq 80\%$ study participation of the eligible nurse residents. Acceptability is defined as 50% or more of the participants using the app at least 3 times per week over 2 months. Based on the above aims it is hypothesized that the use of a meditation app by Nurse Residents will be found feasible and acceptable.

Methods:

This study uses a mixed-methods design incorporating quantitative research instruments and qualitative journals and focus groups. The study instruments are a demographic questionnaire, Perceived Stress Scale (PSS) and Mindful Attention Awareness Scale (MAAS). The study procedures are that during the first month of the Nurse Residency program the researcher meets with the Nurse Residents to explain the study. Informed consent is obtained from the Nurse Residents willing to participate. The questionnaires are then completed. The participants are assisted with downloading the free meditation app from Insight Timer. The investigator then conducts a brief class on mindfulness meditation. This is followed by a group practice session with the meditation app. Participants are asked to do the meditation app at least once a day and a minimum of three days per week. The participants are given a small notebook to journal their meditation practices and a guide for what to include. A second session is held at the end of the third month of the Nurse Residency Program. At this session participants are again given the PSS and MAAS instruments to complete and then participate in a focus group session using structured interview questions.

Data analysis will provide descriptive statistics (means, medians, frequencies, percentages) in meditation app usage for day of the week, work day vs non-work day, time of day, and number of times per day. Trends in usage over the course of the study will be explored to see if usage changed over time. In addition, descriptive statistics (e.g. means, medians) will be used to assess the scores from the Perceived Stress Scale and Mindful Attention Awareness Scale at the end of the first month of the residency program (at enrollment) and at the end of the third month of the residency program (at focus group session). Median changes of these scores will be determined, and the Wilcoxon signed-rank test (non-parametric version of paired t-test) will be used to look for pre-post differences. Qualitative data from the journals and focus groups will be evaluated systematically by the investigators using thematic analysis.

Results:

The study began with the spring 2018 cohort of Nurse Residents. Five Nurse Residents to date have completed the study procedures and an additional five are currently in progress. One NR in the first cohort declined to participate and another dropped out due to not feeling she could complete the study procedures. The study will be ongoing until a minimum of twenty Nurse Residents complete the procedures for this feasibility and acceptability study. At that point the study team including the statistician will determine if additional data is needed or whether study procedures should be modified.

Preliminary findings to date are that the first cohort of Nurse Residents found the meditation app easy to use and helpful. They primarily used it before bedtime. Mean and median for the two study instruments were calculated for the first cohort as follows: Perceived Stress Scale Baseline – mean 30.4, median 30; PSS Post – mean 29.8, median 30; Mindful Attention Awareness Scale Baseline – mean 60, median 56; MAAS Post – mean 71.6, median 72. The journaling procedures were not complied with well by the first cohort of participants; additional guidance and encouragement to complete the journaling will be given to future participants.

Conclusion: Results to date indicate that the use of an app for mindfulness meditation practice may be useful to Nurse Residents. Further data collection and analysis will be done as this study is completed.

Title:

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Applicable category:

Academic, Researchers

Keywords:

Mindfulness Meditation, Nurse Residents and Stress

References:

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Abstract Summary:

This poster presents preliminary findings from a study evaluating the feasibility and acceptability of a mindfulness meditation practice delivered by an app for Nurse Residents (Registered Nurses recently graduated and new to practice). This study uses a mixed-methods design incorporating quantitative research instruments, journaling and a focus group.

Content Outline:

I. Introduction

- a. Stress and burnout among new nurses
- b. Nurse Residency program description

II. Innovation/Intervention: Mindfulness Meditation App

III. Study Purpose and Aims

- a. Examine feasibility and acceptability of using a meditation app with Nurse Residents
- b. Summarize trends in Nurse Resident use of a meditation app
- c. Explore levels of perceived stress and mindful attention awareness in Nurse Residents

IV. Study Design and Methodology

- a. Mixed-methods design
- b. Quantitative research instruments
- c. Qualitative journals and focus groups

V. Participants and Recruitment

- a. Nurse Residents (licensed Registered Nurses in their first professional nursing position hired and selected for a Nurse Residency Program at a comprehensive cancer center)
- b. Session on stress management and mindfulness held in first week of classes in the Nurse Residency program.
- c. Nurse Residents are given opportunity to participate in the study and informed consent is obtained.

VI. Data Collection Procedures

- a. Instruments – administered in sessions with Nurse Residents during first week of classes and in month 3

- 1. Perceived Stress Scale

- 2. Mindful Attention Awareness Scale

- b. Focus group procedure and questions

- 1. Focus group held in third month of Nurse Residency Program

- 2. Structured questions developed by investigators based on the literature

- 3. Sessions are audiotaped

- c. Journals and guidelines for journaling

- 1. Journals are provided to Nurse Residents in first session

- 2. Printed instructions for journaling included in the journal and reviewed verbally by the investigators

VII. Data Analysis Plan

- a. Descriptive statistics for demographics, pre and post measures with instruments

- b. Trends in usage of app over course of study

- c. Audiotape transcripts from focus groups reviewed and analyzed by the investigators using descriptive and thematic analysis

VIII. Conclusions

- a. Preliminary Findings from the first two cohorts

- 1. Feasibility of use of the meditation app

- 2. Acceptability of the meditation app and study procedures (e.g. journaling)

- b. Lessons learned to date

c. Global Implications

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