Utilizing the Calm™ Mobile Application to Reduce Burnout in Nurse Anesthetists

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Introduction

Background:
- CRNAs are exposed to situations that require high-pressure responsibilities and managing life-threatening scenarios
- Repeated stressors evolve into chronic stress that contributes to burnout manifesting in forms of psychological, social, and physical symptoms
- Burnout can increase employee turnovers, impair team relationships, and decrease the quality of care delivered

Literature Review:
- Mindfulness mobile application interventions found improvements in awareness and well-being

Objective & Aims

Objectives:
To evaluate the implementation of an 8-week Calm™ mobile application for nurse anesthetists and its effects on burnout

Aims:
- Determine the impact of the intervention
  - on emotional exhaustion, depersonalization, and personal accomplishment
  - in general happiness
  - usability for nurse anesthetists

Methods

Design: Pre- and post-test
Setting: Pediatric Hospital in Saint Petersburg, Florida

Data Collection: MBI-HSS and SHS surveys and post intervention usability survey

Data Analysis: Wilcoxon signed rank test and descriptive statistics

Sample: 4 CRNAs

I ntervention

The Calm™ app: #1 downloaded mindfulness app in the app stores – music, sleep, meditation, breathing, 3 minute

Results

Aim 1: Statistically/clinically insignificant, p values > 0.58 (EE), 0.59 (DE), 1.0 (PA)

Aim 2: Statistically/clinically insignificant, p value > 0.18

Aim 3: High usability ratings

<table>
<thead>
<tr>
<th>Table 1. Demographic Characteristics</th>
<th>(N = 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, n (%)</td>
<td></td>
</tr>
<tr>
<td>29 to 39</td>
<td>2 (50)</td>
</tr>
<tr>
<td>40 to 49</td>
<td>1 (25)</td>
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<tr>
<td>50 to 59</td>
<td>1 (25)</td>
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<tr>
<td>Sex, n (%)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>4 (100)</td>
</tr>
<tr>
<td>Race, n (%)</td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>4 (100)</td>
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<tr>
<td>Experience, n (%)</td>
<td></td>
</tr>
<tr>
<td>6 to 10</td>
<td>1 (25)</td>
</tr>
<tr>
<td>11 to 15</td>
<td>3 (75)</td>
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</tbody>
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Discussion

Strengths: Positive indications for mobile platform

Limitations: COVID-19, small non-diverse sample size

Recommendations: Further research with larger sample sizes during a downward curve of COVID-19

Conclusion

Discovering a method to integrate mindfulness for CRNAs such as a mobile application to practice mindfulness may be an effective method decrease burnout