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Burnout Among Intensive Care Nurses

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Executive Summary

At a time when the healthcare system is experiencing strain due to the current health crisis and nursing shortages, talking about, and addressing nursing mental health is of the utmost importance. Nurses who work in the pediatric intensive care unit (PICU) often face more stress due to the patient population they work with. These stresses can lead to burnout and moral distress if not addressed appropriately. Nurses should have a system in place at their workplace and tools readily available to support their mental health while on the job. Through a literature search, it is proposed that an initiation of a hospital-based program that includes journaling, meditation, breathing exercises, and providing a gym membership can help reduce symptoms of moral distress and burnout in PICU nurses. Implementation of a mindfulness-based intervention program for these nurses would decrease prevalence of psychological disorders and improve longevity of employment in the pediatric ICU. In the long term, less turnover in the ICU would mean more experienced nurses caring for out most vulnerable population of nurses. It is also hypothesized that patient satisfaction would increase with an improvement in the mental of health and overall happiness of their nurses providing care in the PICU.

Burnout Among Intensive Care Unit Nurses

Critical care nurses are a group of very specialized nurses working with the sickest of patients and their families. This patient population and the situations these nurses deal with often leads to a group of psychological disorders. Mindfulness, self-compassion, and resilience are often not integrated into their daily routines. Through a literature search the following PICOT question will be addressed: In nurses working in intensive care units (P), how does mindfulness (I) compared to a lack of self-compassion, (C) effect moral distress and burnout (O) after one month of participating in mindfulness interventions (T)?

Rationale for the Project

Intensive care unit (ICU) nurses are left vulnerable to the stresses of this specialized field of critical care nursing. The stresses if left unmanaged can lead to significant psychological conditions. ICU nurses often are faced with patients with terminal conditions, patients on artificial life support, death, the emotional needs of the patients and their families, nursing shortages, and time constraints (Gauthier, Meyer, Greer, & Gold, 2015; Mealer at al., 2012). The stresses and guilty feelings that relate to these situations can ultimately impact the physical and psychological well-being of the ICU nurse (Garcia-Garcia & Olivan-Blazquez, 2017).

Clinical Issue

Burnout can cause physical and psychological fatigue that may lead to dangerous outcomes of the patients an ICU nurse manages. Burnout is a frequent occurrence in the ICU, which is a major contributing factor to turnover. Burnout is often related to moral distress and the negative feelings produced when a nurse cannot act upon their moral compass or personal belief system in the ICU setting (Shoorideh, Ashktorab, Yaghmaei & Majd, 2015). Burnout and moral distress are the leading indicators of psychological disorders among ICU nurses. These

psychological disorders seen in ICU nurses included: anxiety, depression, burnout syndrome, and post-traumatic stress disorder (PTSD) (Mealer et al., 2014). The presence of these psychological disorders causes a major dilemma in quantity of nursing staff and the quality of care provided to patients.

Changing current practice in pediatric ICU's would benefit hospital facilities in many ways. Implementation of a mindfulness-based intervention program for these particular nurses would decrease prevalence of psychological disorders and improve longevity of employment in the pediatric ICU. In time this would ultimately decrease resources being used by organizations needed to hire and train new staff as a result of burnout among ICU nurses. Patient satisfaction scores would also improve due to a positive change in care being provided by these nurses, as a result of a healthier psychological profile. Facilities would also notice an increase in overall experience of nurses working on the unit due to a predicted decrease in staffing turnover.

Literature Synthesis

Selection Criteria. To review the evidence supporting mindfulness related to decreased burnout among ICU nurses, CINHAL, PubMed and MEDLINE databases were used to search for resources through the UTTyler Robert R Muntz Library. Search terms used included: 'ICU nurses', 'burnout', and 'mindfulness'. From the searches, 17 articles resulted. Selecting only peer-reviewed studies and those studies published within the years of 2010-2018 narrowed the search. Studies were excluded if they did not include ICU nurses. For this literature review, five studies were chosen.

ICU Nurses. Literature stated that staffing shortages often exist in the ICU environment. This can often be attributed to the psychological impact of working in a high stress environment like the ICU. These work-related stresses can be attributed to interventions such as performing

cardiopulmonary resuscitation (CPR), prolonging life with artificial support systems, and postmortem care (Mealer et al., 2011). Moral distress in this situation often adds to the stress and psychological impact of ICU nurses (Shoorideh et al., 2015). Psychological disorders often seen among these nurses include PTSD, anxiety, depression, and burnout syndrome.

Mindfulness. Mindfulness originated from Theravada Buddhism and is a state of being mindfully present in one's own space. Mindfulness can be learned, and through mindfulness-based interventions (MBI) psychological disorders can be treated (Gracia-Gracia & Olivan-Blazquez, 2017). Studies by Gauthier et al. (2015) and Gracia-Gracia and Olivan-Blazquez (2017) discovered positive correlations between mindfulness and a decrease in burnout symptoms of ICU nurses.

Gauthier et al. (2015) tested a five-minute daily MBI over a 30-day period. The intervention used techniques such as breathing, labeling one's own thoughts, and thanking oneself for the time and effort put forward. Scales were used to measure burnout, stress, mindfulness, and self-compassion. Overall, it was discovered that a five-minute, once a day intervention was not enough time to see a positive correlation between stress and mindfulness or job satisfaction and mindfulness. It is thought that ICU nurses become accustomed to the high levels of stress and may start to thrive in the high stress environment of an ICU. Self-care may take a backseat in these situations. A positive correlation was found between self-compassion and mindfulness. Interventions related to self-care could benefit from stress reduction techniques among ICU nurses. Gracia-Gracia and Olivan-Blazquez (2017) also found a positive correlation with mindfulness and self-compassion. There is a significant decrease in burnout among ICU nurses who use mindfulness and self-compassion techniques on a regular basis in the hospital setting.

Resilience. Resilience is defined as a personal characteristic that helps with recovery after a traumatic event (Mealer et al., 2011). Like mindfulness, resilience can be learned and improve positive adaption in the ICU environment. Mealer et al. (2014) used multiple scales to test resilience, PTSD, anxiety, depression, and burnout. Through surveys sent to ICU nurses belonging to the American Association of Critical Care nursing (AACN), they found that ICU nurses had a high incidence of anxiety, depression, PTSD, and burnout syndrome. Through educational programs it was concluded that resilience not only could be taught, but that resilience is associated with improved social networks, support systems, and self-care. Most importantly, resilience decreases signs and symptoms of PTSD among ICU nurses. Mealer et al. (2011) states that only twenty-two percent of ICU nurses surveyed are labeled as highly resilient. Those that are highly resilient are less likely to be diagnosed with PTSD, anxiety, and burnout syndrome. Resilience among these nurses will help to retain staff in an area where shortages are far too common.

Project Stakeholders

The key project stakeholders in this initiative include the hospital administrative team, nurses, families and most importantly the patients. The hospital administrative team plays a key role in providing education to their nurses, as well as funding the journals and gym memberships. Nurses will be key in the implementation and success of the project. It is important that proper education will be provided to the nurses and that they feel a part of the project every step of the way. The longevity of the project will be determined by the enthusiasm and commitment of the nurses in the PICU. I also included patients and their families as key stakeholders. Patients and their families are the consumers and provide the most valuable

feedback in the care that they receive. The success of this program will be evident in overall patient satisfaction.

Implementation Plan

Based on the evidence provided a change in practice is proposed as followed: an implementation of a mindfulness-based intervention program for nurses working in a pediatric intensive care unit. This program would include multiple mindfulness-based interventions, giving each nurse the opportunity to find an intervention that would work for them. Proposed interventions include focused breathing, meditation, journaling, and exercise.

These programs will be implemented through 1-day training workshops, provided to all nurses before the program is implemented on the unit. The workshop will focus on educating about the impact of burnout, stress, and psychological disorders among nurses as well as the benefits that mindfulness-based techniques can have. During this workshop, a survey will be given to collect data on each nurse's level of burnout and moral distress, as well as current mindfulness techniques being used. After the training workshop, unit implementation would be focused on breathing and meditation pre shift as a group. A journal would be provided to the nurses and journaling would be encouraged during either before or after a shift to reflect on personal thoughts and experiences. Finally, an exercise membership would be provided to all nurses who are interested to encourage physical activity. Effectiveness of this program would be evaluated through pre-implementation surveys and surveys given every month for 12 weeks.

Timetable/Flowchart

(Appendix B)

1. Week 1: Education workshop provided to ICU nursing staff.
    a. Education on burnout, stress, and psychological disorders

   b. Education on benefits of mindfulness techniques
   c. Education on hospital offerings or focused breathing, meditation, journaling, and exercise memberships
   d. Pre-implementation survey to assess burnout and moral distress using MBI scale. An additional question will be added to assess what mindfulness techniques (if any) are currently being used.
2. Weeks 2-12: Unit implementation
   a. Focused breathing and meditation during pre-shift huddles
   b. Journal provided and post shift reflections encouraged
   c. Exercise membership provided
3. Weeks 4, 8 and 12: MBI survey given to evaluate burnout and determine effectiveness of the program. Additional questions will be added to MBI scale to assess use of mindfulness techniques and how often they are being used by each nurse.

Data Collection Methods

Evaluation of the participants in this project will involve comparing survey results pre and post program implementation. The 22 item MBI will be used to assess burnout among nurses. This scale is widely known and researched and has a pre-developed set of questions to evaluate burnout in three distinct categories: emotional exhaustion, depersonalization, and personal accomplishment (Poghosyan et al., 2009). Cronbach alpha ratings from all three scales have been reported as follows: 0.90 for emotional exhaustion, 0.76 for depersonalization, and 0.76 for personal accomplishment (Complete Dissertation by Statistical Solutions, 2021). Post

implementation surveys will be given every month to participants for 12 weeks to be able to evaluate and compare how burnout changes with involvement in the program.

Cost/Benefit Discussion

The implementation of this program will benefit a given organization through staff retention, job satisfaction, and patient satisfaction. Educating staff on moral distress and burnout, providing journals, and providing gym memberships will be an added expense to an organization. However, with these tools, it is hypothesized that staff retention and job satisfaction will improve. The financial impact will be positive with the implementation of this program with less need for hiring and training new staff. It is estimated that replacing just 1 beside nurse can cost a hospital on average $40,038 (Plescia, 2021). The cost of providing one gym membership ranges from $480-$600 per year (Rodeck, 2018). Adding the additional, and minimal cost of a notebook, the cost it takes to improve staff retention and satisfaction through a program as proposed, outweighs the financial impact of replacing a nurse lost due to burnout.

Discussion of Results

Burnout among intensive care nurses is far too common. It is extremely important that burnout is addressed in any given hospital organization. Currently, there is not an official evaluation of this benchmark study. Due to covid and limitations within the hospital systems at this time, this study was not able to be carried out. Once this project can be implemented, I hope to see that through providing meaningful, non-time consuming, and supportive interventions, that ICU nurses will see an improvement in symptoms of moral distress and burnout. Through this, I would expect to see a decrease in nursing turnover, an improvement in their job satisfaction, and an improvement in patient satisfaction scores.

Recommendations

Psychological disorders are common among ICU nurses due to the high stress environment and the patient demands of working in an ICU. These psychological disorders often included depression, anxiety, PTSD, and burnout syndrome. Left untreated, these psychological disorders can lead to a decrease in quantity and quality of nursing staff. Mindfulness and resilience are both positive techniques that can be taught to nurses. These interventions can positively influence ICU nurses by not only decreasing the rates of psychological disorders but also by helping them cope with daily stresses of caring for critically ill patients. Therefore, it is recommended that hospitals develop a program to address nursing distress and burnout through providing the necessary tools to ensure their wellbeing and longevity on the job.

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Appendix A: Synthesis Table

Synthesis Table

Study	Design	Sample	Outcome
Bianchini et. al. (2021)	Quasi-experimental	Convenience sample of 150 nursing staff from 3 pilot units -nurses had to attend regular staff meetings N=86 attend MBI trainings N=76 pre-intervention survey respondents N=57 post-intervention survey respondents All 150 nurses received weekly emails and had access to toolkits and self-care videos	Lower PSS and MBI scores with mindfulness-based interventions in place.
Fortunatti et. al., (2017)	Cross Sectional Descriptive	Santiago Chile at and University Hospital. 32 Bed ICU. Convenience Sample Used. N=44 RNS and 56 NAs Women: n=69 NA's lower income than RNs (p=<0.01)	Increased effort-reward improves EE, DP, and PA among nursing staff.
Gauthier et al., 2015	Descriptive correlational	*N*=38 Age=75.5% 26-39 Sex=93% YE=64.4% <=5 BSN=not included	Intervention decreased S&A, increased JS, and no change in SC
Gracia-Gracia et al., 2017	RCT	*N*=68 Age= 38.49 M yrs Sex= 91.2% F YE= 7.88 M yrs BSN= 88.2%	Increased SC associated with decreased levels of BO

Mealer et al., 2014	Cross-sectional study pilot	*N*=27 Age= Not included Sex= 92% F YE= 4.88 M yrs BSN= 100%	Intervention increased R scores & decreases PTSD and D
Mealer et al., 2011	Descriptive study	*N*=744 Age=43.6 M yrs Sex= 91% F YE= 17.8 M yrs BSN= 57%	High R associated w/ decreased S&A, BO, PTSD, and D.
Lief, L et al., (2018)	Descriptive	Sept 2015-March 2017 data collected to assess quality of life of 200 patients who died in the medical or cardiac ICU of NYPH hospital. N=100 nurses 34.2% nurses present at patients' death Patient sample N=175 N=118 Male N=122 white Mean length stay in ICU= 9.7 days N=149 DNR	High correlation between poor quality of patient death in ICU with severe symptoms of emotional distress among ICU nurses.
Lin et. al. (2019)	RCT	2 tertiary level hospitals Nurses invited and subjects screened Exclusion criteria: Full time nurse, suffering from somatic disease, taking mood-regulating drugs, suffered traumatic event in past 6 months, and previously participated in mindfulness training. N=110 Intervention Randomly assigned to → Intervention group N=55, F=43, Bachelor's degree=21, night shift=30 Control group N=55, F=41, Bachelor's degree=24, night shift=37	Improvement in perceived stress, negative affect, and positive affect immediately after intervention and at 3-month follow-up. Changes in resilience seen at 3-month follow-up No significant improvement in job satisfaction but trending towards positive direction.

Shoorideh et al., 2015	Cross-sectional descriptive study	*N*=159 Age= 33.4 mean yrs Sex=72.3% F YE= 7 M yrs BSN= 95.6%	Increased AT associated w/ increased BO. Increased BO associated w/ increased age & YE
Smith (2014)	Literature Review	Inclusion: Empirical articles, included nurses or student nurses included in sample size, use of MBSR and programs derived from MBSR Exclusion: meditation interventions N=13 empirical articles 11 quantitative studies 2 qualitative studies	MBSR can be effective in burnout in nurses, valuable for nurses, decreasing stress and increasing self-compassion in healthcare professionals, reducing symptoms of burnout, increasing life satisfaction and relaxation, decreasing stress, and improving positive mood states. MBSR may be unique in decreasing distractive, ruminative thoughts and behaviors
Steinberg et. al., (2017).	RCT	N=32 Registered nurses 75%, Women 78% mean age 39.8 Mean years of service 10.8 Individuals who participated in 30min/day of yoga, mindfulness or exercise were excluded from this study	Improvement of R with implementation of workplace mindfulness-based interventions
Vaclavik et. al, (2018).	Quasi-Experimental	N=56 oncology nurses BSN=18. MSN=10 F=26 M = 2 <5 years nursing experience = 15 6-10 years nursing experience = 5 11-15 years nursing experience =2 >16 years nursing experience= 6	Improvement of MD with mindfulness-based interventions

Legend: AT= anticipated turnover, BO= burnout, BSN= Bachelor of Science in Nursing, D=depression, JS=job satisfaction, MD= moral distress, PTSD= post-traumatic stress disorder, S&A= stress and anxiety, SC= self-compassion, R=resilience, YE=Years of experience,

Appendix B: Flowchart