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Mitigating Burnout in the Pediatric Intensive Care Unit

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Mitigating Burnout Syndrome in the Pediatric Intensive Care Unit

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Executive Summary

Burnout is defined as a "prolonged response to chronic emotional and interpersonal stressors on the job leading to a combination of physical and emotional exhaustion" (Lachman, 2016). The effects of burnout syndrome among nurses are well documented in the literature. Burnout is associated with an increased incidence of a variety of physical and psychological symptoms, including weight loss or gain, lethargy, headaches, sleep issues, anxiety, depression, and difficulty concentrating (Lachman, 2016). As a result of these symptoms, nurses experiencing burnout are more prone to provide poorer quality care to patients and are at heightened risk of commission of errors in practice. In 2016, the Critical Care Societies Collaborative published a call to action for members of the healthcare community regarding burnout and compassion fatigue (Moss, Good, Gozal, Kleinpell, & Sessler, 2016). In this statement, they revealed that at least 25 to 33% of nurses working in critical care display symptoms associated with burnout. This statistic is alarming and certainly calls for intervention. Nurses working in oncology, pediatrics, and critical care settings are at the highest risk for experiencing burnout due to high acuity, the great burden of need from patients in these areas, uncertainty of patient outcomes, and the impact of repeatedly bearing witness to suffering (Rushton, Batcheller, Schroeder, & Donohue, 2015).

The literature supports that mindfulness-based stress reduction practices are effective methods of health promotion and reduction of stress and burnout among nurses. Those practicing mindfulness have reported improved ability to concentrate, increased attention, higher self-reported resilience, and overall improved wellbeing (Noble, Reid, Walsh, Ellison, & McVeigh, 2019). Furthermore, a study by Bong (2019) detailed the implementation of a

"mindfulness bundle," which showed positive results in decreasing rates of burnout among those participating in the bundle.

This alarming data makes it clear that identification, prevention, and mitigation of burnout among nurses working in pediatric critical care ought to be a high priority. In response to this, a mindfulness bundle was implemented in a small pediatric intensive care unit (PICU) in Oklahoma City, Oklahoma to determine the impact on self-reported symptoms of burnout among the nurses working in the unit. The mindfulness bundle provides pediatric critical care nurses with printed information on mindfulness, as well as resources for local counseling services, encouragement cards, and lavender sachets to promote a sense of calm. The results of the post-implementation survey as compared to the pre-implementation survey supports the use of a mindfulness bundle to mitigate burnout among PICU nurses.

Mitigating Burnout Syndrome in the Pediatric Intensive Care Unit

One of the most telling things about a nurse is their practice specialty. For every specialty, there is an associated stereotype. For pediatric nurses, this holds true. Many people regard pediatric nurses as the bleeding hearts of the nursing workforce. Pediatric critical care nurses are uniquely positioned to watch the most tragic tales unfold in the lives of the most innocent patient population. This serial exposure to suffering too often results in symptoms of burnout syndrome among PICU nurses. In order to provide the highest quality care to pediatric critical care patients and their families, it is imperative to identify, prevent, and mitigate burnout syndrome among nurses working in PICUs.

Rationale

Symptoms of compassion fatigue and burnout syndrome are all-encompassing and can be detrimental to the work-life balance of a nurse. According to Lachman, compassion fatigue is defined as a "state of significant depletion or exhaustion of the nurse's store of compassion, resulting from repeated activation over time of empathic and sympathetic responses to pain and distress in patients and in loved ones" (Lachman, 2016, p. 276). The symptoms commonly displayed by nurses experiencing burnout syndrome or compassion fatigue include loss of hope, weight fluctuations, gastrointestinal issues, headaches, oversensitivity, cynicism, anxiety, sleep disturbances, depression, and many other concerns (Lachman, 2016). According to Lachman (2016), nurses experiencing these issues are more prone to calling in to work, lacking motivation in patient care tasks, have impaired judgement, have decreased efficiency at work, leave the nursing workforce altogether, have increased job turnover, have increased rates of errors in their work, and have a tendency to provide poorer quality care to patients and families. Nurses are uniquely positioned to provide direct care to patients. As such, if nurses' ability to perform their

job functions are impaired, then this is an issue that demands public attention and corrective action. There is documentation throughout the literature of the widespread impacts of burnout and compassion fatigue on nurses and their patients, but there is limited literature detailing what steps are necessary to mitigate and reverse the phenomenon of burnout among nurses. As such, this project sought to identify a viable method of mitigating burnout among PICU nurses, in order to protect this fragile patient population and to uphold the integrity of the nursing profession. This is partially an extension of the fifth provision of the American Nurses Association (2015) *Code of Ethics for Nurses* which reads, "The nurse owes the same duties to self as to others, including the responsibility to promote health and safety, preserve wholeness of character and integrity, maintain competence, and continue personal and professional growth" (ANA, 2015, p. 5).

Review of Literature

There is ample literature documenting the pervasive nature of burnout among critical care nurses. There is less literature available focused specifically on pediatric critical care nurses, but what little is available suggests generalizability from data collected from nurses employed in other critical care settings. One of the most central articles to this project examined the resilience among nurses employed in various PICUs across the nation (Lee, Forbes, Lukasiewicz, Williams, Sheets, Fischer, & Niedner, 2015). The purpose of this research was to identify factors relating to resilience and assess the interventions most productive in promoting resilience among PICU nurses. Among the interventions cited by the researchers, the most effective were identified as "taking a break from stressful patients, being relieved of duty after your patient's death, palliative care support for staff, structured social activities outside of the hospital, and Schwartz Center rounds" (Lee et al., 2015, p. 428). Ultimately, they concluded that

no single intervention would eliminate burnout altogether, but the promotion of these resources could be highly effective at reducing compassion fatigue and burnout. Along these same lines, Sacco, Ciruzynski, Harvey, and Ingersoll (2015) reported that the relationship between professional quality of life and standards for a healthy work environment are linked and require focused and intentional intervention to maintain proper balance.

According to Kelly and Lefton (2017), millennial nurses are at the highest risk of compassion fatigue and burnout syndrome. This is particularly concerning because these millennial nurses are the future of the nursing workforce, as older generations progress towards retirement. According to Kelly and Lefton (2017), simple interventions can be key in mitigating burnout, including the DAISY award program, simple thank you notes, and nurses' week celebrations.

Research by Rushton, Batcheller, Schroeder, and Donohue (2015) took a look at the relationship between stress and burnout in nurses working in high-intensity settings. They found that nurses employed in critical care, pediatrics, and oncology report the highest levels of burnout, as a result of "patients' intense needs, uncertain outcomes, and the highly charged context of the nurses' work, particularly the impact of ongoing witnessing of suffering and death" (Rushton, Batcheller, Schroeder, & Donohue, 2015, p. 418). These investigators stated in their article that 20% of the nurses enrolled in the study reported intent to leave their current job within the next year. Turnover is a detriment to safe patient care, and this rate of intent to turnover is particularly concerning. However, when compared to the rates of turnover in the PICU that serves as the site of this change project, the data is consistent.

Stakeholders

The key stakeholders identified in this project are the organizational administration, the unit-level staff, and the patients and families served by the PICU. Burnout places caregivers at a much higher risk of turnover or abandonment of the profession. Turnover leads to numerous challenges for healthcare organizations, including inadequate staffing in nursing units, fiscal loss for the organization, and frustration for all involved. Hämmig (2018) describes burnout as an occupational disease, commonly observed in healthcare providers. In a survey of healthcare workers, Hämmig (2018) discovered that among physicians, nurses, and other hospital workers, increasing physical, emotional, and mental workloads were positively associated with a heightened risk of burnout syndrome and intent to leave the profession. For the administrative and unit-level stakeholders, this causes a high rate of fiscal loss and budgetary concerns. Though it is the primary goal of healthcare organizations to provide optimal care to patients, it is important to remember that healthcare is a business, and the bottom line matters if the organization wants to remain viable.

Patient and family engagement and satisfaction are hugely important factors for modern healthcare systems. In a cross-sectional survey of pediatric critical care nurses, those with symptoms of burnout syndrome were far more likely to have poor attitudes about engagement with patients and their families (Buckley, Christian, Gaiteiro, Parhuam, Watson, & Dryden-Palmer, 2019). Personal perception of accomplishment is another important factor related to this concept. Those with a more conceptualized view of personal accomplishment are more likely to have better engagement with patients and families. Engagement is strongly associated with patient and family satisfaction scores, which is of key interest to the administrative and unit-level stakeholders. Many studies have tackled this issue of improving engagement, including a pilot

study by Horner, Piercy, Eure, and Woodard (2014) which found a correlation between increased awareness and utilization of mindfulness practices and engagement between nurses and families.

Plan for Evaluation

Engaging in evaluation is important to determine the efficacy of any given intervention (Brewer & Alexandrov, 2015). For this project, the evaluation process began with a pre-intervention survey. The survey employed in this project was the Perceived Stress Scale (PSS). This survey was administered to participants as well as non-participants in the pre-intervention phase. The PSS was again administered to participants and non-participants in the post-intervention phase, as a reliable measure of efficacy of the intervention.

The second phase involved accuracy measurement. The validity of the data is ensured by the use of the PSS for measurement of stress and burnout-related symptoms among nurses. Employing a standardized scale, rather than an investigator-made scale, helps to ensure the validity of the data. It is ill-advised for novice investigators to create a novel instrument for data collection because of the risk of impaired validity (Brewer & Alexandrov, 2015).

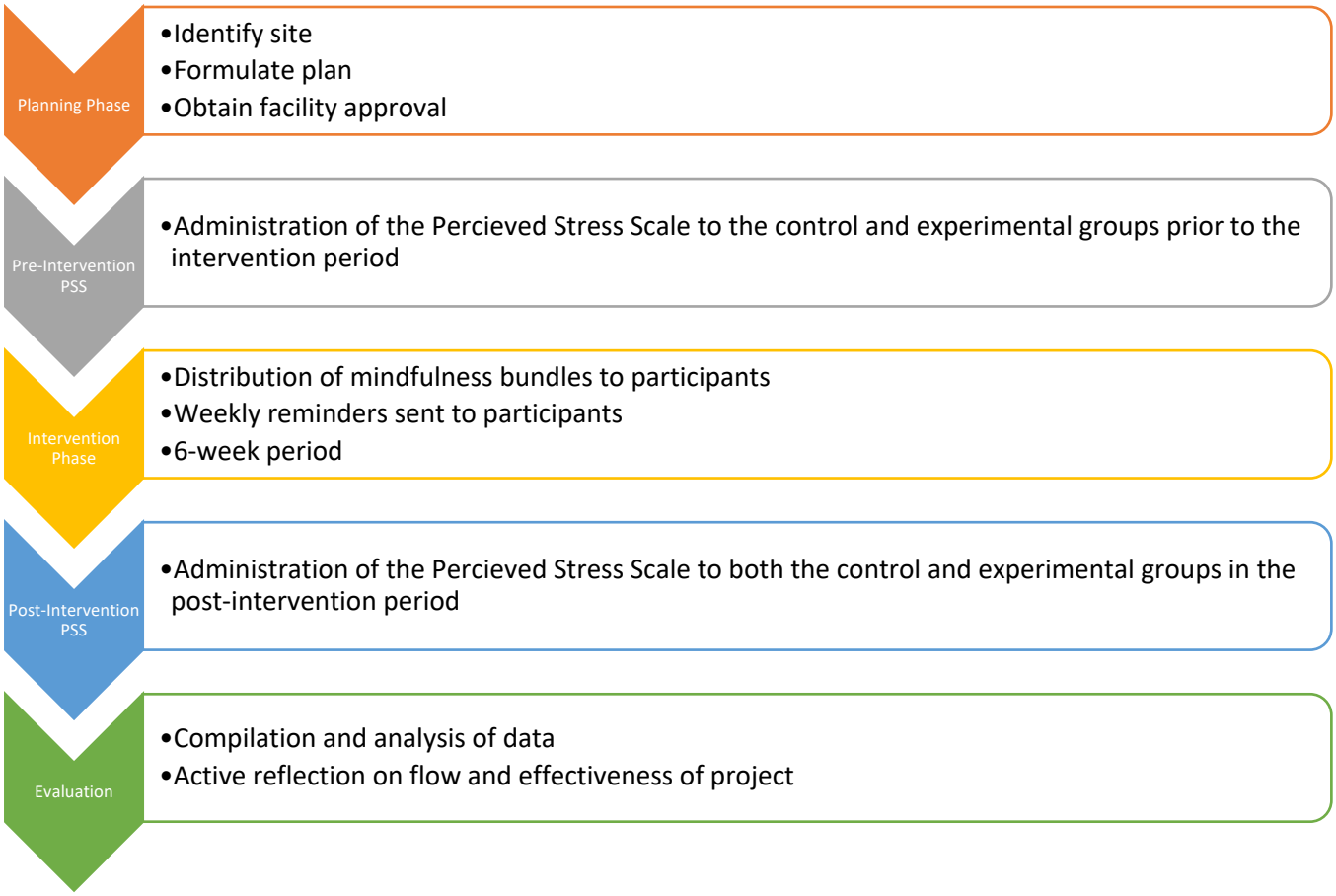
Timetable

The true inception of this project began in 2018 and 2019, with the development of the PICOT question, literature synthesis, and pre-planning for the change project. In January 2020, the true planning phase began. During this phase, the site was identified, and the structure and makeup of the unit was analyzed. This project took place at INTEGRIS Baptist Medical Center in Oklahoma City, Oklahoma in the Pediatric Intensive Care Unit. The first step was to obtain the approval of the PICU leadership team. Then, participants were identified at this time to serve as members of the experimental group participating in the mindfulness bundle. A general

overview of the change project was disclosed to the PICU nurses and participants were all volunteers. This phase took about two weeks.

The next phase consisted primarily of the administration of the pre-intervention Perceived Stress Scale (PSS). This project utilized the PSS to measure mental and emotional health margins prior to the intervention period. The PSS is brief and easily understood, consisting of only ten questions. Both the control and experimental groups participated in this survey.

The third phase was the intervention phase. This phase was conducted in February and March of 2020 and took place over a six-week period. During this phase, mindfulness bundles were distributed to participants. Each week, a reminder email was sent to participants to reinforce the importance of practicing mindfulness during the intervention period. Two weeks following the conclusion of this phase, a post-intervention PSS was administered to the participants and non-participants again. Finally, the evaluation period began.



Methods of Data Collection

The Perceived Stress Scale (PSS) was the survey employed in this change project for data collection. Four non-participants and six participants were evaluated using the PSS in the pre-intervention and post-intervention phases. This small sample size was certainly a limitation in this project. However, this project is easily reproduced and could be replicated in a larger unit with a larger sample to determine consistency and validity of the results. The pre-intervention PSS was administered in the first week of February 2020 and the post-intervention survey was administered in the first week of April 2020. The data was then analyzed and compared to yield the results detailed below. A copy of the PSS can be found in Appendix A.

Cost/Benefit

There is a clear fiscal benefit to the implementation of this change project. According to the literature, mitigation of burnout among nurses leads to a marked decrease in risk of turnover and intent to leave the profession. There is a great deal of cost associated with training new registered nurses in the PICU. Hours of classes and orientation to the unit are required to train a PICU nurse. Keeping nurse satisfaction high and retention of nurses in their current position will result in improved patient satisfaction, improved patient outcomes, and overall improved unit morale and cohesiveness. The overall cost of this mindfulness bundle program is relatively low to implement and maintain. It costs approximately $30 USD per bundle. This is so negligible in the grand scheme of things and certainly deserves consideration as a permanent fixture within the new hire orientation process in the PICU. It is impossible to quantify the impacts of this change projects on patients and families within the PICU, but it can be easily inferred that the implementation of a low-cost and relatively simple mindfulness bundle has a positive impact on quality of care for PICU patients.

Final Results

When comparing the PSS scores of the participant and non-participant groups, there was a statistically significant improvement in PSS scores among the participant group from the pre-intervention period to the post-intervention period. See appendix B for a full breakdown of results. This indicates that mindfulness-based techniques are potentially effective at mitigating burnout among PICU nurses. This change project would need to be reproduced to concretely prove efficacy, but this small-scale trial was overall very successful. It should also be noted that the COVID-19 pandemic began to gain ground in Oklahoma during the post-intervention survey administration period of this change project. This was an uncontrollable, extraneous variable, but it could have impacted the post-intervention survey scores in various ways.

Recommendations

This project was a success overall, but there are certainly alterations that could be made in future iterations of this change project. It would be advisable to reproduce this project in a large setting, on a larger scale, to determine the ultimate efficacy of the change project on the rates of burnout among PICU nurses. Additionally, it is important to maintain this mindfulness teaching and bundle implementation in the PICU at INTEGRIS Baptist Medical Center to continue to mitigate burnout among the nurses there. The results of this initial small-scale change project support these recommendations for the leadership of the PICU at INTEGRIS.

Personally, as a future masters-prepared nurse, I want to carry the lessons I learned from this change project with me in my career. First, I learned the importance of being detailed and thorough in order to impact the climate of a healthcare unit for good. Change is not always well-received but trying to infect others with passion and showing others the importance of change is hugely beneficial in gaining traction. Second, I want to continue to take action to impact the overall quality of care for patients. I strongly believe that this project is ultimately beneficial for patients in the PICU and that has driven me this semester. Healthcare is not a perfect system. We all need to apply ourselves to continual self-improvement. This project has given me a constructive outlet for that drive, and I want to continue to seek out opportunities to positively impact patient outcomes in the future.

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Appendix A: Perceived Stress Scale

PERCEIVED STRESS SCALE

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often

1. In the last month, how often have you been upset because of something that happened unexpectedly? 0 1 2 3

2. In the last month, how often have you felt that you were unable to control the important things in your life? 0 1 2 3

3. In the last month, how often have you felt nervous and "stressed"? 0 1 2 3

4. In the last month, how often have you felt confident about your ability to handle your personal problems? 0 1 2 3

5. In the last month, how often have you felt that things were going your way? 0 1 2 3

6. In the last month, how often have you found that you could not cope with all the things that you had to do? 0 1 2 3

7. In the last month, how often have you been able to control irritations in your life? 0 1 2 3

8. In the last month, how often have you felt that you were on top of things? 0 1 2 3

9. In the last month, how often have you been angered because of things that were outside of your control? 0 1 2 3

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? 0 1 2 3

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Appendix B: PSS Results

Pre-Intervention Participant PSS Scores	0	1	2	3
1. In the last month, how often have you been upset because of something that happened unexpectedly?		1	3	2
2. In the last month, how often have you felt that you were unable to control the important things in your life?		3	3	
3. In the last month, how often have you felt nervous and stressed?		1	4	1
4. In the last month, how often have you felt confident about your ability to handle your personal problems?		3	3	
5. In the last month, how often have you felt that things were going your way?		2	4	
6. In the last month, how often have you found that you could not cope with all the things that you had to do?		2	4	
7. In the last month, how often have you been able to control irritations in your life?		2	4	
8. In the last month, how often have you felt that you were on top of things?		3	3	
9. In the last month, how often have you been angered because of things that were outside of your control?		3	2	1
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?		2	4	

Pre-Intervention Non-Participant PSS Scores	0	1	2	3
1. In the last month, how often have you been upset because of something that happened unexpectedly?		2	2	
2. In the last month, how often have you felt that you were unable to control the important things in your life?		2	2	
3. In the last month, how often have you felt nervous and stressed?			3	1

4. In the last month, how often have you felt confident about your ability to handle your personal problems?		1	2	1
5. In the last month, how often have you felt that things were going your way?		2	2	
6. In the last month, how often have you found that you could not cope with all the things that you had to do?		2	2	
7. In the last month, how often have you been able to control irritations in your life?		3	1	
8. In the last month, how often have you felt that you were on top of things?		2	2	
9. In the last month, how often have you been angered because of things that were outside of your control?		1	3	
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?		2	2	

Post-Intervention Participant PSS Scores	0	1	2	3
1. In the last month, how often have you been upset because of something that happened unexpectedly?		3	3	
2. In the last month, how often have you felt that you were unable to control the important things in your life?		3	3	
3. In the last month, how often have you felt nervous and stressed?		2	4	
4. In the last month, how often have you felt confident about your ability to handle your personal problems?		3	3	
5. In the last month, how often have you felt that things were going your way?		3	3	
6. In the last month, how often have you found that you could not cope with all the things that you had to do?		4	2	
7. In the last month, how often have you been able to control irritations in your life?		4	2	

8. In the last month, how often have you felt that you were on top of things?		2	4	
9. In the last month, how often have you been angered because of things that were outside of your control?		4	2	
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?		3	3	

Post-Intervention Non-Participant PSS Scores	0	1	2	3
1. In the last month, how often have you been upset because of something that happened unexpectedly?		2	2	
2. In the last month, how often have you felt that you were unable to control the important things in your life?		2	2	
3. In the last month, how often have you felt nervous and stressed?		2	2	
4. In the last month, how often have you felt confident about your ability to handle your personal problems?		1	2	1
5. In the last month, how often have you felt that things were going your way?		1	3	
6. In the last month, how often have you found that you could not cope with all the things that you had to do?		3	1	
7. In the last month, how often have you been able to control irritations in your life?		3	1	
8. In the last month, how often have you felt that you were on top of things?		2	2	
9. In the last month, how often have you been angered because of things that were outside of your control?		1	3	
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?		2	2	