BEST PRACTICE RECOMMENDATIONS TO SUPPORT THE PSYCHOLOGICAL WELL-BEING OF INTENSIVE CARE UNIT NURSES

By

COURTNEY LEE WAISATH

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Approved by:

Dr. Melissa Goldsmith

College of Nursing

Abstract

This paper will identify best-practice recommendations to help nurses better cope with demands of the field, an implementation plan, and an evaluation of the implementation process. This paper explores whether or not nurses working in the intensive care unit (ICU) experience reduced psychological well-being due to aspects of their job such as high mortality rates, ethical dilemmas, and stress. In the world of healthcare, the demand for nurses is at an all time high. However, retention rates of bedside nurses are a direct threat to this demand. The low retention rate of newly licensed registered nurses remains an ongoing challenge not only for the institution but for the quality of care provided to the patients. In 2017, the turnover rate for bedside registered nurses ranged from 6.6% to 28.7%, with a turnover rate for critical care nurses in 2017 of 16.4% (Colosi, 2018). The articles presented in this paper examine the psychological well-being of ICU nurses regarding levels of compassion fatigue and burnout and further discuss the effect that high incidences of stress, high mortality rates, ethical dilemmas, and pressure on the nurses to provide their best care have on the nurse's well-being.

CHAPTER 1

Introduction

Statement of Purpose

The purpose of this thesis is to develop best practice recommendations to increase the psychological well-being of ICU nurses. In this thesis, the recommendations provided will be collected from evidence-based research. The evidence-based research used in this thesis provides supportive interventions that directly impact the psychological well-being of ICU nurses. This topic is of great importance to the healthcare system because of the effect that the demands of the ICU have on nurses leaving the profession. Because of this, the thesis will provide background on the issue of psychological well-being before going on to express the significance of the problem to nursing. Next, evidence based research backing up the need for support among critical care nurses will be proposed. After this, best practice recommendations will be suggested to provide ideas for future support of this population of nurses. All together, these discussions will answer the question whether or not nurses in the ICU experience reduced psychological well-being and what supportive measures can be taken to support the nurses working in this field.

Background of Issue Importance

For the purpose of this paper, psychological well-being will be an umbrella term that consists of: compassion satisfaction, compassion fatigue, burnout, and secondary traumatic stress, all of which are defined in the glossary on page 6-7, (Stamm, 2010). The nursing shortage crisis is particularly apparent in specialty areas such as the ICU. It is proven that nurses in the ICU undergo extreme levels of stress during their work. According to Boer, Rikxoort, Bakker, & Smit (2013) there is research posted about the impact of this stress from critical incidents on

emergency room nurses, but not specifically on intensive care nurses. However, because persistent stress reactions after critical incidents can cause negative psychological reactions such as post-traumatic stress disorder, depression, and anxiety, research of ICU nurses is needed (Boer et al., 2013). Attention and interventions need to be implemented for ICU nurses to avoid damaging psychological well-being. Poor psychological well-being of the nurse also leads to higher rates of turnover and higher costs for the institution (Boer et al., 2013). If this is not addressed, the negative outcomes will continue to affect the entire healthcare system. This research needs to be taken seriously as ICU nurses work directly with the patients and their families around the clock, allowing for extensive periods of traumatic exposure and increased risk for psychologic harm (Boer et al., 2013). An exemplar from one study demonstrates an ICU nurse expressing concern for herself both mentally and physically due to her obligations at work. "My husband worries about me. He says I'm cranky but rightly so, but worries about my health. We know that night work increases many health risks, and this coupled with the stress of the combative patient, the death and dying patient… I continually struggle with the question of 'is it worth it?' The abuse my body is taking both mentally and physically… am I doing harm to myself?" (Mealer, Conrad, Evans, Jooste, Solyntjes, Rothbaum, & Moss, 2014, p. e102). Because of the very vulnerable and critical patient load that ICU nurses have, their psychological well-being needs to be recognized and acknowledged.

Significance of the Problem

The Intensive Care Unit (ICU) is defined by Merriam-Webster Dictionary as a place where seriously ill patients are kept under careful and constant monitoring. The ICU is commonly known to have a high incidence of stress associated with the high mortality rates, ethical dilemmas, and pressure on the nurses to provide their best care (Mealer et al., 2014).

There is a significantly higher rate of nurse turnover in the ICU compared to other units within the hospital (Mealer et al., 2014). According to Mealer et al. (2014) the annual turnover rate for ICU nurses is between twenty-five to sixty percent. Because of this evidence, the psychological well-being of ICU nurses has become a major concern. Nurses working in this specific field have higher prevalence of psychological disorder. Included in these are anxiety, depression, burnout syndrome, and posttraumatic stress disorder (PTSD) (Mealer et al., 2014). For example, in this study specifically, 100% of the ICU nurses were positive for symptoms of anxiety, 77% were positive for symptoms of depression, and 44% met the diagnostic criteria for PTSD (Mealer et al., 2014).

According to Shoorideh et al. (2015), the factors that contribute to moral distress of ICU nurses, specifically leading to high rates of turnover include: aggressive treatment of patient's facing death, inadequate treatment by the staff, unfair distribution of power among colleagues, and lack of organizational support. Psychological distress affects the individual's physical, mental, and spiritual well-beings (Shoorideh et al., 2015).

In order to continue delivering quality care to patients that require critical care, planning for replacing nurses reaching retirement age is needed. According to Mason, Leslie, Clark, Lyons, Walke, Butler, & Griffin (2014), current healthcare systems are undergoing preparation for the next generation of nurses to replace the current workforce. The current workforce is the largest nursing workforce in recent memory (Colosi, 2018). This shift is crucial to deliver high-quality nursing care, ultimately leading to better-quality patient outcomes. According to Mason et. al., (2014), the current average age of staff nurses is 46-years old. This is significant because retaining experienced ICU nurses is critical to the successful orientation of inexperienced ICU nurses orienting to the demanding environment. Educating new nurses is an urgent matter as half

of the workforce in America is approaching retirement age (Colosi, 2018). The goal is to hire new nurses and improve the retention and decrease turnover rates of these critical care nurses. This is imperative as if it is not done, hospitals and patients suffer. To avoid high turnover rates in this new generation of nurses, psychological well-being needs to be addressed. Addressing modalities to cope with burnout and compassion fatigue are necessary in order for this new wave of critical care nurses to survive in this challenging environment.

Summary

The purpose of this thesis is to develop best practice recommendations to better provide support to increase the psychological well-being of ICU nurses. The reduced levels of psychological well-being due to the demand of ICU nursing has a direct effect on patient care and institutional funding. It affects high-quality patient care in demanding fields such as the ICU because of the large attrition rate and a looming nursing shortage. This thesis will help to determine ways that help to decrease nurse stress and attrition rates and increase psychological well-being. In order to achieve high-quality patient care in the ICU, it needs to be established whether or not nurses working in the ICU experience reduced psychological well-being due to their job, and if that is why there is a higher rate of nurse turnover in this specialized area. By answering this question, the thesis will be able to provide best-practice recommendations that can be shaped to form supportive therapy for ICU nurses, ultimately improving their psychological well-being.

Glossary

Stress	A non-specific biological response to a demand or stressor that is not necessarily harmful to the individual (Ridner, 2004).
Psychological Distress	The unique discomforting, emotional state experienced by an individual in response to a specific stressor or demand that results in

	harm, either temporary or permanent, to the person (Ridner, 2004).
Compassion Satisfaction	Compassion satisfaction is characterized by feeling satisfied by one's job and from the helping itself. It is characterized by people feeling invigorated by work that they like to do. They feel they can keep up with new technology and protocols. They experience happy thoughts, feel successful, are happy with the work they do, want to continue to do it, and believe they can make a difference (Stamm, 2010).
Compassion Fatigue	Compassion fatigue is characterized by the negative aspects of providing care to those who have experienced extreme or traumatic stressors. These negative responses include feelings of being overwhelmed by the work that are distinguished from feelings of fear associated with the work. Thus, there are two scales for Compassion Fatigue (Stamm, 2010).
Burnout	Burnout is characterized by feelings of unhappiness, disconnectedness, and insensitivity to the work environment. It can include exhaustion, feelings of being overwhelmed, bogged down, being "out-of-touch" with the person he or she wants to be, while having no sustaining beliefs (Stamm, 2010).
Secondary Traumatic Stress	Secondary Traumatic Stress is characterized by being preoccupied with thoughts of people one has helped. Caregivers report feeling trapped, on edge, exhausted, overwhelmed, and infected by others' trauma. Characteristics include an inability to sleep, sometimes forgetting important things, and an inability to separate one's private life and his or her life as a helper—and experiencing the trauma of someone one helped, even to the extent of avoiding activities to avoid reminders of the trauma. It is important to note that developing problems with secondary traumatic stress is rare but it does happen to many people (Stamm, 2010).

CHAPTER 2

Review of Literature

In chapter two, the review of literature that addresses research on psychological wellbeing of ICU nurses will be discussed. The PICOT(S) question used for the literature research was: Does a nurse working in the intensive care unit (ICU) have a reduced psychological well-being compared to a nurse working in an ICU with established interventions to improve psychological well-being? The databases used for the research provided were CINHAL and PubMed. The publication dates used were all between 2013 and 2018. The search terms "stress", "ICU", and "nurses" were used to explore. The filter "nursing journals" and "within 10 years" was used on both the CINHAL and the PubMed databases. Eight articles were selected to be used for this literature review. These articles were selected based on their relevancy to the topic, the recommendations for best-practice, the type of study design, and location of the conducted study. The evidence-based articles will provide the foundation for best-practice recommendations proposed to better support ICUs and improve their psychological well-being.

Studies That Establish That ICU Nurses Experience Psychological Stress

Relationship between ICU nurses' moral distress with burnout and anticipated turnover.

Moral distress affects ICU nurses by causing them to feel frustration, guilt, stress, sadness, anxiety, fatigue, and many other negative thoughts of well-being. The purpose of this study was to determine the correlation between this moral distress with burnout and anticipated turnover in ICU nurses (Shoorideh, Yaghmaei, & Majd, 2015). The sample size was one hundred and eighty nurses working in the ICU across twelve different academic hospitals in Iran.

One hundred and fifty-nine of the one hundred and eighty participants completed the entire questionnaire (Shoorideh et al., 2015). The design was a descriptive-correlation study. The three variables that were investigated were moral distress, burnout, and anticipated turnover. These variables were managed using the Iranian ICU Nurses' Moral Distress Scale (IMDS), the Copenhagen Burnout Inventory (CBI), and the Anticipated Turnover Scale (ATS) (Shoorideh et al., 2015).

The specific results were high levels of moral distress and anticipated turnover in ICU nurses, and moderate levels of burnout (Shoorideh et al., 2015). Positive correlations were found between years of nursing experience with moral distress ($p< 0.05$) and burnout ($p<0.01$) (Shoorideh et al., 2015). There was also a positive correlation between the nurse-to-patient ratio and moral distress burnout ($p<0.001$) (Shoorideh et al., 2015). The results were all clinically significant. The author's findings were that there was a significant correlation between age, nursing experience, and nurse-to-patient ratio with moral distress and burnout (Shoorideh et al., 2015). The author's findings support the concept that there needs to be a nurse-to-patient ratio standard set and required in ICU's to help eliminate this imposing threat. The findings from this study were also consistent with those of Mobley et al. and Ulrich et al, but not consistent with Corley et al., who found a negative correlation between age and moral distress (Shoorideh et al., 2015). The strengths of this study included a large sample size and the form of data collection. By using three different scales for the nurses to respond to, the researchers were able to monitor three different variables in one study. One weakness of this study was that the nurses' responses could be influenced by the day that they had just experienced. This study was a level VI of evidence because it was a descriptive-correlation research study.

Compassion fatigue, moral distress, and work engagement in surgical intensive care unit trauma nurses.

The purpose of this study was to examine the effects of compassion satisfaction as well as compassion fatigue, moral distress, and education level on work engagement (Mason, Leslie, Clark, Lyons, Walke, Butler, & Griffin, 2014). There were four research questions used to guide this pilot study. What are the correlations between four key variable: compassion fatigue, moral distress, level of nursing education, and work engagement? How does nurse education level and hospital shift worked relate to compassion satisfaction or fatigue, moral distress and work engagement? Does compassion satisfaction or fatigue or moral distress have a direct relationship to work engagement? Do nurses identify themes in their work-related experience? (Mason et al., 2014). The sample size was thirty-four trauma surgical ICU nurses. The inclusion criteria for these participants was: registered nurse status, greater than or equal to fifty percent of on-duty work time spent in the provision of direct nursing care to patients in an ICU setting, and lastly, computer literacy (Mason et al., 2014). Twenty-six of the thirty-four nurses participated in the entire study (Mason et al., 2014). The design was a survey consisting of fifty-five questions and four different parts. The four sections were broken down into educational level, Professional Quality of Life Scale (ProQOL-5), the Utrecht Work Engagement Scale (UWES), and a seven item moral situations scale from the Moral Distress Scale (Mason et al., 2014). The participants were emailed this survey to their work emails, and had two months to complete the study (Mason et al., 2014).

The specific results were that seventy-three percent scored average on compassion satisfaction and twenty-seven percent scored high (Mason et al., 2014). Fifty-eight percent of the trauma surgical ICU nurses scored average on burnout and forty-two percent scored low

(Mason et al., 2014). None of the participants scored high on the burnout scale or on experiencing secondary traumatic stress (Mason et al., 2014). There were significant positive correlations between work engagement and compassion satisfaction ($P<0.05$) (Mason et al., 2014). There was a negative correlation between work engagement and burnout ($P<0.05$) (Mason et al., 2014). The results were all clinically significant. The researchers' findings showed as work engagement increases, compassion satisfaction increases and burnout decreases (Mason et al., 2014). The findings of the nurses' responses to their experiences identified different themes for surgical ICU nurses: role conflict with management, death and suffering decision making, violence in the ICU, dealing with the family, powerlessness-moral distress, physical distress, and medical versus nursing values of moral distress (Mason et al., 2014). The strengths of this study were that all of the instruments demonstrated adequate reliability and validity, and that confidentiality was enforced and exaggerated. This allowed the nurses to hopefully give their honest response without fear of exposure. One weakness of this study was the small sample size. This study was a level VI of evidence because it was a descriptive-correlation research study.

Critical incidents among intensive care unit nurses and their need for support: Explorative interviews.

The purpose of this study was to get insight into ICU nurses' critical work-related incidents, their reactions and coping mechanisms, and their perceived support in a Dutch ICU (Boer, Rikxoort, Bakker, & Smit, 2013). The researchers developed three research questions: What categories of work-related incidents are perceived as most stressful? What are nurses' reactions and coping preferences after their most critical incidents? To what extent did colleagues and or supervisors address nurses' need for support after critical incidents? (Boer et

al., 2013). The sample size was twelve ICU nurses at a teaching hospital in The Netherlands (Boer et al., 2013). All twelve of the nurses completed the study. This was a purposive sample. The design was a qualitative explorative study. The study consisted of thematic analysis of face-to-face interviews. The interviews involved of six questions that were all recorded on an MP3 recorder. Thematic analysis of the interviews occurred in five stages (Boer et al., 2013).

The specific results for the first research question included responses such as, "…I should have insisted they go home by ambulance rather than in their own car," (Boer et al., 2013). The specific results for the second research question consisted of responses such as, "It affected me a lot… I started shaking from stress," (Boer et al., 2013). The specific results for the third research question consisted of responses such as, "Telling it to my colleagues has helped me very much," and "…it happened to me and a colleague, we could talk it over together very well," (Boer et al., 2013). The researchers' findings were that the nurses' most critical incidents were not related to death or dying, but rather consisted of incidents occurring under emotionally demanding special circumstances (Boer et al., 2013). Another finding was that the nurses' immediate reactions after their most critical incidents consisted of a professional response at the time of the incident and then a physical reaction such as feeling stress, anxiety, and trembling after the situation calmed down (Boer et al., 2013). These reactions fell in line with other studies (Boer et al., 2013). Another finding was that talking to colleagues was the most helpful way to overcome stressful incidents, which was also in line with previous studies (Boer et al., 2013). The strengths of this study included the fact that it was a one-on-one interview and that they recorded it for review and analysis. Another weakness of the study, which was stated as a limitation, was that the interviewer was both a psychology student and an ICU nurse. This could be a possible source of

bias, and a weakness. This study was a level VI of evidence because it was a single qualitative study.

Stress level among intensive care nurses in the municipality of Paraná (Brazil).

The purpose of this study was to assess ICU nurses in the municipality of Western Paraná, Brazil for their levels of stress (Inoue, Versa, & Matsuda, 2014). The sample size was sixty nurses working in the ICU of five different hospitals (Inoue et al., 2014). The only exclusion criteria was if the nurse had worked less than three months in the ICU (Inoue et al., 2014). The design was a cross-sectional cohort study. The data was collected using the Bianchi Stress Scale (BSS) (Inoue et al., 2014). Of the responses to this scale, the stressors were categorized into six different domains. The domains were as follows: relationship with units and supervisors, activities related to the suitable operation of the unit, activities related to personnel management, assistance provided to the patient, coordination of the unit's activities, and working conditions for the performance of the nurse's activities (Inoue et al., 2014). These domains were categorized in order from A-F (Inoue et al., 2014).

The specific results were that stress levels for domains A, B and E were low (Inoue et al., 2014). The stress levels for domains C, D and F were medium (Inoue et al., 2014). The researchers' findings were that there is a medium stress level for ICU nurses in this particular region (Inoue et al., 2014). This level of stress was mostly identified from their workload of care that they had to provide to their patients (Inoue et al., 2014). The strengths of this study were the characteristics of the study population. Of the sixty participants, forty-one of them were females and nineteen were males. Compared to other similar studies, this study includes more participants from both genders. The weaknesses of this study are centered around that there was no discussion about when and how the participants were given the stress scale to complete. The

study only states that they used the BSS to collect data, and then the results that were collected from this scale. This study was a level IV of evidence because it was a cross-sectional cohort study.

Moral distress, autonomy and nurse-physician collaboration among intensive care unit nurses in Italy.

The purpose of this study was to find potential associations between moral distress and (1) nurse-physician collaboration, (2) autonomy, (3) professional satisfaction, (4) intention to resign, and (5) workload among Italian ICU nurses (Karanikola, Albarran, Drigo, Giannakopoulou, Kalafati, Mpouzika, Tsiaousis, & Papathanassoglou, 2014). The sample size was five hundred and sixty-six practicing ICU nurses in Italy. Of the six hundred and thirty-seven surveys that went out, five hundred and seventy-five completed the study for a response rate of ninety percent (Karanikola et al., 2014). Nine surveys were thrown out of the study due to incompletion, leaving five hundred and sixty-six surveys (Karanikola et al., 2014). These participants were attending the Third European Federation of Critical Care Nurses Association's 22nd international conference in Florence. The design was a descriptive correlational cross-sectional study. The study was a survey of self-reported questionnaires. The survey was in the packets that the attendees got upon arrival to the conference. The survey consisted of four parts: demographics, Corley's Moral Distress Scale, Varjus's et al. Autonomy Scale, and Bagg's Collaboration and Satisfaction About Care Decisions scale (Karanikola et al., 2014). Data analysis was used (Karanikola et al., 2014).

The specific results for moral distress were positively, weakly associated with autonomy ($P<0.0001$), positively, weakly associated with job satisfaction ($P<0.0001$), negatively associated with work satisfaction ($P= 0.003$), positively, weakly with an intention to resign ($P< 0.0001$), and

positively, weakly associated with work load (P<0.0001) (Karanikola et al., 2014). The results were all clinically significant. The researchers' findings were that there is a moderate to high intensity of moral distress in Italian ICU nurses and there is an association between the severity of moral distressing experiences and poor nurse-physician collaboration (Karanikola et al., 2014). Participants who experienced morally distressing situations of low severity in comparisons to high severity, were less likely to resign (Karanikola et al., 2014). One strength of this study was the very large sample size. This provides a lot of data for the researchers to interpret. Another strength is the implication into nursing practice that can come from this study. Future enhancement of that nurse-physician relationship can help nurses not feel morally distressed and in turn create a better work environment for the employees and the patients. The weaknesses of this study involved trying to research too many variables in one study. If they had simplified the questionnaire down to focus more on one specific area associated with moral distress rather than five areas, they could have possibly gotten stronger positive correlations which would have been more significant. This study was a level VI of evidence because it was a descriptive-correlation quantitative research study.

Studies Describing Interventions That Prevent or Reduce Stress Among ICU Nurses

Feasibility and acceptability of a resilience training program for intensive care unit nurses.

The purpose of this study was to explore if a multimodal resilience training program for ICU nurses was feasible to perform and tolerable for the study participants (Mealer et al., 2013). There is little evidence based research done in support of resilience training in the ICU setting. The sample size was thirty-three eligible ICU nurses. Nurses were eligible if they were currently working twenty hours per week at the ICU bedside, had no underlying medical condition that

would contraindicate exercise, and if they scored a minimum of eighty-two on the Connor-Davidson Resilience Scale (Mealer et al., 2013). Exclusion criteria included any nurse that was unable to participate in a two-day educational workshop or had a medical condition that would limit exercise (Mealer et al., 2013). Only twenty-seven of the eligible ICU nurses completed the study since four of the ICU nurses did not score as resilient on the Connor-Davidson Resilience Scale, and two dropped out of the study before beginning it (Mealer et al., 2013). Thirteen nurses were randomized to the intervention arm and fourteen nurses to the control arm (Mealer et al., 2013). The design was a randomized control twelve-week intervention study. There was a treatment and a control group. Every participant including the control arm and intervention arm, completed a questionnaire before and after the intervention was completed. There was a two-day educational workshop for the intervention participants to understand resilience training, different forms of distress experienced in the ICU, and an introduction to the different forms of therapy they would complete over the next twelve weeks (Mealer et al., 2013). Over the twelve weeks, the intervention arm completed written expressive therapy, MBSR stress reduction practices, exercise, and event-triggered counseling sessions (Mealer et al., 2013).

The specific results were that after the twelve-week intervention, the intervention group had a significant decrease in depressive symptoms (P=.03), PTSD symptoms (P=.01), and increased resilience scores (P=.03) in comparison to the control group (Mealer et al., 2013). The results were all clinically significant. The researchers' findings were that this resilience training program was feasible to conduct and acceptable to ICU nurses (Mealer et al., 2013). The researchers discuss that resilience can be taught through these programs (Mealer et al., 2013). One strength of this study was that they had all of the participants complete a questionnaire before and after the intervention. This allows the researchers to have data to compare their

results and findings to. One weakness of this study was that there was possibility of intervention contamination to the control group. As a result, the PTSD symptoms reduced and the resilience scores increased in the control groups as well. This would need to be controlled in a future study because it does not give the researchers an accurate control to compare their findings to. This study was a level II of evidence because it was a well-designed randomized control trial.

Burnout and mindfulness self-compassion in nurses of intensive care units.

The purpose of this study was to investigate the correlation between burnout and the ability of self-compassion mindfulness and establish a predictive model for the occurrence of burnout in nursing staff in ICUs (Gracia & Blazquez, 2017). The inclusion criteria for this study is active nursing staff with a professional experience of one year or greater in the ICU. The study was conducted in 4 adult ICUs in Spain. Of the sample that was originally recruited, 68 nurse's responses were collected and considered. These participants received letters containing informed consent, a survey of sociodemographic variables, and the burnout and compassion scale surveys. The data collection was conducted during the months of January and February 2016. Burnout and compassion were both assessed in this study. Burnout was assessed using the MBI-Human Services Survey, a questionnaire that assesses burnout syndrome in healthcare professionals. Compassion was assessed using the Self-Compassion Scale developed by Kristin Neff (Gracia & Blazquez, 2017).

After a descriptive analysis of the sample was performed, the Pearson correlation coefficient was used. A P value less than 0.05 represented a significant relationship. There is a significant relationship between emotional exhaustion and humanity and isolation. There is a significant relationship between depersonalization and humanity and isolation. Lastly, the relationship between personal accomplishment of nurses and humanity and isolation was

statistically significant with a P value less than 0.05 (Gracia & Blazquez, 2017). Overall, the findings indicate a correlation between burnout and the ability of mindfulness self-compassion in nursing staff in ICUs. The results suggest that programs of mindfulness and self-compassion intervention help nurses to reduce the perceived stress and the emotional strain (Gracia & Blazquez, 2017). This in turn will continue to prevent burnout. The strengths of this study were that the results were all clinically significant. Other strengths include the large sample size and the future implication into nursing practice that can come from this study. The weaknesses of this study were that it was in another country. Another weakness was that the researchers did not present any questions or hypothesis, but only a purpose or aim of the study. This study was a level VI of evidence because it was a cross-sectional descriptive study.

Strengthening workplace well-being: perceptions of intensive care nurses.

The purpose of this study was to identify intensive care nurses' perspectives of strategies that strengthen their workplace well-being. Two research questions were investigated: What do ICU nurses think may enhance their workplace well-being (potential strengtheners)? What strategies do ICU nurses currently use to enhance their workplace well-being (actual strengtheners)? (Jarden, 2018). The study was a descriptive qualitative approach set in New Zealand. The sample size was sixty-five intensive care nurses that were purposefully sought out. The inclusion criteria included al New Zealand RNs employed in an ICU (Jarden, 2018). The participants completed an online survey. Within this survey there were two different free-text responses of which the specific results were concluded.

The results included responses such as, "…a supportive team environment. To me, the most important aspect of this is team… Being isolated in a nursing role is a recipe for disaster not only for the patient but for the wellbeing of the nurse," (Jarden, 2018). The findings from the

sixty-five nurse's responses were sixty-nine different strengtheners of the workplace well-being. These strengtheners included mindfulness and yoga, peer supervision, formal debriefing and working as a team to support each other. In conclusion, the study found that strengtheners that can be implemented to increase psychological well-being stem across multiple platforms including: individual, relational and organizational resources (Jarden, 2018). The strength of this study resides in the future implementations in the workplace surrounding well-being programs. The main weakness of this study is that it was set outside of the United States in New Zealand. This study was a level VI of evidence because it was a descriptive study.

Conclusion

Based on the studies in this review, the research shows that nurses working in the ICU do have certain lowered levels of psychological well-being. There was a significant correlation in multiple studies between nurse-to-patient ratio with moral distress and burnout. The level of stress that ICU nurses felt was mostly identified from their workload of care that they had to provide to their patients. Along with this self reported research, there were feelings of anxiety and stress reported by the nurses after their most critical incidents. Talking to colleagues revealed to be the most helpful way to overcome stressful incidents for many of the ICU nurses. Two studies also revealed that there was an association between moral distress and poor nurse-physician collaboration.

Further research needs to be done on the psychological well-being of ICU nurses in the United States. Out of all of the research in this review, none of them specified that they were performed in the United States. Shoorideh et al. (2015) suggests that more research needs to be done at non-teaching hospitals. This would help make the studies more generalized for every hospital to apply the research.

There needs to be a nurse-to-patient ratio standard set, required, and followed in ICU's to help decrease heavy workload related stress on ICU nurses. Although there is a standard set, based off of the research, that standard is either too high for the nurses, or is not being followed. The second implication for practice is a resilience training program to help ICU nurses cope with their stressful work environment.

CHAPTER 3

Best Practice Recommendations: Supporting Psychological Well-Being in ICU Nurses

The purpose of this thesis was to create best practice recommendations to better provide psychological support for nurses in the ICU. This chapter of the thesis will describe the best practice recommendations to enhance the psychological well-being of ICU nurses. Table 1 provides an overview of the best practice recommendations based on evidence from research articles discussed in chapter two.

The literature reviewed in the previous chapter specified important information regarding the correlation between the hardships associated with caring for critical patients and the ICU nurse's psychological well-being. The literature included studies that established that ICU nurses experience psychological stress and studies describing interventions that prevent or reduce that stress. The literature reviewed proved that moral distress and burnout is one of the ICU nurses' major tribulations. Events in the ICU impact not only the nurses' personal well-being, but their professional practice which is why recognition and implementation is crucial (Shoorideh et al., 2015). The literature emphasized that ICU nurses are faced with crisis not only in the patient, but also in the family. The impact of the sudden circumstances brought about in most families faced with a family member in the ICU bear a lot of weight on the nurse caring for the patient. Caring empathetically for such a critical population puts the nurses at risk for moral distress and compassion fatigue (Mason et al., 2014).

Table 1

Best Practice Recommendations for Psychological Well-being of Intensive Care Unit Nurses

Best Practice Recommendations	Rationale	Level of Evidence	References
Adhere to Nurse to Patient Ratio	Positive correlation between nurse-to-patient ratio and moral distress and burnout	Level VI	Shoorideh, A. F., Yaghmaei, F. T., & Majd, A. H. (2015). Relationship between ICU nurses' moral distress with burnout and anticipated turnover. *Nursing Ethics, 22*(1), 64-76. doi: 10.1177/0969733014534874.
Debriefing Sessions	Being able to debrief and "tell their story" after a traumatic event allows for reduced moral distress by avoiding development of acute stress reactions and acute post traumatic stress disorder	Level VI	Mason, M. V., Leslie, G., Clark, K., Lyons, P., Walke, E., Butler, C., & Griffin, M. (2014). Compassion fatigue, moral distress, and work engagement in surgical ICU trauma nurses. *Dimensions of Critical Care Nursing, 33*(4), 215-225. doi: 10.1097/DCC.0000000000000056.

Structured Peer Support	Active problem focused coping like talking to colleagues was perceived as helpful after clinical incidents	Level VI	Boer, D. J., Rikxoort, V. S., Bakker, B., A., & Smit, J., B. (2013). Critical incidents among ICU nurses and their need for support. *British Association of Critical Care Nurses, 19*(4), 166-174. doi: 10.1111/nicc.12020.
Resilience Training Program	Resilience training allows nurses to develop resilience coping strategies and adapt to stressful work experiences in a positive manner	Level II	Mealer, M., Conrad, D., Evans, J., Jooste, K., Solyntjes, J., Rothbaum, B., & Moss, M. (2014). Feasibility and acceptability of a resilience training program for ICU nurses. *American Journal of Critical Care, 23*(6), 97-105. doi: 10.4037/ajcc2014747.
Enhancement of Nurse-Physician Collaboration	Poor nurse-physician collaboration is a contributing factor to ICU nurse's moral distress. Enhanced collaboration through managerial interventions and professional practices	Level VI	Karanikola, N.K. M., Albarran, W. J., Drigo, E., Giannakopoulou, M., Kalafati, M., Mpouzika, M., Tsiaousis, Z. G., & Papathanassoglou, D.E. E. (2014). Moral distress, autonomy and nurse-physician collaboration among ICU nurses in Italy. *Journal of Nursing Management, 22*, 472-484. doi:

	can lead to increased nurse involvement in clinical decision-making and decreased moral distress		10.1111/jonm.12046.
Mindful Meditation	Mindfulness and self-compassion help nurses to reduce perceived stress and lessen the emotional strain that is produced from the demands of the atmosphere	Level VI	Gracia, G. P., & Blazquez, O. B. (2017). Burnout and mindfulness self-compassion in nurses of the ICU. *Holistic Nursing Journal, 31*(4), 225-233. doi:10.1097/HNP.0000000000000215
Personal Resources: Multi-level workplace well-being program	Simplifying the nurse's life is a strengthener that promotes preventing ill-being rather than an intervention that focuses on the	Level VI	Jarden, J. R. (2018). Strengthening workplace well-being: Perceptions of intensive care nurses. Nursing in Critical Care, n.p. doi: 10.1111/nicc.12386.

	recovery from ill-being		

Summary of Best Practice Recommendations

All of the literature reviewed in this thesis summarized different ways to improve the psychological well-being of intensive care nurses. These recommendations from multiple authors aimed at prevention of psychological distress in this population. After investigation, the PICOT question: Does a nurse working in the intensive care unit (ICU) have a reduced psychological well-being compared to a nurse working in an ICU with established interventions to improve psychological well-being? was addressed through the literature. The literature examined provided multiple recommendations that could be implemented into the ICU settings to increase nurse's psychological well-being. Shoorideh et al. (2015) concluded that the higher the nurse-to-patient ratio, the greater the workload the nurses had which caused an increase in moral distress and burnout. Although nurse-to-patient ratios are set in place in ICUs, they are not always followed. Therefore, strict nurse-to-patient ratios need to be implemented and maintained. Mason et al. (2014) determined that formal debriefing sessions lead by a chaplain or a nurse manger need implemented to allow the ICU nurses to discuss moral and clinical situations. Being able to talk through ethically demanding situations decreases moral distress and it was stated in the research that a person who experiences a traumatic event can require telling their story regarding it eight to nine times before the psychological stress of the event resolves. Boer et al. (2013) suggested that structured peer support needed implemented to help diffuse the stigma that these emotionally demanding circumstances the nurses undergo are not always recognized as critical incidents by their colleagues because they are also experiencing the

same thing. Allowing for structured peer support allows the nurses to cope through expressing their feelings to people who have undergone the same circumstances, but are willing to accept that this is a stressful situation and their colleague needs support. Mealer et al. (2014) concluded that resilience in the ICU setting is associated with positive communication, connectivity, and emotional support. Because of this, the resilience training program should be implemented because it has the potential to influence psychological outcomes such as anxiety, depression, burnout, and PTSD. Karanikola et al. (2014) determined that the association between the severity of moral distressing experiences and poor nurse-physician collaboration was significant enough to recommend education for nurses to adopt perspectives that challenge the power differences present. Nurses need to be able to work cohesively with the physician and be a part of the decision making, especially regarding end-of-life care in order to decrease feelings of powerlessness and moral distress. Gracia et al. (2017) recommended that self-compassion mindfulness should be implemented for ICU nurses because of it's inverse relationship with level of burnout. Jarden et al. (2018) found that ICU nurses identify unique strengtheners including: simplifying lives, mindfulness, yoga, peer supervision, and working as a team. These strengtheners provide a foundation for a workplace well-being program to be implemented in the ICU. These well-being programs help the nurses identify and practice these strengtheners to decrease moral distress.

CHAPTER 4

Implementation and Evaluation

This chapter will focus on implementing and evaluating the theoretical introduction of a resilience training program for ICU nurses to improve psychological well-being. The previous chapters have already identified the presence of a threat to the psychological well-being of nurses in the ICU as well as measures that can be taken to improve this threat. Now that this has been established, the next step is to propose a theoretical training program that combines the findings from chapter three into a multifaceted resilience training program. This training program will be theoretically implemented into a nurse residency program which are aimed at new graduate nurses. The incorporation of this training program into nurse residency programs provides for a guaranteed teaching environment as well as training of new nurses prior to the onset of feelings associated with negative psychological well-being. This new graduate nurse resiliency training program will combine all of the topics studied above including: resilience, debriefing, the importance of structured peer support, mindfulness, and enhancement of nurse-to-physician collaboration.

In order to implement this training program, the Plan-Do-Study-Act (PDSA) cycle will be used. The PDSA cycle will serve as a framework for implementation of the training program into the nurse residency programs. The PDSA cycle serves to test the change made to the nurse residency program by adding this resiliency training program. It is necessary to test change in the real work setting, and this cycle is able to do so by planning it, trying it, observing the results, and acting on what is learned (Institute for Healthcare Improvement, 2019).

This chapter will also briefly cover the evaluation of this theoretical implementation using the PDSA cycle. Evaluating the implementation is a crucial portion of making a

significant change in this field. By evaluating what was learned, what goals were met, and what was concluded from the overall cycle, it can be determined if this new program is going to have an impact on the threat. Testing of the new graduate resilience training program will begin on a small scale in one single hospital's new graduate residency. The PDSA cycle will be used multiple times for this one program, with new data and new learned evaluations each time. Eventually over time, after multiple cycles and refining of the program for maximum results, the program can expand to be included in more nurse residencies. During this chapter, the strengths and limitations of the best practice recommendation with be discussed, in support of future research and implementation.

Implementation

Implementing an Effective Resilience Training Program

Research has indicated that to improve the overall psychological well-being of ICU nurses, a multitude of workplace interventions need to take place. To properly deliver an intervention that incorporates most of the best practice recommendations, a training program is one approach that can be implemented to deliver evidence-based practice information to nurses working in ICUs. The training program will be theoretically implemented using the PDSA cycle. As mentioned, the training program will begin in one single nurse residency program at one hospital. Then, the PDSA cycle will be used multiple times to identify and address bad results and help refine the program for maximum outcome. Once the program has undergone multiple PDSA cycles, it can theoretically be implemented into multiple nurse residency programs.

Plan. As the first stage of the PDSA cycle, plan incorporates stating the objective of the test. For the purpose of this theoretical recommendation, the plan is to test successfully adding a

resilience training program into an established nurse residency program at one hospital. After declaring an objective, predictions must be made about what will happen and why. For this recommendation, the plan will hopefully produce increased levels of psychological well-being. Lastly, a plan can be developed to test the change. This plan must be detailed and include who, what, when, where, and what data need to be collected (Institute for Healthcare Improvement, 2019).

The first step is to identify who this training program will be implemented amongst. This training program will be taught to new graduate nurses enrolled in the nurse residency program. Another important step is to define where this will take place. A nurse residency program must be chosen that is willing to add a resilience training program to their established platform. After identifying who and where this will take place, a framework for when needs to be decided. This theoretical program will be implemented within the next two years for the Spring of 2021 cohort of the nurse residency program. This program will last the entire span of the residency program which is approximately one year. This program will be sprinkled in with educational seminars that are already planned.

Another crucial step in the plan stage is to define exactly what will be implemented. A multimodal new graduate resilience training program will be created based off of the incorporation of the best practice recommendations that were identified in chapter three. This will include five sessions on resilience training itself because it was proven that resilience training allows nurses to develop resilience coping strategies and adapt to stressful work experiences in a positive manner. This program will also include one educational seminar on debriefing sessions and how they are a mandatory standard for each ICU nurse to attend after any critical event on the floor. This program will also include one lecture on structured peer support

and the benefit of active problem focused coping like talking to colleagues after clinical incidents. This program will also incorporate one educational seminar about mindful meditation and the impact it has on reducing perceived stress and lessen the emotional strain that is produced from the demands of the atmosphere. Lastly, this program will include three different interprofessional scenarios where new graduate nurses will work closely with medical residents, pharmaceutical residents, patient care technicians, physical therapists, and social workers. These scenarios will provide a time for learning how to properly communicate as a team during critical incidents as well as end-of-life management. Because poor nurse-physician collaboration is a contributing factor to ICU nurse's moral distress, enhanced collaboration through professional practices can lead to increased nurse involvement in clinical decision-making and decreased moral distress (Karanikola et al., 2014).

The final step in the plan stage of the PDSA cycle is to define what data needs to be collected. The data will be collected using scores from the Professional Quality of Life Scale (ProQOL). ProQOL is one of the most commonly used measurements for the positive and negative effects of working in demanding environments, and experiencing stressful events (Stamm, 2010). The type of administration that will be done using the ProQOL will be group administration. During group administration, the cohort in the nurse residency program will be in a classroom setting on an individual computer workstation. The ProQOL scores the cohort on multiple definitions including: compassion satisfaction, compassion fatigue, burnout, and secondary traumatic stress (Stamm, 2010).

Do. Do is the second stage of the PDSA cycle. It consists of actually carrying out the test. The test will be theoretically implemented in the New Graduate Nurse Residency Program at a large teaching hospital. The multimodal resiliency training program will be incorporated

within the established residency program and will last the span of one year, the same as the actual residency program. The training program will consist of: five sessions on resilience training itself, one educational seminar on debriefing sessions, one lecture on structured peer support, one educational seminar about mindful meditation, and three different interprofessional scenarios. These trainings and lectures will be incorporated into educational seminars over the span of the one-year program.

In this stage, analysis of the data will also begin to take place. During this process of setting the plan in motion, it is crucial to watch what happens once executed. The focus of this stage is on what was observed. Observations for this specific program should include: nurse participation, nurse retention, interdisciplinary reaction, how it fit in with the already established nurse residency program, and nurse response.

Evaluation

After conducting a theoretical implementation of the resilience training program, the next step is to evaluate. Evaluation occurs using the Study and Act stages of the PDSA cycle, and are the final portions that will be discussed in regards to integrating this best-practice thesis into the real world.

Study. The third stage of the PDSA cycle is study. During this stage, the entire analysis of the data takes place. After theoretical implementation of the best-practice program, taking the time to study the results will create room for improvement and manipulation (Institute for Healthcare Improvement, 2019). For example, questions that can and need to be asked include: What was learned? Was the goal met? During the study stage, the ProQOL scale explained previously will be used to collect scores on compassion satisfaction, compassion fatigue,

burnout, and secondary traumatic stress (Stamm, 2010). These scores will guide the evaluation process in determining if the goals were met.

Once the analysis is finished, the data needs to be compared to the original predictions that took place in stage one. The prediction for this theoretical implementation was that the incorporation of the nurse resiliency program into an established nurse residency program would increase overall psychological well-being. The results from the ProQOL need to be compared to this prediction to determine effectiveness of the program. Finally, a summarization and reflection of what was learned should be completed (Institute for Healthcare Improvement, 2019).

Act. The final stage of the PDSA cycle consists of refining change based on the data from stage three (Institute for Healthcare Improvement, 2019). To begin with, this theoretical evaluation will begin by writing down whether or not this implementation worked or not. If the implementation did not effectively work, then determination of changes that can be made needs to take place. A list of possible changes for this specific program could include: more or less educational sessions, longer or shorter time frame for conducting the program, and or actual practice of mindful meditation rather than education on it's benefits. If the implementation did work, a decision on whether the program is ready to spread to more nurse residency programs needs to be determined. In conclusion, during the Act stage, modifications need to be determined, and a future tests need to be planned and prepared (Institute for Healthcare Improvement, 2019).

Strengths and Limitations of Thesis Project

The main strength of this best practice recommendation is the literature that supports the purpose. The review of literature confirmed the threat of decreased psychological-well being that occurs in ICU nurses. The review of literature also provided multiple recommendations for increasing the psychological well-being of ICU nurses in the face of the threat. With a combination of this literature, a best practice recommendation for a multimodal resilience training program was created and supported by a wide demographic. The resilience training program would support new graduate nurses working in ICUs on how to overcome stressful environments and events and would in turn increase psychological well-being of ICU nurses.

The main limitation of this thesis project is that the recommendations that were collected from multiple studies are all new and individual recommendations. Not a lot of overlap occurred in the literature between each of the recommendations. However, although this is a limitation, it was perceived as a strength for the actual content of the program because it was able to incorporate five different recommendations rather than just one.

Summary

In conclusion, the purpose of this thesis was to develop best practice recommendations to increase the psychological well-being of ICU nurses. Through a thorough review of research literature, it was determined that there was a threat to the psychological well-being of ICU nurses evident through increased stress levels, decreased compassion satisfaction, increased compassion fatigue, and increased burnout. This author developed multiple recommendations for increasing psychological well-being and helping to overcome and manage the stressful environment of an ICU, based on research evidence. The proposed implementation and evaluation portion of this thesis utilized the PDSA cycle to determine effective outcomes of the theoretical program. The

theoretical implementation consisted of implementing a multimodal resilience training program into an established year-long nurse residency program. This training program consisted of five of the best-practice recommendations including: resilience training, debriefing sessions, structured peer support, mindfulness, and enhancement of nurse-physician collaboration. The evaluation process of this program used the Study and Act stages of the cycle to determine the effectiveness of the implementation. Overall, implementation of the multimodal resilience training program into an established nurse residency program will help to increase the knowledge and coping mechanisms to handle the stress and demand of an ICU nurse, in an effort to increase the psychological well-being of ICU nurses.

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