

ATHABASCA UNIVERSITY

MANAGING EXPOSURE: A GROUNDED THEORY OF  
BURNOUT AND RESILIENCE IN CRITICAL CARE NURSES

BY

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### **Dedication**

This thesis is dedicated in loving memory to Jay Crawford, BScN. Jay finished his nursing degree at St. Francis Xavier University in the face of extraordinary adversity. He inspired the Xaverian community, and touched the lives of many. Jay lived resilience, and his example helped to inspire my research. His memory lives in all of our hearts.

This thesis is also dedicated to Coralea Forbes, Registered Nurse. It is because of Coralea's example that I became a nurse, and I am grateful for her inspiration every day. She teaches me what it means to care for others, and how to live with things that we can't change. Her grace and compassion are an example to all.

I shall pass through this life but once.

Any good, therefore, that I can do

Or any kindness I can show to any fellow creature,

Let me do it now.

Let me not defer or neglect it,

For I shall not pass this way again.

-Etienne de Grellet-

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**Abstract**

Workplace adversity negatively impacts critical care nurses. This research study was conducted to learn more about nurse resilience in response to workplace adversity. This grounded theory investigation was conducted at a large, multi-site urban hospital with 11 critical care nurses. The participants completed open-ended interviews, discussing resilience and burnout in critical care environments. The proposed, resultant grounded theory is entitled MANAGING EXPOSURE: A Grounded Theory of Burnout and Resilience in Critical Care Nurses. To address the problem of workplace adversity, nurses enact the process of MANAGING EXPOSURE. The core category of MANAGING EXPOSURE counters the basic social process of workplace adversity. The driver of MANAGING EXPOSURE is situational awareness. Nurses manage exposure through a variety of techniques. As a result, nurses will experience a range of indicators. Nurse leaders can intervene in critical care environments, in order to reduce workplace adversity and drive the process of MANAGING EXPOSURE toward resilience.

Keywords: resilience, critical care, nursing, workplace adversity, burnout

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MANAGING EXPOSURE: A Grounded Theory of Burnout and Resilience in  
Critical Care Nurses

**CHAPTER 1: INTRODUCTION**

Life is fraught with challenges. Each person faces various obstacles on a daily basis. Some challenges may be the mundane occurrences of everyday life, while others may seem insurmountable. Each of these obstacles challenges a person to adapt, rather than succumb to perceived adversity. The ability to adjust to challenging circumstances is essential for human development.

Nursing is no exception. Like many professionals, nurses encounter adversity in their occupational practice environments. In order to fulfill the obligations of their role, nurses must overcome these adversities. There are a variety of factors that have been identified by researchers that impact the capacity of nurses to adjust to obstacles in their workplace, and to provide compassionate, safe nursing care to patients and families.

Resilience is one way that many populations overcome adversity, and move forward in the face of difficulty. Nurses can be resilient, in a variety of settings. It is unknown how nurses become resilient, and what factors influence this process. Resilience holds promise as a force that can support nurses in critical care environments. This research study was conducted to advance the understanding of the process of resilience for critical care nurses.

### **Definition of Terms**

This discussion is facilitated by the definition of the following terms:

- **Burnout:** a phenomenon that is characterized by emotional exhaustion, detachment and cynicism, and low levels of personal efficacy and accomplishment (Epp, 2012).
- **Critical care setting/ environment:** inpatient unit(s) where the patient population experiences illness or injury that can be immediately life threatening. This environment is characterized by a nurse : patient ratio that is usually 1:1, with patients who are continuously monitored and medically unstable (Canadian Association of Critical Care Nurses, 2009). In this research study, the term environment applies broadly to critical care, and the term setting applies specifically to the area where the research took place.
- **Critical care nurses:** Nurses in critical care environments are highly skilled, with specialized education (Vanderspank-Wright, Bourbonnais, Toman, & McPherson, 2015). When the term “nurse” or “nurses” is used in this thesis, it is specifically referencing Registered Nurses (RNs).
- **Resilience:** the ability of an individual to adjust to adversity, maintain equilibrium, retain some sense of control over their environment, and continue to move on in a positive manner (Jackson, Firtko, & Edenborough, 2007, p. 3).
- **Workplace adversity:** any negative, stressful, traumatic, or difficult situation or episode of hardship that is encountered in the occupational environment (Jackson et al., 2007, p. 3). For the purposes of this thesis, other forms of the term "

adversity", such as "adverse", also relate to workplace adversity unless otherwise specified.

### **Significance of the Problem**

Critical care nurses experience workplace adversity, which can create burnout. The significance of this problem is explored in this section, through an examination of workplace adversity, patient safety, nursing in critical care environments, and resilience.

### **Workplace Adversity**

Nurses experience many factors that contribute to workplace adversity, including nursing shortages (Hodges, Keeley, & Troyan, 2008), nursing absenteeism (Unruh, Joseph, & Strickland, 2007), high rates of nursing turnover (O'Brien-Pallas, Murphy, Shamian, Li, & Hayes, 2010), and unsatisfactory workplace climates. Nurses experience negative consequences from shift work, violence in the workplace, and intense workloads (Bogossian, Winters-Chang, & Tuckett, 2014). Worldwide, nurses face high rates of violence in the workplace (Spector, Zhou, & Che, 2013). These factors have all proven to be influential in nurses' intentions to stay in their current positions and in the nursing profession (Chan, Tam, Lung, Wong, & Chau, 2013). Workplace adversity has consequences for individual nurses and also across the health care system.

When nurses are negatively impacted by workplace adversity, it reflects in higher costs for a health care system. If nurses feel overburdened in their workplace, they may opt to call in sick or move to another position as a measure of self-protection. Nursing turnover and absenteeism are expected in health care environments, and are not inherently negative. The problem is that nursing turnover and absenteeism have recently

risen to very high levels (Hodges et al., 2008; Unruh et al., 2007). When nurses are absent from work or change jobs, increased costs are accrued in the health care system, as a result of paying other nurses overtime wages to fill in the gaps. While this expense will always exist at some level, these costs can be kept manageable by promoting nursing wellbeing.

### **Patient Safety in Health Care**

It is important for health care organizations to ensure the provision of safe care to patients and their families, across the spectrum of the Canadian health care system. There are many preventable incidents occurring in hospitals, which place unnecessary demands on financial and personal resources. Many of the costs incurred in the health care system could be avoided through intervention. For example, nosocomial infections and physical injuries represent a significant financial burden, despite being preventable in nature (Mittmann et al., 2012). All health care professionals are obligated to address patient safety concerns to protect patients and provide quality health care.

Nurses are an important population to consider in the context of providing safe health care. There are many ways that safety is important in health care environments. It is important to consider safety, in the context of nurses caring for patients, for several reasons. It is acknowledged that nurses are in position of power relative to patients in hospital environments, and they have responsibility for ensuring patient safety (College of Nurses of Ontario, 2009). The second reason is that nurses are able to directly affect patient safety in their clinical practice, through monitoring, patient interaction, and communication (Wassenaar, Schouten, & Schoonhoven, 2014).

Researchers have highlighted the importance of nurses in providing safe patient care. Nurses are able to significantly impact rates of nosocomial infections through the delivery of high quality nursing care (Vandijck, Labeau, Vogelaers, & Blot, 2010). Chin (2013) has confirmed that when there are higher ratios of nurses in inpatient environments, there are fewer adverse events. Decreasing preventable adverse events would represent a significant cost savings to the Canadian health care system, as these events cost \$397 million in Canada in 2009-2010 (Etchells et al., 2010). The provision of safe, high quality nursing care protects patients and helps to keep health care costs to a minimum.

### **Nursing in Critical Care Environments**

It is well documented that nurses experience workplace adversity in critical care environments. Critical care nurses have reported a decline in the quality of their work environments (Ulrich, Lavandero, Woods, & Early, 2014). Many factors that contribute to workplace adversity in critical care environments are specific to these environments. These include high patient mortality rates, (Heyland, Lavery, Tranmer, & Taylor, 2000), occupational stress, experiences of moral distress, and factors in the physical environment (Epp, 2012). Structural factors, such as nursing staffing, can be very influential in the quality of critical care environments (Ulrich et al., 2014). All of these factors can create an adverse workplace for nurses. Critical care nurses can be especially prone to the negative impacts of workplace adversity, such as burnout (Epp, 2012).

Nursing burnout has been widely researched, and is a well-known problem experienced by nurses in critical care environments. Burnout can be a product of

sustained exposure to workplace adversity (Epp, 2012). Many critical care nurses experience some degree of burnout (Epp, 2012) and rates of burnout among critical care nurses are higher than those of other health care professions (Khamisa, Peltzer, & Oldenburg, 2013). However, burnout is not an inevitable consequence of nurses facing workplace adversity in a critical care environment, and it can be both prevented and successfully treated (Epp, 2012).

### **Resilience and Nursing**

A factor that may help prevent burnout for nurses in critical care environments is resilience. While burnout has been extensively investigated, resilience has received comparatively little attention. Based on a variety of recent statistical models, it has been demonstrated that resilience is not associated with demographic variables (Lee, Nam, et al., 2013; Pines et al., 2011). Essentially, anyone can be resilient. There is evidence that resilience can help an individual to adapt to adversity, and achieve positive outcomes despite difficult circumstances (Earvolino-Ramirez, 2007; Fletcher & Sarkar, 2013; Werner, 1989). Resilience has helped individuals from various populations, such as Olympic athletes (Fletcher & Sarkar, 2012), people with amputations (Livingstone, Mortel, & Taylor, 2011), and children who are deemed vulnerable (Werner, 1989). In light of this evidence, it is possible that resilience may be a positive force for critical care nurses.

### **Theoretical Development**

To learn more about resilience for nurses, it was advantageous to target theoretical development. A theory is a framework that tentatively describes, predicts, or explains

relationships and ideas that create a phenomenon (Maz, 2013). There are a variety of theories about resilience (Polk, 1997; Richardson, 2002). However, these theories exist within the realm of grand theory, and have limited direct application to a critical care environment. Additionally, these theories conceptualize adversity as a trauma that is imposed upon a subject. This is not the case for critical care nurses, who choose to work in critical care environments, and may experience non-trauma adversity continuously in the workplace. These factors could make the process of resilience for critical care nurses unique to other resilience processes.

It is known that burnout is a systemic problem in critical care environments, and that attempts to address burnout have not had a widespread impact (Epp, 2012). A different approach is needed to address burnout in critical care environments. A practice-based grounded theory of resilience, generated from data gathered from nurses in critical care environments, serves as a framework for direct application. The understanding of this phenomenon helps nurses to identify how to engage in resilience-promoting processes, and can inform the development of interventions to promote resilience. The delineation of the process of resilience for critical care nurses makes a contribution to the understanding of the phenomenon of resilience.

It is also important to consider the potential economic benefits of resilient nurses. Diminishing nursing absenteeism and increasing nursing retention will better ensure that enough nurses are available in the workplace. This can have a positive impact on nursing morale and workplace culture, as well as on patient safety. In turn, the promotion of

resilience will likely decrease adverse events in hospitals, which could protect patients and save money.

It is also likely that resilience can help nurses to avoid burnout. The incidence of nursing burnout in Canada provides a measure of evidence that the health care system does not inherently facilitate caring for the caregiver (Epp, 2012). Nurses are not an inexhaustible resource; it is important to support nurses so that they can provide exemplary patient care. Caring for the caregiver through the promotion of nursing resilience would support the nursing profession.

### **Purpose of This Study**

The purpose of this study was to learn more about critical care nurses' experiences with workplace adversity, and their process of becoming resilient. The proposed grounded theory is rooted in nurses' experiences of workplace adversity and resilience. It is acknowledged that resilience and adversity are present in many facets of one's life; for the purpose and feasibility of this study, the focus is narrowed to workplace adversity in critical care environments.

### **Research Question**

The research question that guided the approach and methods to achieve the purpose stated was: what is the process of critical care nursing resilience in workplace adversity?



### **Position as the Researcher**

My interest in resilience in critical care nursing has evolved from my experiences. I was originally exposed to the phenomenon of resilience at university, where I learned of Werner's (1989) research involving high-risk children. I remember being fascinated that these children thrived in the face of adversity, and also that there had been identifiable protective factors in their lives. While I was intrigued by this research, the seeds of interest in resilience lay dormant for some time.

After university, I worked as a nurse in various capacities, eventually reaching a critical care environment. It was my plan to pursue a nursing career in critical care. It flattered my ego to think that I could work in the place where the nurses were the most elite in the hospital (I have since come to appreciate the narrow-mindedness of this understanding). I perform well under pressure, and wanted an environment that was full of fast-paced challenge. I completed my orientation process easily, and began a career in critical care nursing. I had been warned that it was difficult to nurse in critical care because of the technical knowledge that was required. However, I soon learned that the technical knowledge would never be a barrier to my ability to work in this environment.

I was wholly unprepared for the emotional challenges of working in critical care. I had no idea of the frequency and gravity of ethical decision-making that would be required; nurses didn't speak about this. I realized there was no education that could ever prepare me to watch a 21-year old die, or listen to the screams of a woman losing her husband of 6 months. The graphic scenes that played out in front of me were shocking. I

saw bodies in states that I could never have imagined; when I closed my eyes, the images were still as vivid as they had been with my eyes open.

In the midst of these experiences, I also saw the actions of my colleagues. The nurses in critical care were strong, well-educated nurses who loved their jobs. Many had been in the critical care environment for 20-30 years, and often spoke of their desire to remain in critical care until they retired. Nurses dealt with graphic, heart-wrenching situations, and still support patients' families or exchange a joke with a colleague. I watched these nurses in awe. How did they do it?

Over time, I found I adapted to the critical care environment. I was no longer exhausted after each shift, nor did I cry all the time. I built supports with my colleagues, and eventually became more comfortable. I felt more confident in my role, and was able to mitigate the stress I experienced in the workplace. I still had days that were absolutely devastating, but I also had days that were rewarding beyond what I could have ever imagined. I felt what my colleagues felt- that nursing in a critical care environment was an opportunity to make a tremendous difference in the lives of patients and their families.

I recall clearly, when I sat in the break room after a very difficult shift, I turned to my colleagues and asked, how do you do it? How can you do this job and not be upset all the time? As I looked around the room, the nurses shrugged and stated, well, you get used to it. No one really provided a clear answer. I knew they were resilient, but no one was able to indicate how they had developed this process. While that moment seemed insignificant at the time, I have come to see that therein lay an important research opportunity. I worked with nurses in critical care who were burnt out, uncaring, and

unsympathetic. I also worked with nurses who were beacons of strength. Their ability to multitask, advocate, and care for extremely vulnerable people was inspiring. I read literature on critical care nurses, and became frustrated with the extensive discourse on burnout because something was missing. In the midst of talking about all of the negative elements of critical care nursing, we have overlooked the good.

I embarked on this research study as a testament to the strength of my colleagues. I wanted to honour what they know of resilience; that resilience is possible. I hoped to advocate for my colleagues, and all critical care nurses, by demonstrating the strength of this amazing group of people. I wanted to help to identify what the process of resilience entails, so that the next time a young nurse asks for help in the break room, there may be an answer.

### **Conclusion**

In the presence of adversity, one can be resilient. Nurses are capable of developing resilience as they face challenges in critical care environments. The proposed grounded theory resulting from this research study provides a framework to understand the process of resilience for nurses in critical care environments in response to workplace adversity.

## **CHAPTER 2: LITERATURE REVIEW**

This research study is informed by an existing body of knowledge about resilience from nursing, psychology, and other disciplines. Multidisciplinary literature was included in this review. The search terms applied for this literature review were ‘resilience’, ‘nursing’, ‘workplace adversity’, ‘critical care’ and ‘intensive care’, and combinations of the same. After initial searching was completed, ‘burnout’ was found to be relevant, and was added to the search terms. Additional resources were provided by colleagues or derived from the reference lists of articles. This chapter will discuss the resultant literature on workplace adversity and burnout, resilience as a concept, and resilience in nursing.

### **Workplace Adversity**

Workplace adversity can take many forms, and exists at various levels in the Canadian health care system. This section discusses conceptualizations of adversity, adversity in the nursing profession, and adversity in critical care settings.

#### **Conceptualizations of Adversity**

There are many interconnected concepts related to adversity and resilience. By definition, resilience exists in the face of adversity. It is helpful to distinguish adversity, which is an external condition, from pain or suffering, which are internal experiences. Pain represents a physiological phenomenon, and suffering is the subjective endurance of pain or distress (Carnevale, 2009). Suffering has also been conceptualized as a distressed state, which is distinct from adversity (Morse, 2001).

There is debate in the literature over what constitutes adversity in the context of resilience. Several authors have stipulated that resilience exists in the presence of significant adversity or trauma (Luthar, Cicchetti, & Becker, 2000; Simmons & Yoder, 2013). However, others have conceptualized adversity as any hardship, not only earth-shattering events (Fletcher & Sarkar, 2013; Jackson et al., 2007). It is also proposed that adversity does not necessarily need to be a wholly negative event (Fletcher & Sarkar, 2013). Fletcher and Sarkar (2013) argue that weddings and graduations are happy events, but the major life changes that are associated with these events can be experienced as adversity.

Additionally, adversity does not necessarily have to be something forced upon an individual by external circumstances. In their grounded theory examination of resilience with gold medal Olympians, Fletcher and Sarkar (2012) highlighted that engaging with adversity can be a choice. Olympic athletes did not have to participate in extremely stressful circumstances; they chose to do so, to reach the highest echelons of their sport. Fletcher and Sarkar (2012) also indicated that resilience was demonstrated by Olympians in response to many different forms of adversity, from everyday tasks to major events.

For the purposes of this research, adversity is located in the context of the workplace, and is defined as any negative, stressful, traumatic, or difficult situation or episode of hardship that is encountered in the occupational setting (Jackson et al., 2007, p. 3). In this study, the occupational setting is a critical care environment (see Chapter 3). This includes daily challenges experienced by nurses (McDonald, Jackson, Wilkes, &

Vickers, 2012). The workplace, and the nature of the stressors in the workplace have significant influence on resilience (Lee, Nam, et al., 2013).

### **Adversity in Nursing**

There are systemic factors that can create workplace adversity and have a lasting, negative impact on nurses. There are many factors that contribute to workplace adversity for nurses, including the workplace climate, violence in the workplace, nursing shortages, nursing absenteeism, and high rates of nursing turnover. Each of these factors has proven to be influential in nurses' intentions to stay in their current position and in the nursing profession (Chan, Tam, Lung, Wong, & Chau, 2013).

**Workplace climate.** The political climate in a health care organization has a significant impact on Canadian nurses. There are many factors that contribute to workplace climate including, job security, nurse-to-patient ratios, wages, workload, and shift work requirements. Nurses in Halifax were on strike in early 2014, until legislators enacted laws that brought the strike to an end (Tutton, 2014). In Alberta, nurses have finally reached a contract after more than 14 months of negotiations (Gerein, 2014). Ontario nurses reached a contract agreement with the province through arbitration, as negotiations proved fruitless (Grant, 2014). These are a few examples of workplace adversity that trickle down from health care organizations to clinical nurses.

Across Canada, there are many challenges for nurses, expressed in their wages and contract negotiations. These conflicts would undoubtedly be stressful for nurses, and create a challenging climate for providing nursing care. Low wages are a source of frustration in the nursing profession, and nurses feel that they are undervalued in their

workplace and in society (Bogossian et al., 2014). Ultimately, nurses may decide to leave the profession because of job insecurity or poor remuneration. When there are systemic concerns regarding job security and wages, large groups of nurses may experience workplace adversity.

The nature of nursing shift work also creates challenges for clinical nurses. Health care is provided 24 hours a day, and nursing staffing schedules are designed to meet this constant demand. Nurses find shift work to be physically demanding and shift scheduling creates conflict with family and non-work activities (Bogossian et al., 2014). There is evidence that shift work increases the risk of work-related injuries for nurses (Zhao, Bogossian, & Turner, 2010). Nurses who do shift work have decreased sleep between work periods, and become sleep deprived. During non-work times, nurses catch up on sleep in attempt to compensate (Allen et al., 2014). Shift work can impact many facets of a nurse's life, potentially creating adversity.

It has also been demonstrated that workload can have a significant impact on nursing satisfaction. Bridges et al. (2013) found that when nurses are dissatisfied with the type of nursing care they are able to provide to patients, they will actively disengage from therapeutic nurse-patient relationships for emotional protection. If nurses are not able to provide high quality nursing care, they experience a range of negative emotions, including frustration and regret (Bridges et al., 2013). A nurse's ability to provide quality care is among the highest predictors of job satisfaction (Utriainen & Kyngas, 2009), and the inability to provide quality care can result in feelings of inadequacy and frustration (Bogossian et al., 2014). The overall quality of nursing care provided has been linked to

the quality of the nursing workplace environment, and hospital staffing levels (Lambrou, Merkouris, Middleton, & Papastavrou, 2014). The quality of nursing care is influenced by the environment, which in turn, impacts clinical nurses.

A nurse's location within a traditionally patriarchal health care system is also stressful (McGibbon, Peter, & Gallop, 2010). Health care environments have many physical and social barriers that entrench the subordinate role of nurses, respective to physicians (McGibbon et al., 2010). This may contribute to the fact that abuse from physicians toward nurses in a clinical environment is higher than abuse in any other relationship among health care professionals (Edward, Ousey, Warelow, & Lui, 2014). Nurses also spend a great deal of time negotiating with other health care professionals. This central role within the health care team increases the burden of responsibility on nurses, and increases nurses' stress (McGibbon et al., 2010).

**Violence.** Violence is a widespread problem for the nursing profession. Nurses experience violence from patients and families, and also from colleagues and superiors (Bogossian et al., 2014). One third of nurses are exposed to physical violence at work, while two thirds of nurses have experienced non-physical violence, such as threats (Spector et al., 2013). There are many cases of bullying, sexual harassment, and physical harm caused to nurses in the workplace (Spector et al., 2013). Horizontal violence, which is sustained, hostile, and aggressive behaviours directed at nursing colleagues are widespread in the nursing profession (Becher & Visovsky, 2012). Violence in the nursing profession is rarely reported; in some cases, 80% of incidents are not passed on to managers (Edward et al., 2014). The financial impact of violence towards a nurse can be



as high as \$100,000 per year, per person (Becher & Visovsky, 2012). Undoubtedly, violence in the workplace is an adverse experience for nurses.

**Nursing shortage.** Another example of workplace adversity is the shortage of qualified nurses. When there are not enough nurses to meet the demands of the health care system, patient safety is negatively impacted (Hodges et al., 2008). Part of this phenomenon is associated with high attrition rates for new nurses in their first year of practice, in some cases over 50% (Hodges et al., 2008). The increased rates of nurse attrition are especially concerning because the quality of the workplace environment is a key factor in nurse retention (Canadian Health Services Research Foundation (CHSRF), 2006). Nurses who are dissatisfied with their workplace may leave the profession, increasing the severity of the nursing shortage (CHSRF, 2006). This is a grave concern in the Canadian health care system, as it is known that greater numbers of nurses are associated with fewer adverse events in hospital, and higher quality patient care (Chin, 2013).

**Absenteeism.** Additionally, there are high levels of absenteeism for nurses in Canada. The rate of absenteeism for nurses, which is defined as missing work on a scheduled day, is almost 60% more than the average Canadian worker (Gaudine, Saks, Dawe, & Beaton, 2013; Ootim, 2002). Absenteeism can create a vicious cycle. For instance, when an employee is absent, the workplace is short staffed; subsequently, nurses who are present must work harder to meet patients' needs. Consequently, these nurses become physically and emotionally tired. This negative impact on nurses can lead to additional absenteeism from physical or mental illness (Unruh et al., 2007). When a

nurse cannot come to work, another nurse can be called to work, but they will be paid overtime as per contract agreements. If nurses are working beyond full time hours, they run the risk of becoming exhausted and missing work, creating a snowball effect. This cycle has clear implications for nursing wellbeing, and also implications for staffing costs in the Canadian health care system.

**Rates of nursing turnover.** Nursing turnover rates are problematic in Canadian hospitals (O'Brien-Pallas et al., 2010). Nursing turnover is a complex phenomenon, and is influenced by patient, nurse, and unit characteristics (O'Brien-Pallas et al., 2010). In their survey of 39 Canadian hospitals, O'Brien-Pallas et al. (2010) found that a lack of team support was cited as the number one reason for nurses leaving a unit. Higher turnover rates were associated with increased medical errors, decreased job satisfaction, and poorer outcomes for patients and nurses.

### **Adversity in Critical Care Environments**

Stress is present in health care workplaces, including critical care environments. There is a great deal of nursing responsibility, including the continuous patient monitoring, anticipatory planning and troubleshooting, coordination of interprofessional care, and psychosocial support of patients and their families (Epp, 2012). It is also notable that in the Canadian health care system, the provision of critical care utilizes a significant amount of health care resources. In Ontario, critical care costs represent 15.9% of the total health care expenditure, about \$662 million (Canadian Institute of Health Information, 2014).

**Death in critical care.** Patient death is also a common phenomenon in critical care environments. Approximately 27% of all deaths at Canadian teaching hospitals take place in critical care environments (Heyland et al., 2000). This is notable for several reasons. In critical care environments, there are widely held views that death is a failure of medical science (Weiser & Cooper, 2011). The purpose of critical care is to cure illness and save lives, and when this is not possible, it can be viewed as though health care professionals have failed. This is in contrast with other environments such as palliative care, where death is viewed as a natural part of life (Ferrell & Coyle, 2006). Nurses often know that a patient is going to die before the family is told, which causes nurses to experience the stressful burden of this knowledge (McGibbon et al., 2010). Nurses also spend more time at the bedside than other health care professionals, and this constant presence means that nurses provide much of the emotional care for the patient and family (McGibbon et al., 2010). The high death rate in critical care environments creates significant stress for nurses, and its emotional impact should not be underestimated (Shorter & Stayt, 2009).

### **Burnout**

In critical care environments, there is a high degree of nursing burnout (Epp, 2012). There are various definitions of burnout. This phenomenon is characterized by emotional exhaustion, detachment and cynicism, and low levels of personal efficacy and accomplishment (Epp, 2012). Burnout represents an extreme manifestation of a nurse's reaction to workplace adversity. Freudenberger (1974) was the first to describe burnout among professionals, and Shubin and Milnazic (1978) characterized burnout in nursing.

The majority of critical care nurses experience some degree of burnout during their careers (Epp, 2012) and rates of burnout among nurses are higher than those of other health care professionals (Khamisa et al., 2013). Poncet et al. (2007) found that a third of critical care nurses experienced severe burnout syndrome (n=2,392). While specific rates of burnout are not known for Canadian critical care nurses, critical care environments have the highest level of nursing staff turnover rates in Canada (O'Brien-Pallas et al., 2010). Burnout has been identified as a key factor in a nurse's decision to leave a position, or leave the profession (Chan et al., 2013). It is also known that burnout negatively impacts a nurse's physical and mental health (Khamisa et al., 2013).

There are several reasons for the phenomenon of burnout in critical care environments. Occupational stress is cited as the main reason for critical care nursing burnout (Epp, 2012; Khamisa et al., 2013). The critical care environment contains many challenging elements, including high levels of nursing responsibility, ethically distressing situations, and families in crisis (Epp, 2012). The gravity and frequency of ethical decision-making in critical care environments may cause nurses to suffer from moral distress, which can manifest in physical and emotional symptoms (Moola, Ehlers, & Hattingh, 2008; Weignad & Funk, 2012). Additionally, critical care nurses experience morally distressing situations, such as providing futile care to a patient at a family's insistence (Epp, 2012). The physical environment also involves the use of many types of technology, and high levels of noise, which can combine with other stressors to contribute to burnout (Epp, 2012).

In a critical care environment, there can be little time to recover from stressful incidents, such as the death of a patient, because of the frequency at which these events occur and the need to continue working with other patients. This lack of recovery time can lead to burnout (Moola et al., 2008). Nurses who work in critical care environments are at risk of developing post-traumatic stress disorder (PTSD), in addition to burnout, due to the number of critical incidents they experience (Moola et al., 2008). This is not exclusively a Western phenomenon; Chinese critical care nurses also identify workload as a major cause of personal stress (Li & Lambert, 2008). The critical care environment is where life hangs in the balance, and the emotional ramifications of this for nurses should not be underestimated. Patient death will always exist in critical care environments. It is important to appreciate this context, as it is influential in the way that nurses can be resilient.

However, burnout can also be prevented and successfully treated (Epp, 2012). Shubin and Milnazic (1978) presented strategies to manage burnout, which bear great similarity to recommendations from modern researchers. Strategies to prevent burnout begin with an organization's recognition that burnout is not an individual problem, and that burnout prevention requires a systemic approach (Epp, 2012). Critical care nurses who work in healthier environments report higher levels of job satisfaction and decreased the intent to leave their roles (Breau, & Rheume, 2014). Notable activities to prevent burnout include visible support from nursing management, the availability of debriefing, inter-professional collaboration, formal and informal support systems, and nursing self-care (Epp, 2012). Units with higher teamwork scores also had lower rates of nurse

burnout (O'Brien-Pallas et al., 2010). Reflective learning, and education about appropriate interventions for patient stress have assisted in decreasing burnout among nurses working in security settings (such as prisons); however, it is acknowledged that the supporting evidence for these claims does not have strong validity (Stewart & Terry, 2014). In their study of resilient critical care nurses, Mealer, Jones and Moss (2012) identified a positive worldview, a diverse and supportive social network, cognitive flexibility, and balance with work and self-care as factors that supported nursing resilience. The resilient nurses distinguished spirituality and their social supports as the two most common supports in the critical care environment (Mealer et al., 2012). This was in contrast with critical care nurses with PTSD, who did not use skills and resources to prevent burnout. Nurses who do use these skills and resources are able to work effectively in a critical care environment, and burnout is not inevitable.

### **Resilience**

Researchers in various disciplines have studied the concept of resilience. In this section, there is a synthesis of the conceptualizations of resilience, resilience theories and models, and a review of nursing and non-nursing resilience research.

#### **Conceptualizations of resilience**

Resilience has been broadly studied and variously defined. For the purposes of this research, resilience is defined as the ability of an individual to adjust to adversity, maintain equilibrium, retain some sense of control over their environment, and continue to move on in a positive manner (Jackson et al., 2007, p. 3). While the term resilience has been applied to a variety of contexts, such as biological systems, engineering materials,

or corporations, resilience is used exclusively as a psychological phenomenon in this article. Resilience is understood as a dynamic and multidimensional phenomenon (Tusaie & Dyer, 2004). In previous studies, demographic variables have been found to have the least impact upon resilience in statistical models; thus, anyone can be resilient (Lee, Nam, et al., 2013; Pines et al., 2011).

Resilience has been conceptualized as a construct (Luthar et al., 2000), a trait (Jacelon, 1997), and a “dynamic life process” (McGee, 2006, p. 46). Herein lies an issue of semantics: *resilience* is used to refer to a process, while *resiliency* describes a personality trait (Luthar et al., 2000). Resiliency, as a trait, refers to personality characteristics that facilitate adaptation, but do not necessarily assume the existence of adversity (Luthar et al., 2000). Resiliency has been associated with the Big Five personality dimensions: agreeableness, conscientiousness, extroversion, emotional stability, and openness. However, the influence of these dimensions on a person’s positive outcomes is not supported in all models (Lee, Sudom, & Zamorski, 2013).

In contrast, resilience, when defined as a process, exists only in the presence of adversity (Luthar et al., 2000). An individual’s personality traits are present whatever their circumstances, so resiliency as a personality trait does not require adversity to exist. However, the process of being resilient is fluid, and begins when an individual experiences adversity and prepares to respond. When resilience is viewed as a process, rather than a fixed trait, it opens resilience to change through interventions (Winwood, Colon, & McEwan, 2013). This is fitting since nurse resilience has been increased through workplace interventions (McDonald et al., 2012). Additionally, the

understanding of resilience as a process accommodates for the influence of the environment and the communities surrounding an individual (Lee, Nam, et al., 2013). In this research, resilience is conceptualized as a process, which is open to environmental influences and interventions. This is consistent with the current understanding in the nursing resilience discourse (Earvolino-Ramirez, 2007).

**Characteristics of resilience.** There are several characteristics of resilience. Earvolino-Ramirez (2007) identified that the most important characteristic of resilience is that it exists in the presence of adversity. Without adversity, there is no resilience process. Earvolino-Ramirez (2007) also noted other defining elements of resilience that have been consistently supported in literature. These include a sense of purpose in life, the presence of social support, flexibility, healthy self-esteem, and a sense of humour. Individuals who are resilient are able to draw on these elements in order to create positive outcomes in their lives, despite adversity. Resilience is distinct from endurance because resilience is a process with the goal of returning toward baseline functioning. Endurance is a response to a specific threat that necessitates a decrease in functioning to promote survival (Morse, 2001).

It is also important to differentiate resilience from coping or adaptation. Resilience influences how a person appraises an event, and understands its significance (Fletcher & Sarkar, 2013). Coping and adaptation are a result of actions that are implemented following appraisal, and are products of a resilience process (Fletcher & Sarkar, 2013). It is also important to consider whether an individual maintains homeostasis, or excels beyond baseline (Luthar et al., 2000). Either of these processes



could occur, and the outcome could be considered contextually resilient (Luthar et al., 2000). Resilience, as a process, combines appraisal, cognition, utilization of resources and supports, and impactful responses, which lead to a positive outcome (Fletcher & Sarkar, 2012).

**Dominant discourse.** These conceptualizations of resilience reflect a Western, individualistic worldview. The characteristics associated with resilience are generally individual attributes (Earvolino-Ramirez, 2007). However, this worldview may not be appropriate for indigenous populations, who may view resilience through a collectivist paradigm (McCubbin, McCubbin, Zhang, Kehl, & Strom, 2013). An indigenous worldview may assume that an individual, family, community, and broader society are inseparable and exist in a relational connection (McCubbin et al., 2013). In contrast, much of the current literature on resilience determines the presence or absence of resilience based on outcomes for an individual, rather than the outcomes of a group or society. An indigenous worldview or contextualization is largely absent from the dominant resilience discourse.

**Seminal research.** Early research on resilience emerged from the field of psychology. The first studies of resilience were conducted in the 1970's with people with schizophrenia (Luthar et al., 2000). Seminal work on resilience was conducted by Werner (1989), who studied the population of the Hawaiian island Kauai for over 40 years. Werner (1989) demonstrated that children who were considered 'high risk' at birth could go on to lead positive and healthy lives. This was attributed to the presence of protective factors, which limited the long-term impact of adversity upon the children.

These factors include the ability to concentrate, participation in hobbies and extracurricular activities, the support of role models, and a sense of personal autonomy and responsibility. This ground breaking research study illustrated that individuals can rise out of adversity and lead productive lives, which was in contrast to prevalent notions about the impact of risk factors upon children (Richardson, 2002). Resilience was identified as a beneficial process, as it fostered coping in the face of adversity.

### **Theory and Resilience**

Various theories of resilience have been developed. The broadest theory of resilience is Richardson's (2002) metatheory of resilience and resiliency. It attempts to cross disciplines and demonstrate that the maintenance of all aspects of homeostasis is a product of resilience. Richardson (2002) identifies three waves of resilience inquiry: 1) resilience as personality traits 2) resilience as the process of coping and 3) resilience as a product of self-actualization. This model progresses from a stimulus that produces negative emotions (adversity), to introspection, decision-making, and possible adaptation. Richardson (2002) stated, "The more that physicists seem to learn, the more they allude to a driving force that controls the universe. In this article, it is called resilience." (p. 314). This is open to criticism, because when resilience is equated with the power of the universe, it moves outside of the realm of intervention or human control. It has been argued that this understanding of resilience is exaggerated (Fletcher & Sarkar, 2013).

**Grounded theory and resilience.** Grounded theory studies have been conducted to explore resilience. Fletcher and Sarkar (2012) examined resilience in Olympic gold medal athletes. Their findings produced the grounded theory of psychological resilience

and optimal sport performance. This theory illustrated that resilience is a process, activated by the presence of stressors. In the first phase, the Olympians appraised stressors. In the next phase, the Olympians developed positive cognitions through the following: a positive personality, motivation, confidence, focus, and perceived social support. In the third phase, the athletes would produce a positive response to their stressors, and act in an adaptive manner. Finally, the outcome would be that the Olympians achieved optimal sport performance. Personal agency was an important factor in this process, as Olympians chose to engage with the stressors in order to excel. While this theory is specific to the context of Olympic gold-medal athletes, its process may have wider applications.

Denz-Penhey and Murdoch (2008) also conducted a grounded theory study of resiliency, with people who had survived despite having extremely adverse medical conditions. These authors specified that they examined resiliency, as opposed to resilience. The resultant grounded theory conceptualized resiliency as “a way of being and acting in the world” (p. 394), with a central theme of connectedness. Five dimensions impacted an individual’s resiliency, under the theme of connectedness. These dimensions were social, family, physical environment, inner wisdom, and strong self-identity. The grounded theory identified resiliency as a phenomenon that started in an individual and permeated out to social relationships and the external environment.

A grounded theory of resilience has also been developed for people who have experienced diabetes-related amputations. Livingstone et al. (2011) interviewed five patients and their caregivers following an amputation secondary to diabetes. The theory

that was generated describes a “path of perpetual resilience” (p. 26) that participants experienced post-amputation. The linear process had 3 stages: the imposed powerlessness patients experienced because of their amputations, the adaptive functionality which addressed the management of their physical symptoms, and finally, the endurance phase where participants adapted to their amputation. Resilience was experienced as participants moved through the stages, eventually arriving at a functional level where they felt hope.

**Nursing theory and resilience.** In nursing, a resilience theory has been developed by Polk (1997). Using a concept synthesis, Polk (1997) reviewed literature to create a middle-range theory. Resilience is understood as the ability to change adverse experiences into growth. It is characterized by four major patterns: dispositional, relational, situational, and philosophical patterns. The dispositional pattern encompasses physical and psychosocial attributes, including genetics, self-esteem, and autonomy. The relational pattern consists of interpersonal relationships and interactive experiences, such as hobbies. The situational pattern reflects the ability to solve problems and be resourceful. Finally, the philosophical pattern includes personal convictions and beliefs. These four patterns are believed to manifest together to create resilience. Polk’s (1997) model does not include the impact of the external environment on an individual’s resilience. Polk (1997) acknowledged that this theory is preliminary, and suggested additional research to develop the theory.

**Other models of resilience.** There have also been efforts to establish a statistical model of nursing resilience. Gillespie, Chaboyer, Wallis and Grimbeek (2007) surveyed

772 operating room nurses to develop a model of nursing resilience. A regression analysis indicated that hope, self-efficacy, problem-solving, managing stress, and competence all contributed to nursing resilience. Sixty percent of the variance was explained by this analysis, with the most influential factors being hope and self-efficacy. This study supports the conceptualization of nursing resilience as a process.

### **Populations of Interest in Resilience Research**

There are several populations that have been the subject of study on resilience. The following section presents resilience research in psychology, and for military personnel, and non-nursing professionals.

**Psychology.** In psychology, the majority of research on resilience has focused on children and adolescents. Werner (1989) demonstrated that resilience could mitigate the effects of childhood trauma. Psychologists have studied the role of resilience for children in a wide variety of settings (Jackson et al., 2007). Currently, the focus of resilience research in psychology includes immigrant children, and children of immigrant parents (Costigan, Koryzma, Hua, & Chance, 2010; Motti-Stefanidi & Masten, 2013).

**Military resilience.** Researchers have examined the role of resilience for military personnel (Lee, Sudom, et al. 2013; Simmons & Yoder, 2013), and military families (Melvin, Gross, Hayat, Jennings, & Campbell, 2012). Resilience is important for military personnel, especially since the beginning of the Iraq and Afghanistan wars. Since these wars began, the rates of military personnel suicides have exponentially increased, surpassing those of the general population (Simmons & Yoder, 2013). Using the Revised Connor-Davidson Resilience Scale, Melvin et al. (2012) found that resilience for military

couples was positively associated with post-deployment couple functioning, regardless of levels of stress. Longitudinal research with Canadian military personnel who served in Afghanistan revealed that conscientiousness, emotional stability, and mastery (proxy measures of resiliency) positively correlated with post-deployment mental health (Lee, Sudom, et al., 2013). However, the resiliency proxy measures of extroversion, positive affect, and agreeableness did not impact post-deployment mental health. Lee, Sudom, et al. (2013) concluded that post-deployment mental health is complex, and its influencing factors merit further study. It is notable that the sample for this research study was all male participants (n=1,584). Simmons and Yoder (2013) identified that adaptive coping, personal control, hardiness, and social support were all important attributes of resilience in military personnel. There has been limited gendered analysis of military resilience, with research findings representing largely male samples. The conceptualizations of resilience in these articles focus on resilience as a trait, rather than a process, which differs from the definitions of resilience that are found in health care literature.

**Resilience and non-nursing professionals.** Resilience has been identified as an advantageous phenomenon for a variety of professional groups, including police officers. Police officers are exposed to both primary traumas, when one is directly in harm's way, and secondary traumas, when one witnesses unfixable suffering (Morley & Conn, 2012). Both types of trauma place officers at risk for PTSD, and other mental health issues (Morley & Conn, 2012). The policing lexicon of resilience is similar to that of nursing, and includes discussions of compassion fatigue, and mental health outcomes. It is advocated that police officers have access to comprehensive programs to foster resilience,

which encompass education, peer support, critical incident debriefing, and professional mental health support (Morley & Conn, 2012).

Teachers also discuss resilience and its impact on their profession. Teachers experience similar rates of attrition as nurses, making resilience an important phenomenon for the teaching profession (Taylor, 2013). Using a blending of resilience and Black feminist theory, Taylor (2013) evaluated a model of resilience in teachers. The participants for this study were four Black female teachers who participated in the desegregation of elementary schools in the American South during the Civil Rights movement. The model advanced a theoretical framework of teacher resilience by identifying the following themes: commitment to teaching, enjoying change, bias towards optimism, efficacy, positive and supportive relationships, the valuing of education, variable locus of control, and religious or spiritual support (Taylor, 2013).

Doney (2013) also studied the role of resilience for novice teachers using qualitative case study and observational methods. Four female teachers participated during their first two years of teaching science to high school students. Doney (2013) found that teachers developed their own resilience process, which was “flexible, ongoing, and recurrent” (p. 660). The teachers balanced their relationships (both professional and personal), resources, skills and self-identified protective factors in individual and evolving ways. Each teacher identified positive outcomes for themselves because of their resilience processes and stayed in the teaching profession. Resilience was found to contribute to the professional retention of teachers. Given the similar attrition rates

between nursing and teaching, it is possible that resilience would also facilitate the retention of nurses.

### **Nursing and Resilience**

Resilience has been studied in the nursing profession in a variety of ways. The following section describes nursing resilience research across the areas of patient populations, personal experiences, prevalence, new nurses, and pediatric nurses.

**Patient populations.** In nursing literature, the focus of resilience research is directed towards patient populations. The populations selected for study are often deemed ‘at risk’ in some way. These include adolescents with diabetes (Jaser & White, 2011), older adults (Wells, 2010), African Americans with mental illness (Smith, 2012), transgendered individuals (Bockting, Miner, Hamilton, & Coleman, 2013), and adults with chronic pain (West, Stewart, Foster, & Usher, 2012). In these studies, resilience was associated with positive outcomes in a variety of contexts. This research reflects that resilience is relevant for many patient populations. It is recognized that fostering resilience is advantageous, and can help vulnerable individuals overcome adversity.

**Personal experiences.** Researchers have examined the importance of resilience for nurses in a variety of environments. There are first-person examples of nursing resilience in the literature, including stories of personal journeys (McGee, 2006), recovery from addictions (Patrick, 2010), and nursing during a disaster (Sebastian et al., 2003). For example, McGee (2006) wrote about her experiences with burnout, and how her love of nursing rekindled while she worked with homeless populations. These



narratives describe the personal meaning of resilience for nurses working in a variety of challenging situations.

**Prevalence.** The prevalence of nursing resilience has been studied in various contexts. Koen, van Eden, and Wissing (2011) assessed the prevalence of nursing resilience across several hospitals, and in both public and private delivery models of health care. Koen et al. (2011) found that nursing resilience scores were comparable to those of the general population. 43% of nurses reported that they were highly resilient (N=133) (Koen et al., 2011). The nurses who reported high levels of resilience were less likely to be looking to leave the profession than nurses who reported lower levels of resilience. Higher levels of nursing resilience were deemed to be a retention factor for health care environments. There were also many factors in the environment that were identified as negative aspects of nursing, contributing to burnout. These included low wages, poor working conditions, the absence of a professional image, staff shortages, poor management supports, and abuse from patients. Conversely, resilient nurses were associated with a love for the nursing profession. While this study took place in South Africa, it is possible that resilience would also influence the retention of Canadian nurses.

**New nurses.** Researchers have examined the role of resilience for new nurses. Pines et al. (2011) found that for nursing students, resilience correlates positively with empowerment. Hodges et al. (2008) studied resilience in 11 new graduate nurses, using semi-structured interviews. Over time, resilient participants developed coping strategies, including cognitive reframing, self-awareness, and knowledge of the practice

environment. Nurses were able to adapt to a new workplace by being aware of their stress, seeking out supportive individuals, and building their knowledge base.

**Pediatric nurse resilience.** Zander, Hutton, and King (2009) reviewed literature about pediatric oncology nurses and resilience. There is a high level of workplace adversity in pediatric oncology environments, with well-documented themes of nursing burnout, vicarious traumatization, and compassion fatigue (Zander et al., 2009). Many of the articles in the review did not examine resilience by name, but assessed factors that are parallel to resilience, such as adaptation, and overcoming professional hardships. Strong teamwork was identified as an informal source of support for pediatric oncology nurses, which facilitated coping with workplace adversity (Zander et al., 2009). Nurses observed that their coping skills developed over time, and they gradually established resources to overcome workplace adversity. These coping skills included nurses taking care of themselves, talking about their situations, having personal rituals, and developing their own emotional management. Critical care nurses also experience high levels of burnout, and it is likely that resilience would mitigate workplace adversity in a critical care environment as well.

### **Critical Care Environments**

Several concepts that are associated with resilience have been studied in critical care environments. The following section discusses coping, hardiness, and grief.

**Coping.** In critical care environments, there has been limited research on resilience and nursing. However, there is evidence that critical care nurses are able to adapt to, and cope with workplace adversity. Burgess, Irvine, and Wallymahmed (2010)

found that critical care nurses in their study did not experience adverse stress. This finding was attributed to factors that mitigated workplace stress such as the nurse's personality, and the workplace environment. It is possible that critical care environments could optimize buffering factors to promote nurse resilience.

In studies where critical care nurses did experience adverse stress, a variety of coping mechanisms emerged. Moola et al. (2008) recognized that formal and informal debriefing was an important part of nurse coping. Formal organizational support for ethical decision-making was also a stress-mitigating factor (Moola et al., 2008). Burgess et al. (2010) identified personality type as a predictor of the coping style of critical care nurses. They surveyed nurses to assess for the Big Five personality dimensions, which are agreeableness, conscientiousness, extroversion, emotional stability, and openness. Different aspects of personality impacted nurses' stress. For instance, openness, conscientiousness, and agreeableness were positively associated with problem solving (Burgess et al., 2010). Planning, when used as a coping strategy, also produced lower levels of stress in nurses (Li & Lambert, 2008). These factors all demonstrate that nurses can address workplace adversity in a critical care environment.

**Hardiness.** Other factors relating to adaptation have also been examined. Hurst and Koplun-Baucum (2005) explored hardiness among 19 critical care nurses. Hardiness is a protective factor for resilience (Fletcher & Sarkar, 2013), and represents a personality trait, rather than a process (Earvolino-Ramirez, 2007). Hardiness is characterized as a commitment to the management of a stressor, by selecting an appropriate course of action. Part of hardiness is appraising a stressful event as challenging, rather than

threatening (Hurst & Koplin-Baucum, 2005). Nurses in this study described their need for control over their personal environment. They also identified the importance of the alignment of a nursing unit's culture and their own values. For example, nurses wanted to work with colleagues who had the same levels of commitment and dedication to patient care.

**Grief.** Shorter and Stayt (2009) assessed how nurses cope with grief, following the death of a patient. Eight nurses completed semi-structured interviews. Participants described a preference for informal support, as formal support mechanisms were not conducive to self-disclosure. Houck (2014) also found that nurses preferred informal mechanisms of support to address grief, as did Spencer (1994). Houck (2014) indicated that nurses were more likely to ask for help after participating in a grief education program, although it was not explained how this was assessed. Colleagues provided informal support on breaks and during shift reports, which was highly valued by nurses. Participants also verbalized the importance of emotional dissociation or distancing from the patient's death for self-protection. These individual factors and relational factors contributed to a nurse's ability to cope with grief following the death of a patient. This research demonstrates that it is possible for nurses to develop effective coping strategies in critical care environments.

### **Conclusion**

It is evident that resilience is an important phenomenon to consider in addressing workplace adversity. Nurses experience adversity in the workplace for a variety of reasons, including nurse shortages, absenteeism, rates of nursing turnover, and the

workplace climate. There are also challenges that are unique to nurses in critical care environments, placing nurses at risk for burnout. There has not been a great deal of study on resilience and critical care nurses. However, studies examining other professionals demonstrated the benefits of resilience, in the context of workplace adversity. By examining the process of critical care nurse resilience in workplace adversity, it will be possible to identify key aspects of the phenomenon, and develop a theoretical framework to foster resilience.

### **CHAPTER 3: METHOD**

This grounded theory study is rooted in a symbolic interactionist framework, and the methods that I used are consistent with Corbin and Strauss's (2008) approach to grounded theory. The question guiding this research study was "What is the process of critical care nursing resilience in workplace adversity?". This chapter delineates the philosophical framework, research methods and procedures, and ethical considerations of this study.

This chapter directly describes my role and efforts as a researcher. For this reason, this chapter is written in the first person. Chapter 3 will be the only chapter to use the first person writing style in entirety because the other chapters of this thesis describe other researchers' work, and the phenomena that are experienced by the research participants.

#### **Philosophical Framework**

Researchers' philosophical frameworks impact how they set about conducting research studies. In this section, I outline my philosophical framework to illustrate how I approached the current study. I discuss my research paradigm, a symbolic interactionism framework, and my personal views on resilience and burnout.

#### **Paradigm**

There are philosophical underpinnings that form the basis of any research method, related to the paradigm of a researcher. A paradigm is a relatively consistent pattern of beliefs and practices, which identifies a researcher's philosophical assumptions about their subject matter (Weaver & Olson, 2006). A paradigm is influential in how one interprets and understands information. There are three major paradigms present in

nursing research: empirical, interpretive, and critical (Gillis & Jackson, 2002).

Researchers who use the empirical paradigm subscribe to the idea of an objective, external reality, which can be verified through the senses (Monti & Tingen, 1999).

Researchers who ascribe to the interpretive paradigm aim to study a phenomenon through the eyes of the people that experience it (Weaver & Olson, 2006). In the critical paradigm, researchers evaluate social struggles, domination, and institutions, with the goal of rectifying injustice (Gillis & Jackson, 2002).

Numerous variations and combinations of these paradigms have been proposed as well, and relate to the research method used in this study. Glaser and Strauss (1967) developed grounded theory as a method of theory generation, using data subjected to inductive reasoning. Grounded theory is discussed in more detail below. Glaser and Strauss went on to each develop different styles of grounded theory, reflecting their philosophical differences. The roots of grounded theory research include aspects of the empirical paradigm, especially for adherents of Glaser's school of thought (Engward, 2013).

Currently, the interpretive paradigm is most often associated with grounded theory. This is most relevant for Corbin and Strauss's (2008) variant of grounded theory. Using an interpretive paradigm, a phenomenon is examined through the eyes of the people who live it (Weaver & Olson, 2006). A key assumption associated with this paradigm is that individuals make meaning from an experience, and that social groups can have shared interpretations of a phenomenon (Maz, 2013). The use of the interpretive

paradigm is also consistent with the associations between grounded theory research and symbolic interactionism (Milliken & Schreiber, 2012).

### **Symbolic Interactionism**

The grounded theory method is rooted in the symbolic interactionism framework, which encompasses various philosophical ideas. The developer of this framework was George Herbert Mead, who heavily influenced Glaser and Strauss, at the genesis of grounded theory research (Milliken & Schreiber, 2012). The symbolic interactionism framework has three major assumptions: culture influences how people live and learn, experiences through culture determine how people make meaning from their interactions, and everyone creates meaning on an individual level and acts according to this meaning (Vejar, 2009). The understanding of one's role in society is constructed through human interactions in a cultural context (Vejar, 2009).

In addition, symbolic interactionism recognizes that there are no simple explanations, and that it is impossible to understand the totality of a phenomenon (Corbin & Strauss, 2008). Corbin and Strauss (2008) illustrate that external events occur (in essence, an external reality exists) but the meaning of these events for a person remains an individual construction. It is assumed that any knowledge of human experience is located within the context in which it occurs (Corbin & Strauss, 2008). That is, the understanding of a phenomenon is specific to the context in which it was evaluated. The use of the grounded theory method inherently acknowledges that the context of a theory is inseparable from the theory itself (Milliken & Schreiber, 2012). These beliefs all form



the foundation of the grounded theory method, and are the starting point for approaching a research study.

### **Personal Views**

My philosophical approach to this research study topic is rooted in the symbolic interactionism framework, and the Corbin and Strauss (2008) school of grounded theory, described in more detail in the research study design section below. My views also include elements of both the empirical and interpretive paradigms. I acknowledge that events objectively take place, external to the knower. I believe that the meaning and significance of these events is understood through the unique perspectives and experiences of the people who live them. There is no right or wrong way to experience a phenomenon; each person's experiences are a result of their culture, past, and how one's experiences are appraised, and understood.

In the context of resilience, I believe that everyone is capable of being resilient. However, how one becomes resilient, or makes meaning from resilience and adversity, is individually determined. While every individual's experience is distinct, I believe that people are more similar than different, and that it is possible for common themes to emerge from unique experiences.

### **Assumptions**

There are several assumptions that are integral to this research study. They are:

1. A reality external to the knower exists; a person creates individual meaning from this reality based on their personal experiences, assessments, and values.
2. Each person's views and experiences are significant and equally valid.

3. It is impossible to account for all the factors that create and influence a phenomenon.
4. All people have the capacity to be resilient.
5. Critical care nurses experience adversity in the workplace.

### **Research Question**

This study was a grounded theory examination of the research question: what is the process of critical care nursing resilience in workplace adversity?

### **Research Design**

This research study was conducted using a grounded theory research design. In this section, I explain grounded theory research methods, analyze the evolution of grounded theory research, and address the practical implementation of grounded theory.

### **Grounded Theory**

In this research study, I used a qualitative, grounded theory design. Grounded theory is an inductive method of deriving a theory from research data (Corbin & Strauss, 2008). This method blends a structured framework with the valued experience of the individual, in order to generate new theories about various phenomena in social science research (Corbin & Strauss, 2008). The Corbin and Strauss (2008) school of grounded theory is an evolution of Glaser and Strauss's earlier work, and the Corbin and Strauss variant of grounded theory was applied in this research study.

### **Evolution of Grounded Theory**

Grounded theory, as a research method, was created to bridge a gap that existed between scientific theoretical development and social science research. Prior to the

development of grounded theory, quantitative research was seen as largely confirming existing theories. Qualitative research produced in-depth descriptions of phenomena, but little theory (Engward, 2013). The application of scientific theoretical development methods was not feasible for generating theories in social science research. Grounded theory was appropriate for social sciences, because it blended a structured research method, a means of developing theory, and an appreciation for the context and experiences of the research participants (Engward, 2013). Grounded theory research was also created to develop practice-based and middle-range theories. This was distinct from much of the research at the time that used grand theories to generate and test hypotheses (Zarif, 2012).

Glaser and Strauss were the developers of grounded theory, and they eventually parted ways, creating different streams of grounded theory (Engward, 2013). Glaser adhered to an empirical framework, emphasizing the passive role of the researcher and allowing data to reveal a theory (Engward, 2013). In contrast, Corbin and Strauss (2008) conceptualize the researcher as an active part of theory generation, and a theory is based on the researcher's interpretations of data. Other grounded theorists have also advanced the research method, including Charmaz (2006) who emphasizes a constructivist approach to grounded theory. In contrast, Corbin and Strauss (2008) highlight that their premise is to generate research that results in social activism, rather than include social activism as part of their research method.

### **Grounded Theory in Action**

Grounded theory is not a fixed or rigid method; it is flexible, and supports the creativity of a researcher (Maz, 2013). Grounded theory is enacted when a researcher begins by collecting data, and uses inductive reasoning to understand the processes that occur to influence a phenomenon. This inductive process results in the generation of a grounded theory (Corbin & Strauss, 2008). Researchers using grounded theory immerse themselves in data analysis, not taking anything for granted. They also foster critical reflection throughout the process by asking questions and seeking clarification, and actively listening to participants' stories. Researchers also draw on personal experiences in order to facilitate theoretical development, as active agents in the research process (Corbin & Strauss, 2008).

There are specific techniques that assist researchers in collecting and working with data in ways that support inductive reasoning and theory generation. These techniques are memoing, theoretical sampling, constant- comparative analysis, and theoretical saturation (Corbin & Straus, 2008; Engward, 2013; Maz, 2013), all of which were used in this study and are discussed further in this chapter. As their variant of grounded theory has evolved, Corbin and Strauss (2008) placed less emphasis on specific, labeled levels of coding, and advocate for an overall inductive process, which gradually refines the categories present within the data.

### **Setting**

This study took place at a large, academic health science center in Ontario, following ethical approval from the appropriate reviewing bodies (Appendix A). I have

worked as a critical care nurse at this organization, but I have not worked in the unit that formed the research setting. Access to the setting was obtained from the unit nurse educators, following the approval of the Athabasca University Research Ethics Board and also the facility's research ethics board. The following people were notified and provided approval for me to access the research setting: Director of the Critical Care Program, Critical Care Unit Nursing Manager, Critical Care Program Research Lead, and the Research Thesis Committee.

### **Participants**

There were 11 critical care nurses who volunteered to participate in this research study. All of the participants were female, and ranged in age and years of critical care experience. The participants self-referred to the research study by contacting me directly. A full description of the participants is found in Chapter 4. This information is given here to provide context for the participant recruitment strategies, which are described in the following section.

### **Inclusion Criteria**

The inclusion criteria for this study limited participation to Registered Nurses, as licensed with the College of Nurses of Ontario. Participants were required to have a minimum of one year of critical care experience, in either a full-time or part-time position. This ensured that participants had frequent contact with the critical care setting, and had experienced adversity in the workplace.

**Exclusion Criteria**

The exclusion criteria for this study excluded nurses who were not full-time or part-time employees in the critical care setting, or who did not have a minimum of one year of critical care nursing experience. These restrictions necessarily limited the sample to meet the practical limits of the study, and recruit participants who were familiar with the research phenomenon.

**Recruitment**

Posters were used to inform potential participants of the opportunity to participate in the study (Appendix B. Please note, this appendix has been edited to avoid identifying the research setting). These posters outlined the risks and benefits associated with participation in the study. The posters were placed in the critical care setting by the unit research team, and were forwarded via email to all critical care nurses by the nurse educators. The unit research team is a group of nurses and research assistants that fulfill designated roles to conduct medical and nursing research within the critical care setting. The unit research team also verbally encouraged nurses to consider participating in the study. I did not conduct any on-unit recruitment. Nurses working in the critical care setting may have known me, outside of the study, by virtue of being employed at the same health care facility. However, critical care nurses are not a vulnerable population, and each participant made an autonomous decision to participate in this research study.

**Sampling**

Initially, I used purposive and convenience sampling strategies to recruit participants who were familiar with the phenomenon under investigation (Richards &

Morse, 2013). This was appropriate for an initial wave of sampling using a grounded theory method (Richards & Morse, 2013). I employed convenience sampling as I studied a population that was practically available; in this case, nurses at my site of employment. I also used purposive sampling, with the support of key stakeholders in the critical care setting. The nurse educators and unit research team were responsible for the initial wave of participant recruitment. These individuals did not have hiring responsibility or other employment related roles at the hospital, limiting the possible influence of employment-related coercion.

As the research study evolved, I used theoretical sampling to explore specific themes that emerged during data analysis (Richards & Morse, 2013). Theoretical sampling is defined as a method of data collection based on concepts derived from the data (Corbin & Strauss, 2008, p. 144). The use of theoretical sampling assists with the creation of a grounded theory by directing data collection, based on the findings of the concurrent data collection and analysis (Breckenridge & Jones, 2009). Theoretical sampling also indicates that a researcher has gone beyond token demographic differences, and investigates what causes variation in the phenomenon, not variation among the participants (Milliken & Schreiber, 2012). This enables a researcher to be flexible, and receptive to the findings that emerge from initial interviews (Corbin & Strauss, 2008). In this study, I used theoretical sampling in the form of evolving research questions. I asked participants varying questions and used probes, based on the participants' experiences, and information that was gleaned from other interviews. For instance, I recognized that the topic of debriefing was an important issue, early in the interviewing process, and

asked subsequent participants about their experiences with debriefing. My responsiveness to emerging information reflected theoretical sampling, as the participants were asked about the research phenomenon from different angles, to expand my understanding.

I also used snowball sampling, as I asked participants at the end of each interview to refer other colleagues to the study. I provided each participant with an additional copy of the recruitment poster (Appendix B), and invited her to share it with colleagues who she thought might be interested in participating in the study. I also sent participants one follow up email, with the poster attached, asking them to refer a colleague to the study. My combination of sampling strategies attracted participants who were easily available for the study, and who were able to add to the understanding of critical care nurse resilience in workplace adversity.

### **Data Collection**

I generated data by conducting in-depth, open-ended interviews with participants. Interviews were conducted face-to-face, and took place after the participant contacted me, expressing interest in participating in the study. I sent the potential participants the invitation to participate in the study and the consent form via email (Appendix C. Please note, this appendix has been edited to avoid identifying the research setting). Each potential participant agreed to participate in the study, and an interview was scheduled at a mutually agreed upon time and location. Some interviews took place at the hospital, while the others occurred in coffee shops. The location was determined by participant preference and convenience.



Prior to beginning the interviews, I reviewed the information letter and consent form (Appendix C) with the participant. Each participant agreed to take part in this research study, and signed the consent form. There was no deception in recruitment or data collection in this study, and participants were fully informed of the purpose of the research, and the risks and benefits of participating in the study. Each participant consented to the optional provision of an email address, to receive a copy of the findings of the study.

I recorded the interviews using a handheld recorder, and the interviews ranged from 60-90 minutes. The initial interview questions were formulated from available literature on resilience in response to workplace adversity (Appendix D). The first question I asked was, tell me about a time you experienced adversity in the workplace. Other questions I asked included what helped participants to deal with adversity, how participants felt when they experienced adversity, and how did participants become resilient. I was flexible in exploring participants' experiences, and used probes and follow up questions to gain greater insight. These strategies were consistent with the grounded theory research method (Corbin & Strauss, 2008). At the end of each interview, I asked the participant, "Is there anything else you would like to share?" which opened the door for participants to discuss any experiences that we had not addressed.

Participants also completed a socio-demographic questionnaire at the beginning of the interview (Appendix E). I asked demographic questions about participant age, gender, ethnicity, years of experience in nursing, education, family status, and household income. Relevant data were used to describe the research participants (see Chapter 4). The process

of completing the socio-demographic questionnaire presented an opportunity to build rapport with the participants at the beginning of the interviews.

Each of the interviews was audio recorded, and the audio file was transferred from the handheld recorder to a password-protected computer, which was kept in a locked office. Each interview was sent to a transcriptionist via the secure file sharing system DropBox. The transcriptionist was not aware of the identity of the research participants, and signed a confidentiality pledge prior to beginning transcription (Appendix F). After the transcriptionist returned a transcript of the interview, and it had been verified for accuracy, the audio file was deleted from the file sharing system. I dictated memos after each interview, and these files were transferred and transcribed in the same fashion.

### **Data Analysis**

I began data analysis after I completed the first interview, as is consistent with the grounded theory research method (Connelly, 2013; Corbin & Strauss, 2008). My first step in analysis was to record my reflections on the interview content and process. I reflected on what the participant had told me, and how that related to other participant experiences. Each interview informed the next, as my interviewing questions and strategies evolved as the interviews progressed. Information I learned in one interview was compared to findings from other interviews, and I adjusted my interview questions as participants shared information that I had not heard previously. This method is termed the constant-comparative method, and manifests by a researcher comparing each piece of data to all others for the duration of the study (Connelly, 2013). I also wrote reflexively

throughout the data collection and analysis process, which is described in more detail below.

### **Coding**

Data management was supported, and sometimes hindered, by the use of the research software NVivo. I uploaded the interview transcripts and my reflexive writings into NVivo. I manually coded the transcriptions of the interviews, labeling the ideas that were expressed by participants (Richards & Morse, 2013). I began by listening to each interview to verify the transcript, and write my impressions of interview. Reviewing each interview gave me the opportunity to revisit my reflections, and also critique my skills as an interviewer.

The next phase of data analysis was coding, where I considered all data as potentially significant. This is consistent with recommendations for all data to be given equal consideration during initial phases of analysis (Morse, 1995). I read the transcript text of the first three interviews, and coded key words in each sentence. After analyzing the first 3 interviews in this fashion, I began organizing ideas into folders. I also drew preliminary diagrams, to consider how concepts were associated. For the next two interviews, I coded the text in larger pieces, such as one to two sentences. At the end of the fifth interview, I established a preliminary understanding of nurse resilience, and was able to illustrate this understanding with a diagram.

My ideas and understanding of the phenomenon evolved considerably as I worked through this process. As I conducted and processed the participant interviews, I began developing related concepts and linking them together. This started at the level of

associating factors like patients and families with the bedside/ patient rooms. As the interviews progressed, I developed more of these linkages and started to see connections between more concepts. I drew numerous diagrams to capture these ideas. After the 5<sup>th</sup> interview, I outlined the relationship between several concepts around ‘managing’, which served as a working model of the theory as my research progressed. This model formed the basis for the final theory, although there were many revisions before the final conceptualization. My analysis strategy changed slightly after I reached the concept of managing. As I analyzed the remaining six interviews, I coded the text according to the factors that I had identified in my draft of the theory. In this section, I coded multiple sentences or paragraphs based on the ideas the participants shared, under concepts such as ‘talking about it’ or ‘distancing’.

I changed the names of the core categories and sub categories several times, but the coding structure was generally cumulative, with each piece building on the previous codes. I modified the theory many times to support new information gleaned from each interview.

Along with coding, I spent considerable time thinking, discussing, and writing about my data and ideas about resilience. My reflexive writing formed a major portion of my analysis as I could outline new ideas to see if they were robust or ill suited to the phenomenon. I also worked with a grounded theory consultant, who supported me by helping me understand how to move from raw data to higher levels of abstraction. It took many iterations of the theory to reach the final product.

I knew I had reached a possible explanation of the phenomenon when: (a) each of my categories and sub categories was directly supported by research data (b) the theory resonated with my own experiences as a nurse (c) the work satisfied Corbin and Strauss (2008) stipulations for grounded theories and (d) the theory felt right. For example, Corbin and Strauss (2008) indicate that a theory explains context and process, and has reached a final level when it is fully integrated. A theory can be considered integrated when the researcher can present a flow of action that tells the story of a phenomenon within the specified context. When I reached a theory that made logical sense, integrated categories together in a cohesive fashion, and felt like it fit the phenomenon, I made the decision to conclude the inductive reasoning process. I proposed a theory of critical care nurse resilience as a possible explanation for how nurses face adversity in critical care environments, which is described in detail in Chapter 4.

### **Theoretical Saturation**

A hallmark of developing a grounded theory is achieving theoretical saturation (Corbin & Strauss, 2008). A researcher achieves theoretical saturation when the information generated from an interview fits with the themes from previous interviews, and confirms the emerging theory (Connelly, 2013). It has been stated that saturation occurs when interviews reveal no new information (Richards & Morse, 2013). However, this belief is tempered by the symbolic interactionism tenet that it is impossible to account for all factors that influence a phenomenon (Corbin & Strauss, 2008). Thus, theoretical saturation is present when a researcher has established clear linkages between concepts in a comprehensive theory (Morse, 1995).

The number of participants required to achieve theoretical saturation depends on the reflections of the participants (Richards & Morse, 2013). It has been indicated that a reasonable degree of data saturation can usually be achieved following six interviews, and saturation can be confirmed by the time up to twelve interviews have been conducted (Guest, Bunce, & Johnson, 2006). Having similar guiding questions for participants also assisted with the achievement of saturation (Richards & Morse, 2013).

There are several models that depict the achievement of theoretical saturation. Creswell (2013) explains qualitative data analysis using a spiral explanation. However, my experience related more to Wishart's (2014) ideas of uncorking. Wishart's (2014) model outlines the idea of a researcher become blocked, or corked, at a point during the process. They become uncorked when they experience clarity or new ideas, to move past the barriers. I experienced several stages of uncorking, when I had a breakthrough or new insights that pushed forward my understanding of the grounded theory.

The first stage of uncorking occurred when I developed a working model of the theory, after analyzing five interviews. At this point, I did not know the shape of MANAGING EXPOSURE, or its categories, but I knew that I had found some aspects of a phenomenon that connected together. I used this insight to shape my interview questions in subsequent interviews, to advance my theoretical saturation. At the conclusion of my 11<sup>th</sup> interview, I experienced another phase of uncorking. I felt that I had explored each aspect of the theory in a comprehensive manner. I did not know exactly what I had found, but I was confident that I had heard the story of resilience for critical care nurses. The final stage of uncorking occurred after I had coded the data in

their entirety, and adjusted various conceptual models of the theory. I concluded with the iteration of the theory that is presented in this thesis. Based on the core category of managing, I named the theory MANAGING EXPOSURE, which illuminates the process of burnout and resilience for critical care nurses.

From a sampling perspective, I had spoken with nurses with varying experiences in critical care settings, and explored new ideas as they emerged during interviews. After the 11<sup>th</sup> interview, I felt that I had a comprehensive understanding of the theory of MANAGING EXPOSURE. I knew that it would be impossible to explore all aspects of this theory, yet I was satisfied that I had enough data to offer a possible explanation for the process of MANAGING EXPOSURE. Richards and Morse (2013, p.223) stated “Often, the first sign [of data saturation] is that the investigator has a sense of having heard or seen it all.” This was my experience during data collection. At the end of the 11<sup>th</sup> interview, I thought, yes, I have heard the story of MANAGING EXPOSURE. My data covered a wide variety of areas, and I felt comfortable that I had explained the categories of my theory satisfactorily. The 11th interview marked the end of participant data collection.

At the conclusion of the research study, I reflected that my assumptions about resilience and adversity were challenged. This was due in part to the fact that I had several participants who presented negative case information. Negative cases are examples that reflect extreme differences in the conceptualization of a concept (Corbin & Strauss, 2008). I heard stories of resilience, and I also heard stories of burnout. These examples pushed and challenged my ideas of resilience, and developed my understanding

of this phenomenon. By the time I reached the final interview, I felt I could anticipate what a participant would say about concepts in the theory, such as who was influential in driving the process of resilience. This reinforced my sense that I had achieved theoretical saturation.

### **Reflexivity**

Reflexivity is a hallmark of grounded theory research, and is the act of researchers considering themselves in relation to their research topic and their context (Doyle, 2013). Reflexivity is important in the grounded theory method, since it is heavily influenced by symbolic interactionism. This framework accounts for the role of a researcher as an active participant in the generation of a grounded theory (Milliken & Schreiber, 2012). A researcher makes meaning from the interaction with participants, just as participants have made meaning from a phenomenon (Engward, 2013).

Reflexivity helps researchers become aware of how they are interacting with participants, and delineates this process as part of the research study audit trail (Engward, 2013). In the grounded theory method, there are two central forms of reflexivity: memoing and reflexive journaling. Reflexivity also occurs during scholarly conversations, engaging with other researchers, and thoughtful reflection on one's data (Hibbert, Sillince, Diefenbach, & Cunliffe, 2014). I employed a variety of reflexive techniques during this research, as described in more detail below.

### **Memos**

A memo is a written record of data analysis (Corbin & Strauss, 2008). Memos illustrate how and why themes are developed, and trace a researcher's thought processes



that accompany the creation of a grounded theory (Engward, 2013). Memoing provides a means to critically analyze the research process and the researcher's decision-making (Corbin & Strauss, 2008). I wrote memos in three major forms.

The first type of memo that supported this research process was recorded observations following an interview with a participant. After I completed an interview, I moved to a quiet, private location, and recorded my thoughts and observations on the interview. I chose this method of reflecting because I could complete the reflections almost immediately after the interviews. I discussed the non-verbal data provided by the participant, topics that stood out during the interview, my comfort and skill as an interviewer, overall impressions of the interview, and compared ideas from several interviews.

The second type of memoing I used was integrated into the data analysis software. As I analyzed the research interviews, I kept a supporting document open that was specific to the interview. I organized the content by date, and recorded things that stood out for me as I worked through the analysis of the interview. These writings included reflections on what the participants said, and also critique of my skill as an interviewer. This formed a running log of my thinking and decision-making during the analysis of each interview.

The third type of memo that I developed was an ad-hoc memo. These memos were bursts of thought or inspiration related to my research, and took almost any form. My focus was to capture my ideas in a memo as soon as possible, so that the completeness of the thought was preserved. I wrote on scrap paper, typed text into my

cell phone, and jotted notes in the margins of journal articles. I also drew numerous diagrams outlining my conceptualization of the research subject matter. These diagrams evolved over time, and traced the development of my understanding. I generated the largest of these memos by putting packing paper on a wall and wrote a flow chart of resilience. These efforts were invaluable in capturing my ideas as memos, and I revisited these memos frequently when I was working with my data.

### **Journaling**

Researchers learn through their reflexive writing, and are able to evaluate their role within the research process (Doyle, 2013). Reflexivity also captures researchers' growth during their work, and highlights both their thoughts and feelings about their experiences (Doyle, 2013). In addition to memoing, researchers can chronicle their reflections through a reflexive journal (Creswell, 2013). Using a reflexive journal was invaluable during this study, as I have clinical experience in the research setting, which undoubtedly influenced the research process.

**Methodological journal.** I kept two types of journals during this study. The first was a methodological journal, which chronologically followed the research process. In this journal, I recorded my procedures, milestones, and choices about data management. I wrote what I chose to work on, and why, and how I worked with my data. The methodological journal served as a map for the work involved in completing this study. In conjunction, I used a spreadsheet to track the amount of time spent on each aspect of the research process.

**Reflexive journal.** The second journal was a reflexive journal. Organized by date, this journal served as a record of my evolving understanding of resilience and other topics in the study. I also wrote about my feelings on the research study at an abstract level, and reflected on articles in the popular press. The methodological journal illustrated my thinking, while the reflexive journal exposed my feelings. For practical purposes, the reflexive writings were saved on a computer and were subject to the same privacy considerations as the participant data.

The major revelation within my reflexive journal surrounded my assumptions about the nature of burnout and resilience. I felt that these concepts were related, but were achieved via distinct, traceable pathways. I thought resilience and burnout were mutually exclusive, largely binary, and fixed outcomes. I hoped to discover the pathway to resilience, because I felt that the focus of critical care researchers had been on burnout. Through my reflexive journaling, I identified that all of these assumptions were incorrect. Burnout and resilience are much more closely related than I believed, which is detailed in Chapter 4. The reflexive writing process helped me to work through my ideas as I rejected earlier assumptions, and developed new understanding.

### **Other Reflexive Efforts**

An additional measure of reflexivity was conversations with the thesis committee and other colleagues. Discussions with my thesis committee served to guide me as I worked through the grounded theory process, as a novice with this methodology. The thesis committee also provided support for trouble shooting various research challenges, including participant recruitment. I also engaged in scholarly conversations at

presentations, conferences, and other gatherings as a valuable source of reflexivity. These conversations forced me to explain my research clearly and succinctly. I fielded questions that were provocative, and challenged my thinking about the research. I used ad-hoc memos to capture the insight I gained through these discussions. While these conversations were informal, they were nevertheless very valuable in advancing my reflections and understanding on resilience and my research study. These conversations helped me to consider and explore new ideas relating to this research study.

### **Ethical Considerations**

The protection of research participants was a paramount consideration for me during this research study. I completed the Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans (2010) education program before developing the research proposal. I obtained ethical approval from the Athabasca University and health care facility research ethics board, prior to initiating the study.

### **Risks and Benefits to Study Participants**

There were no known risks associated with participation in this study. It may have been emotionally trying for research participants to recount stories of adversity in their workplace. All participants have access to the hospital's third party confidential counselling service; the contact information for this service was included on the invitation to participate (Appendix C). Participants were reminded of the availability of this service prior to beginning an interview.

There may be no direct benefits for participation in this study. Participants received a \$20 gift card to a coffee shop, and reimbursement for parking fees where

applicable. The gift card was a token that acknowledged the participant for their contributions to the research study. This gift card was not a substantial amount of money and no coercion was exerted.

Participants may have found it therapeutic to share their stories of adversity with someone who was interested. The opportunity to present their stories gave participants a safe haven to share their experiences, and to potentially afford them an opportunity to help others (Lakeman, McAndrew, MacGabhann, & Warne, 2013). Several participants thanked me for the opportunity to contribute to nursing research, as they hoped to help others by sharing their stories. The participants contributed to the epistemology of the nursing profession and met nursing competencies related to involvement in research.

### **Confidentiality**

Participants were informed that their data would be kept confidential, except in the event of reportable information. The circumstances that mandate disclosure are: the immediate risk of harm to self or others, and indications of child abuse. No reportable information was disclosed during this study.

All of these written data for this study will be kept secure for 10 years following the completion of this research study. Participants were aware that I intend to publish and present the findings of the research study at its conclusion. No information identifying the participants will be included in these publications. Each participant was assigned a pseudonym for the study, which was used in research dissemination as applicable.

### **Rigour**

There are a variety of perspectives on how to ensure rigour in qualitative research. The framework that is used in this study is Morse, Barrett, Mayan, Olson, and Spiers (2002). This framework was selected because it emphasizes the need to build rigour-enhancing strategies into research studies, rather than use rigour criteria exclusively after a study is completed, for evaluation purposes. Morse et al. (2002) highlight that rigour-enhancing strategies prevent error, and optimize the overall quality of a research study. Their strategies focus on methodological congruence, sampling, concurrent data collection and analysis, and theoretical thinking and development.

There are many steps taken to ensure rigour in this study. For the strategy of methodological congruence, I employed expert consultation. The thesis supervisor and committee provided feedback and guidance throughout the research process, contributing to methodological rigour (Connelly, 2013; Richards & Morse, 2013). Supporting graduate students ensures that research studies are methodologically sound (Morse et al., 2002). I worked with a grounded theory consultant, who assisted me to take my raw data and develop higher levels of abstraction in my work. I also attended several research workshops to enhance my qualitative research skills, and read extensively about grounded theory research.

Sampling techniques were used to support rigour in this study. I used a combination of sampling techniques to ensure a measure of rigour by selecting participants who were experts in the phenomenon and easily available (Richards & Morse, 2013). My use of convenience, purposive, and theoretical sampling strategies

supported data saturation. Morse (1995) indicated that the use of theoretical sampling and the selection of a cohesive research sample were keys to achieving theoretical saturation.

Another important strategy for ensuring rigour is concurrent data collection and analysis. This is consistent with the approach utilized, grounded theory (Corbin & Strauss, 2008). My initial data analysis began as soon as the data were collected, and informed subsequent interviews. The use of NVivo research software also supported rigour, as I coded data consistently and in detail (Richards & Morse, 2013). I also employed multi-modal reflexive practices, as described above, to delineate the decision-making process during my concurrent data collection and analysis.

Finally, evidence of theoretical thinking and development enhances rigour. Thick description is employed in this manuscript, as findings are supported by quotations from participants. Thick description is a representation of a phenomenon that is written with rich detail (Richards & Morse, 2013). One will be able to identify the foundations of the theory from participants' quotes (Gillis & Jackson, 2002; Richards & Morse, 2013). The use of reflexive writings and memos also helps to delineate a researcher's decision-making process, illustrating the basis for the theory (Corbin & Strauss, 2008). I recorded my research process in great detail, through journals, to create an audit trail. As a novice in grounded theory research, I benefitted from consultation with experts, who provided guidance during data analysis and theory development. The theory is supported by quotes from participants that outline the theory's foundations (See Chapter 4). All of these efforts resulted in a rigorous proposed theory of the process of critical care nurse resilience in workplace adversity.

### **Conclusion**

During this research study, I inductively generated a grounded theory of critical care nurse resilience in workplace adversity. A symbolic interactionism framework was used in this research study because it is consistent with my philosophical orientation and the assumptions guiding this research. Participants were nurses from an adult critical care setting, who met the inclusion criteria for this research study. Data were generated through open-ended interviews with participants, as well as memos and reflexive journaling. The data analysis took place simultaneously with data collection, using the constant-comparative technique. Ethical considerations were of paramount importance, and were strictly adhered to throughout the research process. Rigour was supported in this study through the use of theoretical sampling, thick description, and expert consultation.



## CHAPTER 4: FINDINGS

### Overview

The resultant grounded theory from this research study is entitled MANAGING EXPOSURE: A Grounded Theory of Burnout and Resilience in Critical Care Nurses. Managing exposure is also the category label assigned to the core category of the theory, addressing what nurses may do in response to adversity. For clarity, MANAGING EXPOSURE, in capital letters, refers exclusively to the theory and the entirety of the process. Managing exposure, the management of exposure, or other variant, in lower case letters, refers to the core category and its sub-categories: protecting, processing, distancing, and decontaminating (the pink section of Figure 1).

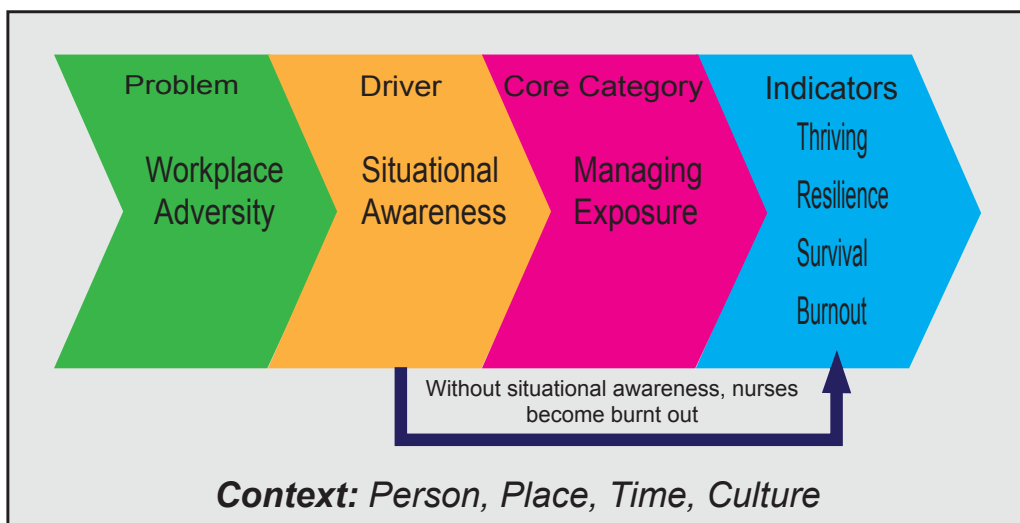
The main concern influencing the development of resilience in critical care environments is exposure to workplace adversity. The driver of MANAGING EXPOSURE is situational awareness, which occurs or fails to occur after exposure to workplace adversity. Managing exposure is the core category that resolves a nurse's exposure to workplace adversity. The proposed theory offers an explanation for the process of MANAGING EXPOSURE, as manifested by a nurse's navigation of many factors in the workplace. The indicators that evidence managing exposure exist as a spectrum of possible results. These possibilities are thriving, resilience, survival, and burnout. While this process is described here in a linear fashion, for clarity, it manifests fluidly, and evolves over time.

In this chapter, the theory of MANAGING EXPOSURE is explained. The first section will highlight the context in which MANAGING EXPOSURE occurs; namely,

the person, place, time, and culture surrounding this phenomenon. Next, the process of MANAGING EXPOSURE is explained as illustrated in Figure 1, following the sequence of workplace adversity, situational awareness, and managing exposure. Finally, indicators of MANAGING EXPOSURE are discussed.

The most important finding of this research study is that burnout and resilience do not manifest in separate processes. Burnout and resilience are indicators of the same process. A nurse can reach burnout or resilience, based on their ability to manage exposure in response to workplace adversity.

Figure 1: The Process of MANAGING EXPOSURE



Workplace adversity in critical care environments can come from a macro, meso, or micro levels, which are described in full below. These forms of workplace adversity have the potential to spread negativity around a critical care environment. The sources of workplace adversity are varied, and range from the critical care environment to the broader society.

A nurse requires situational awareness to address workplace adversity. Situational awareness is defined as “the perception of elements in the environment in a volume of time and space, the comprehension of their meaning, and the projection of their status in the near future” (Endsley, 1995, p. 36). Without situational awareness, nurses will not be able to optimally manage exposure, and will move toward burnout. Disclosure of information is an antecedent factor to situational awareness. Disclosure is the sharing of information that workplace adversity exists, and needs to be addressed carefully. Situational awareness consists of perception, cognition, and projection. Perception is how a nurse interprets and feels about a stimulus. Cognition is how a nurse understands and thinks critically about a stimulus. Projecting is a nurse’s anticipation of the outcomes of a course of action, based on resources and context. Situational awareness acts as a nurse’s intrinsic dosimeter or Geiger counter, and leads nurses to identify when they are becoming overexposed to workplace adversity. A nurse’s situational awareness precludes managing exposure. If nurses are not aware of the impact of workplace adversity, they will not move through managing exposure. In the absence of situational awareness, nurses will become burnt out.

Nurses manage exposure in the workplace through a variety of means: protecting, processing, decontaminating, and distancing, which are discussed in more detail below. One way that nurses manage exposure is by attempting to regulate their contact with workplace adversity. This process occurs minute to minute during a shift, and also over months and years of a career in critical care nursing. This management occurs both inside and external to the critical care environment, and over varied timeframes.

Based on the effectiveness of managing exposure, a nurse reaches a level of functioning in the workplace. Critical care nurses can experience a spectrum of indicators resulting from managing exposure, which range from thriving to burnout. Ultimately, if nurses are able to manage exposure effectively, they can become resilient or thrive in the workplace. Nurses who can just get through their shifts are at the survival level. If nurses are not able to manage exposure, they experience burnout. The spectrum of indicators also has the theoretical extensions of Post Traumatic Stress Disorder (PTSD). Unresolved, chronic burnout could lead to PTSD. These indicators reflect the process of MANAGING EXPOSURE within a given context.

### **Context**

The theory of MANAGING EXPOSURE occurs within the contextual factors person, place, time, and culture. Each of these factors is discussed in more detail in this section.

### **Person**

Participant demographic data were collected through a questionnaire, which was completed with each participant at the beginning of the interview. There were 11 nurses who participated in this research study. All of the participants were female. The participants ranged in age category from 24 to 56 years. There were five participants in their twenties, three participants in their thirties, one participant in her forties, and two participants in their fifties. The participants' years of nursing experience ranged from four to 36 years, with the years of critical care experience ranging from one to 24 years. The educational background of the participants varied, with one participant having a diploma,

eight participants had bachelor's degrees, and two participants had master's degrees. All of these degrees were in the nursing discipline. Six participants worked full time in the critical care setting, and five participants worked part time. All of the nurses were employed at their desired capacity; that is, everyone who worked part time wanted to work part time. Four participants were single, one was engaged, one was married, two were in common law relationships, and two participants were divorced. Three participants had children, while eight did not. What was notable about socioeconomic status was not a nurse's income as such, but whether a nurse was working overtime shifts because of financial need. Several of the participants discussed the impact of overtime shifts and financial pressures. These comments were assessed as part of the interview portion of this research study, as the information shared was beyond what could be captured in an ordinal level measure. Each participant self-referred to the research study.

**Place**

The facility in this study was a tertiary-care hospital, and acted as a regional referral center. The facility has an inpatient capacity of approximately 1,000 beds. There are two separate adult critical care units, each with a 32-bed capacity for providing medical/surgical critical care. Due to the potential differences between the units, the focus of this study was on one of the adult critical care setting. This setting employs approximately 200 nurses who provide nursing critical care at similar levels to other Canadian tertiary-care hospitals. The mortality rate at this unit was 19% for the 2014-2015 fiscal year, which is similar to previous years.

**Time**

Recruitment and data collection for this research study took place in the spring of 2015. Data collection occurred during the Ebola outbreak (with no confirmed cases in Canada), and flu season. This timing was not by design, but reflects the ever-changing nature of critical care environments, and the constant demands on the Canadian health care system.

The study participants work 12-hour shifts, day and night shifts. The standard rotation in this unit is two day shifts, two night shifts, and then five days off. Part time scheduling is variable, but requires four 12-hour shifts per two-week remuneration period. Day shift hours run from 0700 to 1900, or vice versa for night shifts.

**Culture**

Cultural context is conceptualized as social, political, ethnicity related, racial, gender-related, informational, and technological frameworks present in an environment (Corbin & Strauss, 2008). It is acknowledged that it is impossible to account for the influence of all of these factors when studying a phenomenon (Corbin & Strauss, 2008). This description of the cultural context of the research setting will be necessarily incomplete, due to the expansive and nuanced nature of culture.

The findings presented in this research study do not reflect a cross-cultural or Indigenous perspective. The values present in this study represent largely a Western form of knowledge generation and understanding. All of the study participants were women, and in valuing the voice and experiences of women, the theory presented here represents a female perspective of the phenomenon.

This study was conducted within Canada's publically funded health care system. Health care delivery in Canada is largely through a patriarchal, biomedical model (McGibbon et al., 2010). Health care is publically funded, with no fees at point of service for patients. This factor impacts the role of socioeconomic status within the health care system. For example, patients are not refused health care on the basis of their ability to pay for expenses. This is not the case for researchers who have examined nursing resilience in other health care systems, such as the United States.

Nurses in Canada are licensed and regulated by a college, and are members of a union by default when they work in this critical care setting. Remuneration scales are fixed, and based on seniority with the organization. Thus, all nurses who participated in this research study are paid according to the same remuneration scale and have comparable personal incomes.

Within the critical care setting, power is reflective of experience. This is formalized through the use of seniority scales in the union system. The longer nurses have worked for an organization, the more seniority they accrue. Seniority determines the hierarchy for allocating vacation, among other workplace benefits. Nurses with more seniority (generally older) are granted vacation before nurses with less seniority (generally younger). This distribution of power determines who receives priority for their vacation requests within the nursing framework at the organization in this study. Seniority is also reflected in how nurses are valued, based on who is paid more for the same work.

The critical care setting is overseen by a director of critical care, and is organized by a manager and assistant manager. A Care Facilitator, who is a critical care nurse in a rotational assignment, oversees patient care issues, such as admissions and discharges. Critical care nurses are assigned one, and sometimes two patients each. Continuity of care is preserved as much as possible, such that if nurses work consecutive shifts, they will have the same patient for each shift. This managerial hierarchy determines who will be responsible to problem-solve various forms of adversity in the critical care setting.

This critical care setting uses a substantial amount of technology, in contrast with other areas in the organization. Machines are used to regulate respiratory ventilation, kidney dialysis, and medication infusions. Each patient is monitored continuously from a hemodynamic standpoint. Additional machines are used based on patient need. The monitoring and management of this technology falls primarily to nurses. The charting system is hybrid, and uses paper charting, and electronic health records and lab reports. The high use of technology in the critical care setting adds a layer of complexity to nursing care that is not present in other areas of nursing. Each of these factors impacts the nursing management of exposure in the critical care setting.

### **The Process of MANAGING EXPOSURE**

This section explains the process of MANAGING EXPOSURE through the progression of exposure to workplace adversity, the driver of situational awareness, the core category of managing exposure, and the spectrum of indicators that can result from this process.



### Workplace Adversity

Workplace adversity is a toxic factor in the critical care environment that can exert a negative influence. There are various forms of workplace adversity across the spectrum of the health care system. Figure 2 illustrates that nurses identified various forms of workplace adversity, by category. These categories are divided into macro, meso, and micro levels of workplace adversity. Each of these categories is explained in more detail below. Workplace adversity can be insidious, and its impacts can be widespread, cumulative, and harmful.

The impact of workplace adversity is determined by the degree of exposure as manifested in its intensity, and its duration. Nurses can be overwhelmed when they face intense situations of intersecting forms of workplace adversity, such as a sudden crisis, where multiple types of workplace adversity are present in the same scenario. *“It was definitely crisis within [the patient’s] care and it affected me more than it would have any other patient, any other day” (Ashley)*. The degree of intensity of the exposure to workplace adversity is related to how powerless a nurse feels in a given situation. As nurses experience higher degrees of powerlessness, the impact of the workplace adversity intensifies. *“I feel like I’m stuck in that situation and I can’t do anything about it. I can’t fix it and there’s no solution to it” (Kelsey)*.

It is important to consider that workplace adversity has the potential to completely overwhelm a nurse’s ability to manage exposure if the intensity is high enough. For instance, someone may have a very healthy lifestyle, and few health risk factors, and become infected with Ebola. In spite of any personal capacity, Ebola will completely

overwhelm its victim and make the person very sick. Workplace adversity can overwhelm a nurse, regardless of the nurse's personal capacity for managing exposure. This realization helps to conceptualize workplace adversity at a systems level, and avoid laying responsibility for managing exposure solely on individual nurses. If nurses are exposed to substantial workplace adversity, they will have difficulty managing exposure based on the intensity of the workplace adversity. While individual nurses can hone their own means of managing exposure, they are not isolated from their workplace context.

The duration of exposure also determines how a nurse is influenced by workplace adversity in critical care environments. Nurses are impacted by repeated exposure, such as a series of challenging shifts. *"I was already spent on just hectic, emotional nights, night after night after night"* (Mary). If nurses are facing a series of difficult situations, they can experience a cumulative effect of workplace adversity.

### **Adversity From Outside the Workplace**

Adversity can come from sources outside of the work place as well. It is notable that adversity can also come from nurses' personal lives, and impact their experiences in the critical care environment. *"Truthfully, I think if you were to talk to most people it's probably not what's going on right here but we don't know that"* (Ellen). Life at work and life outside of work are not exclusive, and nurses can experience stress from their personal lives as adversity in the workplace as well. *"I had a really difficult case and I also had some like personal things that were happening (...) it all builds"* (Kelsey).

The focus of this study was on workplace adversity, although this is not the only type of adversity nurses experience in their lives. While the process of MANAGING

EXPOSURE to workplace adversity is likely similar for adversity outside of the workplace, it is beyond the scope of this research study to delineate a universal resilience process.

Figure 2: Workplace Adversity				
Workplace Adversity				
<i>Macro Level</i>	<i>Meso Level</i>			<i>Micro Level</i>
<i>Systems</i>	<i>Unit Culture</i>	<i>Practical Concerns</i>	<i>Nature of Critical Care Nursing</i>	<i>Interpersonal</i>
Politics	Stigma around coping	Technical aspects of care	Futility, tragedy, mortality rate	Role conflict
Union issues, job instability	Horizontal violence, bullying, gossip	Staffing, scheduling, and vacation	Moral distress	Interprofessional team
Patriarchy	Complaining	Workload	Intensity and constant presence	Patients and families
Nature of health care system	Safety		Knowledge base required	Colleagues (including intergenerational conflict)
Perceptions of nursing and critical care in society			Expectations of self/others	Lack of respect for nursing among health care professionals
Budgeting/ Funding			Doubt, guilt	
Organizational policy			Powerlessness	

### **Workplace Adversity for Critical Care Nurses**

There are a variety of forms of workplace adversity in critical care environments, listed in Figure 2. Workplace adversity is present across three levels: a macro level, encompassing health care systems; a meso level, encompassing the unit culture, practical concerns, and the nature of critical care nursing; and a micro level, encompassing interpersonal workplace adversity. This discussion focuses on the impact of workplace adversity on nurses in critical care environments, although it is likely that the impact of the macro level of workplace adversity is not limited to critical care environments, and impacts the nursing profession more broadly.

It is also important to note that an area can be a source of adversity, but also has the potential to be a source of support. For example, if health care funding is inadequate, this may reflect as workplace adversity. However, if health care funding were robust, this would not create workplace adversity. The following discussion addresses different aspects of workplace adversity, and it is important to recognize that these areas are not all inevitably difficult for nurses.

**Macro level workplace adversity: Systems.** This workplace adversity is present at a macro, systems level for critical care nurses. These issues are broad, and have a trickle down impact for nurses as they work at the bedside. Forms of workplace adversity at the systems level include the politics of an organization, union issues and job uncertainty, patriarchy, the nature of the health care system, perceptions of nursing, health care budgets and funding, and organizational policy. These forms of workplace adversity are discussed in detail in this section.

**Politics.** In this study, politics refers to the activities associated with health care operations. This includes the organizational level, and also provincial and national governments (such as the Ministry of Health in Ontario). The politics of health care delivery are a form of workplace adversity for nurses in critical care environments. These include politics within the unit, the hospital, and more broadly in Canada. *“I find it very frustrating, trying to advocate for a change whether it be within government for health care or anything” (Athena).* Hospital politics are identified as a source of burnout for nurses.

*These new ideas they come up with. They came up with the same idea 15 years ago, constantly switching this stuff on us. I’m burnt out with the politics so I just close my eyes to it now (Athena).*

A perceived lack of efficacy results from this type of workplace adversity.

**Job instability.** Job uncertainty, workplace negotiations, and union issues impact critical care nurses. *“And I feel [eliminating jobs at the organization] is a real loss ... I’m dismayed at the cutbacks” (Mary).* Nurses also experience anxiety related to the historical impact of job insecurity, and how that could impact them again in the future. *“...because a lot of us know that our jobs are not completely secure. It’s not like a few generations ago where you went into a job and you were in it for life. You could get laid off or many things could change” (Mary).*

**Patriarchy.** Patriarchy acts as workplace adversity for nurses in critical care environments. In the current study, patriarchy is the dominant power and preferential

status of men, relative to women. A manifestation of patriarchy is the treatment of nurses within an organization's traditionally patriarchal model.

*And it's like you always say that nurses, nurses, nurses. We need you. You guys are great. But you make policies like that and you're not proving that point.*

*You're emphasizing old school nursing, like I have to give up my seat (Gala).*

Another salient example is the relationship between physicians, who are a historically male dominated profession, and nurses, who are a historically female dominated profession.

*[Doctors] just screaming or yelling or even now, I see it ... because you can't scream anymore. They can't yell at us anymore, not really. They can't swear at us anymore and they can't hit us anymore so now you know what they do? They roll their eyes, or they give these sorts of inappropriate non-verbal responses (Athena).*

*Health Care System.* The nature of the health care system is a form of workplace adversity for critical care nurses, because of its impact on nursing care.

*A lot of [the Care Facilitator role] is bed flow. When we're tight with beds and you know, they want to bring three people up and we only have one bed open and they're saying well you have all these beds. We have no nurses and the doctors are saying, if you don't bring this patient up the patient is going to die (Ellen).*

The availability of beds, and the movement in critical care units and within the hospital fluctuates based on the patient census. There is lack of beds in the community for patients

needing assisted living, causing an overflow effect to hospitals. The constant need for beds is adverse in critical care environments.

**Public's perception of nurses.** The public's perceptions of nursing care can act as workplace adversity for nurses.

*I think that TV has shown such a bad rap for nurses and even to explain what nurses do. I mean most people think we give needles, we give baths, and you know, but that's out on the floor. And even then, they do so much more but you can't capture it for them. Like all the stuff they do and even in ICU, I don't think they realize that (Ellen).*

Television is cited as a medium that makes unrealistic portrayals of nurses. “[the public sees] anything on Grey’s anatomy and they just come in [to the unit] (...) it just skews peoples’ understanding. It’s a total misconception” (Kelsey).

**Funding.** Additionally, the impacts of budgets and funding for hospitals have a trickle down effect on nurses in critical care.

*You make a difference to who is going to make the cutbacks. I think it's wrong that they're cutting back on some people. I think it's wrong that they're cutting back on physio and I think it's wrong that they're cutting back on OT but they're not valuing what these services offer because what do you suppose happens? It transfers over to nursing and we're already up to here. There isn't any more to give (Mary).*

Cuts made to other departments increase the workload of nurses as they provide care.

**Organizational policy.** There are many aspects of organizational policy that can create workplace adversity. Nurses associate policies around organizational issues with an organization's value for its employees. An example is staff parking, as there were recent changes at the hospital that involved moving employee parking offsite. This policy resulted in nurses feeling de-valued by the organization.

*It makes me feel like they don't appreciate nurses or our job and how long we're working and they don't appreciate it as much because doctors still can park here on campus. Residents, medical students, when you're not even an employee. So it's not as much that we have to park somewhere else. I mean that's obviously not ideal. It's that we have to park somewhere else in addition to the fact that other people who also work here get different treatment. So that's when it makes me feel really inferior (Gala).*

This organizational policy around parking also impacted a nurse's ability to perform self-care.

*I used to run before my day shifts, get up early (...) but having to get up earlier to go catch the shuttle, I don't get up earlier to go for a run to leave earlier (...) I feel like [taking the shuttle has] taken a lot of my own free time to do my running or to do whatever ... to decompress my own head (Gala).*

Parking is an example of how organizational policy can create adversity for nurses when employees feel devalued by an organization.

**Meso Level Workplace Adversity: Culture, Practical Concerns, Critical Care.** There are several forms of meso-level workplace adversity, which impact nurses in



critical care environments. These include the unit culture, practical concerns, and the nature of critical care nursing. Each of these types of workplace adversity is discussed in more detail in the following section.

**Unit culture.** There are forms of workplace adversity that are conceptually closer to the bedside, at the level of the unit culture. There are factors in the culture of a critical care setting that create workplace adversity, including stigma, complaining, and workplace safety. Critical care environments can be difficult places to work, for many reasons.

*I used to get very angry with them or feel very humiliated by [the doctors]. I don't anymore. They used to put me in tears when I was younger. And I still see that. They put them into tears (...) it's not a very nice climate at times because it's very stressful in there and you know, everybody's coding, then people get stressed out and they behave poorly. That's when people start rolling their eyes and commenting that you know, [the nurse] is sitting there and I'm you know, doing CPR for the last 10 minutes on my patient. Well, there may be a reason why [that nurse] is sitting there because she needs to be there for whatever reason for her patient so people can't see past themselves when their stress level is very high so the ICU is a very .... It can be a very abusive place to put it frankly. So you have to wade through that and be very strong, independent, and don't take it personally and assert yourself without eating people alive because I see a lot of older nurses who've been taught poor coping skills and they eat these young ones*

*alive and they eat their co-workers alive and you know, they're just floundering basically (Athena).*

**Stigma.** Stigma can act as a negative force as it influences how nurses understand the availability of formal resources to support their mental health, and the perceptions of their colleagues. These resources include confidential counselling programs that are available for free, external to the organization. *"I think there's a lot of stigma. People seem to feel they have to figure things out (...) I think people do need to use the resources. I think some people are feeling more permission to do it" (Mary).* Stigma and perceptions of coworkers acts as a barrier to seeking support, which creates workplace adversity as part of the unit culture.

**Complaining.** Complaining, which is repetitious, negative comments about an aspect of the workplace, manifests workplace adversity for nurses.

*I don't like to feel like I'm complaining, complaining, complaining. I think there's a big culture of complaining pretty much across the board, not just in ICU. People just complain. All they do is complain all day long, it's about their job. They complain that somebody didn't say thank you, or they complain that somebody didn't say please (Sarah).*

Complaining is not goal directed as it does not aim to address problems in a constructive manner.

*I don't like being that person that complains but doesn't do anything about it so I hate talking to people like that at work. They just complain, complain, complain and I'm like well what do you do about it? (Isabelle).*

Nurses can distinguish venting, a situational discharge of negative emotions, from complaining, which does not serve to unburden a nurse. *“Sometimes you have to go in and say you just need to have a place to vent for a minute and then I’m good” (Ellen).* Nurses will avoid colleagues and areas where complaining is present. *“So much complaining happening so I don’t want to go into the break room and automatically start complaining” (Sarah).* Complaining is a pervasive form of workplace adversity for nurses.

**Safety.** Safety concerns take several forms in critical care environments. The risk for physical violence is a major concern for nurses. Safety is also a concern regarding nursing capacity, and workload expectations.

*There’s just insanity (...) I said, “You know, I’m really worried about this.” And I did tell [the organization]. And I said, “This is really unsafe. I’m telling you.” (...)* They said that I was rude and that they didn’t feel that my complaint was valid (Athena).

Safety is a concern from the presence of non-staff members in the critical care environment, and also from threats in the community at large.

*We have a lock down unit for good reason. We have families that are just ... they lose it and they become aggressive with us and they just shouldn’t see what goes on in there sometimes. I wouldn’t want to see it. The other thing is we have gangs in the city now and they’ve gotten into our OR and they got into our unit a couple of weeks ago to finish somebody off with a gun (Athena).*

Safety threats can come from many different sources, and are perceived as workplace adversity in critical care environments.

**Practical concerns.** The next level of workplace adversity consists of practical concerns, which are located in or proximal to the critical care environment. There are multiple practical concerns that can influence workplace adversity in critical care environments, including logistics, technology usage, available equipment, and the physical space in the unit. Scheduling concerns are also problematic, and include staffing, scheduled shifts, working shift work, overtime, and vacation. Finally, heavy workloads are also identified as adding to workplace adversity.

**Technical concerns.** There are a number of technical concerns in critical care environments. There are many machines used in this environment, and the management of these machines falls primarily to nurses. It can be difficult to manage the volume of technology required for patient care, especially at the time of patient admission. The use of technology also shifts the focus from the patient to the machines and their associated tasks.

*Especially when I'm getting the admission. I completely forget there's a person under there and I just need to get all the leads on them, get the catheter in, get IV lines in, get the blood pressure cuff on, art line, central line (...) You're just working with all these things and underneath it all there's like a human but you forget that during that type of moment (...) definitely I feel that technology does deter you from being able to see the patient as a person (Isabelle).*

Technology can also pose a challenge for nurses when a patient arrives in the critical care environment and the machines in use need to be switched to continue patient care. *“We didn’t have the same pumps as that hospital and they were running all kinds of epinephrine and all kinds of infusions” (Helen)*. It is also logistically difficult to move unstable patients who require diagnostic imaging outside of the unit, or are being transferred within the hospital.

*Day [shifts] can be a bit more demanding in terms of the amount of consulting services coming to see your patient, the amount of tests you’re going to have to be doing because daytime, it’s easier to get them done (Isabelle)*.

The physical space and layout of a unit can also influence workplace adversity, if these factors make it difficult to care for patients. *“[The other unit] was just harder to navigate and just the logistics of it was just making it harder to work there” (Isabelle)*. In the critical care setting, nurses have supplies brought to individual supply stations, which alleviates some of the concerns from centralized supply spaces that are far from the bedside.

*I’m very thankful for [logistics personnel] because running on the wards, you are very unsupported when you compare in terms of logistics, when you compare an emergency scenario on the ward versus in the intensive care (Isabelle)*.

The shape of the unit can also impact nursing teamwork in a critical care environment. The patients may be far apart from each other, or around a corner from other patients. The shape of the unit can make nurses feel physically isolated from other colleagues, which impacts their ability to receive help from colleagues. This effect is

amplified by the nature of the critical care environment, where patients require a nurse at the bedside for continuous hemodynamic monitoring. “[*The nurse has to*] come over [*to my area*] and check what infusions I’m making and go back to her corner and mix them for me” (*Gala*). The physical space within the unit impacts how nurses help each other and monitor their patients.

***Staffing, scheduling, and vacation.*** A frequently named source of workplace adversity is staffing and vacation concerns. These issues are related to the nature of shift work, scheduling, overtime, and calling in sick.

The nature of shift work can take a toll on nurses. The scheduling for the unit is overseen by individuals in a staffing office, and nurses can experience conflict with their schedules. “*The scheduling, the night shifts. I really don’t like that. I wish we had an option*” (*Isabelle*). In this unit, the rotation mandates that nurses work day and night shifts. Nurses can experience adverse consequences from working night shifts, especially if they experience difficulty with their sleeping routine. “*The not sleeping and doing the shift work and full time hours, and still doing courses too on top of that was all contributing [to burnout]*” (*Helen*). Nurses working part time have more flexibility in their schedules, and it enables some nurses to avoid undesirable shifts.

*I worked full-time hours but I just liked the flexibility instead of doing the four in a row. It just worked better for [my child’s] school and everything so I would have had a set schedule and then picked up extra shifts* (*Ellen*).

Shift work poses difficulty in maintaining relationships with people outside of nursing, who do not do shift work. “*I feel like they’re making it harder for me to have any*

*kind of life out of this institution” (Bethany).* It is especially difficult to miss important events in a nurse’s personal life due to scheduling. *“The way people in my life put it, you’re missing life, life’s passing you by, for a job” (Gala).* Ultimately, scheduling is a reason that nurses will leave critical care environments. *“I know some other people who have left ICU’s. [It’s] more of a scheduling thing” (Bethany).*

It is difficult for nurses with lower seniority to be granted vacation. *“And even just getting vacation time off is really tough especially for folks with less seniority. This winter we have people with more seniority than I have and they weren't granted vacation” (Ashley).* When nurses with lower seniority want to leave the unit, they often switch shifts. *“The only way to get time off is to do switches” (Ashley).* However, this can increase their time at work, which can contribute to burnout. *“Doing switches isn’t nearly as relaxing” (Ashley).* Nurses recognize that they are becoming burnt out, and need to take a leave from the critical care environment, but they are unable when their vacation requests are not approved. *“I thought I was going to lose my marbles (...) I got a note offering me vacation (...) I don’t normally take it and I went yes” (Mary).*

Some nurses will call in sick, in attempt to manage burnout. *“I just can’t face it today. Yes, then I would call in sick” (Ellen).* Sick calls are problematic in critical care environments if nurses are not available to come in to work on overtime. Paying nurses overtime also has financial consequences in hospital environments. *“People still call in sick from the burnout and then you need more overtime but right now [the hospital] can’t afford overtime and it’s just a vicious cycle” (Gala).* Overtime shifts can also contribute

to burnout, as they increase the time nurses spend in the critical care environment, and subsequently, their exposure to workplace adversity.

*This past year has taught me just that sometimes overtime is not always the best situation to always be in (...) That would be because it's tiring so you go home and (...) so that starts affecting your home life and then you start being more emotional at work (Bethany).*

**Workload.** Additionally, heavy workloads can influence perceptions of workplace adversity and are seen as impacting patient safety, because of the demands placed on a nurse.

*I can tell that some of the nurses are just burnt out and just frustrated and they're complaining about the workload and sometimes we do have a heavy workload, very heavy at times and it can be ... sometimes it's unsafe (Helen).*

Workload is also a contributing factor for burnout. “*Workload can really add to my burnout*” (Connie). Heavy workload can act as workplace adversity for nurses in critical care environments.

**Nature of critical care nursing.** The final aspect of meso level workplace adversity is the nature of critical care nursing. This refers to the type of nursing roles and conflicts that are related directly to critical care environments.

**Futility, tragedy, and mortality rate.** Nurses in critical care environments bear witness to many powerful moments. In this environment, patients are experiencing extreme, life threatening illness or injury. Nurses carry the burden of knowing that, despite their best efforts, many patients will not survive.



*You want to see your patients get better so when it comes to that point, especially with working where we work, you're surrounded by all this equipment that's life sustaining ... life saving and then you face a point where death is not an option. It's going to happen whether you want it or not (Isabelle).*

Nurses provide care to the patient, and also care for the patient's family upon their arrival. *"I don't always take stuff home with me but I just couldn't shake it off. I really felt the grief of the parents and it's a feeling of helplessness" (Mary).* These moments are difficult under any circumstances, and nurses are a constant presence throughout a crisis.

Nurses witness human tragedy. *"We only see the worst of everything" (Ellen).* They may be the first among the interprofessional team to realize that a patient cannot be saved. *"I think they would say that the nurses know before the doctors or [that they] see it coming" (Ashley).* Nurses may also have to provide care to a patient, knowing that it will be futile. The act of providing critical care in the face of futility is very difficult for nurses. *"I was looking at the monitor. Yes, there's brain activity but it's dying brain activity. That brain is dying" (Sarah).* The high mortality rate in critical care means that nurses face life and death situations on a regular basis. Even when patients survive, nurses witness human suffering and tragedy. *"This person will not be going back to where they were before" (Ellen).*

It is also difficult to witness the volume of human tragedy that occurs in critical care environments. Young patients can be very difficult to care for, as their deaths seem much more senseless than older patients who have had opportunities to see their dreams realized. *"I'm looking at this kid, beautiful kid, and he's a leader, he's a good boy"*

*(Mary)*. When older patients die, “*it’s sad and it’s heartbreaking but it’s not devastating kind of thing, it’s almost satisfying to be able to help them through that in a peaceful way*” *(Ashley)*. Nurses who are new to critical care environments find they are not prepared for the emotional gravity of the nursing care. Nurses indicate that they were not expecting the number of patient deaths in critical care environments, because they expected their role would be largely saving people’s lives. “*Stuff that I thought would happen in ICU and the patients that I thought I would work with in ICU are very different from what actually I am experiencing*” *(Isabelle)*.

**Moral distress.** There is substantial ethical-decision making that nurses are involved with in critical care environments. Moral distress occurs when nurses experience an ethical conflict between the care that they enact and what they believe is right. Many of these decisions surround end of life care, and when there are conflicts surrounding these decisions, it can lead to moral distress.

*What I learned from that, because you do deal with it every day almost, is that there’s such a lack of knowledge in the community about what it means to be critically ill and what it means to be [resuscitated] why would you choose this and respecting peoples’ wishes of what they would want* *(Kelsey)*.

Moral distress can result from conflict over whether to start or discontinue a potentially life sustaining treatment without knowing the patient’s wishes.

*The patient’s family wants everything done for them in terms of traching, pegging, and the patient’s completely aware of everything but has moments of delirium*

*during their ICU stay so of course they can't contribute 100%, unless they discussed it with their family way before, which rarely people do I find (Isabelle).*

When families have to make life and death decisions for their loved ones, they often turn to nurses for support. Subsequently, nurses are burdened with ethical decision making by proxy. *"Because they often say, "What would you do?" "You know what? I can't make that decision. It's up to you and your family what you think your loved one would want" (Ellen).* Moral distress occurs when nurses have to provide care that is in accordance with a family's wishes, but which goes against a nurse's personal beliefs. *"What we see as the right choice is not always what the family sees and there seems to be a lot of ethical, moral distress over that" (Kelsey).* Moral distress is most pronounced in cases where care seems futile in a changing course of events.

*You have moments at work sometimes where you're conflicted, say you're ventilating a 96 year old woman and the family wants to trach them. They're full of cancer, there's no way this person is going to live, and you're wrestling with the ethics of it (Sarah).*

***Intensity and presence.*** Critical care units are characterized as being intense. They are environments of constant change, and one where nurses are always on guard for a crisis. *"I know this sounds corny, but it is life and death and we are saving lives or helping them to die hopefully gracefully and peacefully" (Ellen).* The patient assignment can determine the intensity that is experienced by the nurse.

*I have had more than once come into work and have the nurse in charge say, “I’m really sorry for this assignment but I needed somebody who was cool as a cucumber” with a stressful or high intensity family (Sarah).*

The intensity of the nursing assignment is determined by the patient’s status, and the atmosphere at the bedside and in the critical care setting.

New patient admissions to the critical care environment are a time of high intensity for nurses. These new admissions are challenging because of the uncertainty about the patient’s situation, and the amount of work that is required to admit a patient.

*It’s a lot of planning and things to do. The room doesn’t get itself ready. You’re telling me that there’s someone down there that’s bleeding. We already know we need extra pumps. We’re probably going to need pressors, we might need the Level One, so we need to get ready. [nurses are] stretched kind of thin so we’re trying to organize how to get all this stuff (Mary).*

Noise within the unit can increase the intensity. “So [noise is] stressful and people screaming and yelling and alarms going off” (Athena). Nurses are also vulnerable to the intensity, because of their constant presence at the bedside, where much of the adversity originates and is experienced. This is because the life and death situations, moral distress, and the patient and family members’ pain and suffering are taking place at the bedside. “I share what’s happening in the room, and I detach from it all. I need to leave that space to take that weight away” (Sarah).

**Knowledge base required.** Nursing in a critical care environment requires an extensive knowledge base. “I always feel there’s so much to learn that I feel it’s

*overwhelming at times” (Bethany).* For critical care nurses, there is emphasis on scientific and technical knowledge, reflected in psychomotor skills, technological capacity, and critical thinking about patient illnesses. Nurses also have to develop their experiential knowledge, or intuition and insight. Nurses learn through formal education, and also from their colleagues. *“Don’t hoard your knowledge. Don’t hoard your experience because it takes a long time to get that. It doesn’t just come out of books” (Mary).* Learning this information takes time, and nurses feel pressured to have a large knowledge base at the outset of their careers. Nurses can also be intimidated about asking questions because they risk appearing incompetent to colleagues. *“I can’t remember the exact response (...) but I definitely didn’t feel like I would ask a lot of questions afterwards” (Bethany).*

***Expectations of self and others.*** Nurses experience substantial adversity when they cannot perform nursing care that meets their expectations.

*So if I can’t do everything that’s actually expected of me, if I can’t sit there and say that I’ve prevented the patient from getting a [coccyx] ulcer or this or that then I feel guilty because I feel like I’m being a part of the problem (Gala).*

These expectations come from themselves, and also the expectations they perceive from colleagues, management, organizations, and regulatory bodies.

*As nurses we’re expected to be impartial practitioners of patient care, providing dignity, respect to patients and their loved ones and sometimes it can be difficult to keep our own personal experiences outside of the care that we provide and so what’s expected of us professionally by the college and by other regulating bodies is that we are impartial practitioners (Connie).*

There is also the pressure to save lives, which can result in nurses feeling like they have failed when a patient dies.

*Our job is to make people better and to help them in some way. When you spend your whole shift and you accomplish that in your mind, you don't feel like you've accomplished it, then you've failed (Kelsey).*

**Doubt and guilt.** During a moment of crisis, the focus of nursing is on completing tasks to try and save a patient. After an incident, nurses reflect back on the crisis, which may be perceived as adversity. “*I try to make sense of it all (...) how could I have done [my care] more effectively?*” (Gala). Nurses experience moments of doubt and guilt, wondering if they missed anything during patient care, or if they could have done anything differently.

*I think the [patients] that stick with me are the ones (...) that are acutely ill and don't get better, or you wonder why it happened, or you feel like tried to do something good for them, as we always are trying to do something good, healthcare wise and we can't. As a team, did we fail them? or as a system did we fail them? (Kelsey).*

These thoughts can be intrusive, and persist after a shift and beyond.

*After you leave the shift, you just ponder about what's going on with the patient or you think did we do the right thing? or is the patient happy? It's various things like that that make you wonder, are we doing the right thing? (Connie).*

Doubt and guilt can result in nurses losing confidence in their practice, and themselves as practitioners.

**Powerlessness.** A major struggle for nurses in critical care environments is powerlessness. For various reasons, nurses face adverse situations that they cannot control or change.

*We had a really good team. We did everything we were supposed to do. We gave every damn drug you can think of, and just all of it together was not enough (...) For the first time, I was actually questioning, not wanting to go to work. So that for me was a really hard time (...) I think it relates back to that feeling of not being able to help anybody (Kelsey).*

Powerlessness can be exacerbated after a crisis.

*Everybody who works with you when you are assigned to this type of this patient always says, this is not your fault. They are sick. But you don't feel that way. You just want to keep them in that bed (...) and keep them safe somehow (Connie).*

This struggle is very stressful to experience, and is difficult for nurses to overcome.

**Micro Level Workplace Adversity: Interpersonal Interactions.** The final level of workplace adversity is the interpersonal, referring to interactions between people in the critical care environment. There are a variety of interpersonal factors that create workplace adversity. These include role conflict, the interprofessional team, patients and families, nursing colleagues, horizontal violence, and a lack of respect for nurses from colleagues and the organization, which are discussed in detail below.

**Role conflict.** Role conflict exists when there are demands placed on a nurse that are not within their professional obligations. An example of role conflict is when family

members ask for information about a patient, and it is the physician's responsibility to provide that update.

*I wait till [the family is] asking pointed questions and I'll answer them but I also don't think it's my job. It's the doctor's job to tell them, your family member is dying (...) you know, that's not my role but if the family members are going to ask me specifically pointed questions like that I'm going to answer honestly (Sarah).*

Nurses also experience role conflict when they advocate for patients and disagree with the plan of care. "I would really try very hard to bite my tongue and not say anything because it doesn't matter and it just makes me mental" (Ellen). Ultimately, nurses feel bound to enact care that they do not support, because of their roles.

*It's clear what our role is you know, you get your doctor's orders and you have to follow the orders. You may not agree with it and you can talk to somebody but in the end, you can't not do what you've been ordered to do (Sarah).*

**Interprofessional team.** The interprofessional team can present a form of workplace adversity for nurses. This is pronounced during rounds, where the team meets at the patient bedside to discuss the case. This team usually consists of physicians, nurses, respiratory therapists, and a pharmacist. Social workers, dietitians, physiotherapists, occupational therapists, chaplains and others may be involved on an as needed basis. While this collaboration can optimize patient care, it can also be a source of frustration.

*One thing that can be difficult to handle is (and I've experience it) is you'll be on rounds presenting your rounds with the interdisciplinary team and generally we provide an overview of the patient, what happened in the last 24 hours since the*



*previous rounds, what was done over the night shift. And I personally have experienced many times where you'll be presenting your rounds to you know, four to ten, fifteen people and half the group will be on their iPads not paying attention, looking around, on their cell phones, and you know you're not being listened to (Connie).*

This lack of collaboration within the interprofessional team is adverse for nurses as they try to advocate for their patient.

There can also be conflicts when nurses delegate to other workers. An example of this is the connection between nurses and health care aids (orderlies). *"It's always a power struggle no matter what you do, no matter what you're calling for so ... and then it changes the attitude in the environment to nurse versus orderly"* (Kelsey). Health care aids often receive delegation from nurses, and this power differential has the potential to create conflict.

***Patients and families.*** Challenges with patients and families were frequently mentioned as workplace adversity in critical care environments.

*It feels like [the family is] kicking you in the face, over and over and over again and I just felt completely drained (...) this person is taking out their anger on you. Their loved one is in the hospital and again I can't change that (Mary).*

Family perceptions of nurses can create workplace adversity when these perceptions are not grounded in reality. *"I just felt attacked. I come out of these heart-wrenching cases and [the family member] even added, there you all are just sitting and yapping, which we*

weren't" (Mary). Interacting with families can manifest workplace adversity for nurses, but families can also connect with nurses and not create workplace adversity.

*And I think by spending the day, the night, at the bedside, you get to know those people for those 12 hours and hopefully you have a good dynamic with that family. I rarely (...) have bad interactions with families (Sarah).*

It is acknowledged that nurses will not have a strong connection with every patient and their family in a critical care environment, but that does not limit the capacity for a therapeutic relationship.

*Try to find a common ground with the patient (...) provide cares professionally and not let it bother you that you just aren't getting along great with your patient (...) having a therapeutic relationship with your patient is the biggest thing (Connie).*

However, when there are interpersonal challenges with patients and their families, it can be very difficult for nurses. "I've been doing nothing but looking after high stress, high intensity families" (Sarah). These challenges can be exacerbated by the fact that critical care patients are often sedated and unable to communicate, so they are not able to voice their concerns or wishes for their care. Family members assume responsibility for decision-making.

*A patient like that where they can't tell you what's wrong, they don't communicate with you in any way, and you feel like everything you're doing for them although it's meant to help them is actually just torturing them (Kelsey).*

In critical care environments, families are experiencing substantial stress, and may release stress at nurses. Part of this difficulty is attributed to the location of nurses at the bedside for 12 hours.

*[The family is] angry. A lot of it is displaced and a lot of it is because you're the one that's there. You often have a doctor with a pager to go oops, my pager's going. I've got to go. But we're trapped there for 12 hours (Mary).*

The constant nursing presence at the bedside can mean that nurses are exposed to adversity for the duration of their shift.

**Nursing colleagues.** Interpersonal conflict can take several forms. Nurses can experience animosity and misunderstanding due to intergenerational conflict. This results from nurses of multiple generations working together, with differing viewpoints on critical care nursing.

*Yeah, I think being a new nurse right out of (...) university, I think that's a point of adversity because a lot of people I've encountered have said no, if you're a new grad you shouldn't be in ICU. You shouldn't have that and I don't necessarily think that and that's actually my one bent (...) with other nurses because I actually think that you can as long as you transition ... as long as you have a good knowledge base and you have the good transition and mentoring that go along with it and the knowledge, skill, and ability to ask questions (Bethany).*

Conflict among nursing colleagues also manifests during helping and delegation. Nurses express dislike for a colleague by withholding assistance.

*I tried to delegate it. [Other nurses] were avoiding me at some points because they knew I was going to delegate some more tasks so they were trying to make tasks for themselves (Gala).*

Nurses can be reluctant to address conflicts with colleagues. *“I don’t do well with conflict at all so as soon as there’s conflict happening, tension, or I don’t know, issues with trust or mistrust, things like that, I naturally want to run from that” (Sarah).* Nurses fear the implications of addressing a conflict with colleagues. *“It’s such a difficult place to be in, you don’t want to have a bad relationship necessarily with your co-worker but you feel like they’re wrong” (Helen).*

**Horizontal violence.** There can be many manifestations of horizontal violence in critical care nursing. Horizontal violence refers to aggressive action between colleagues in the workplace, which may be overt or covert. The colleagues perpetuating the violence are a similar hierarchal level in the critical care environment, as opposed to vertical violence, which would move up or down an organizational hierarchy. Horizontal violence occurs amongst nurses, and can manifest through a variety of behaviours, including workplace bullying, passive aggression, or withholding assistance to a colleague.

*The teamwork could be eroded a little bit, like the team aspect, whether it’s horizontal violence, or criticizing another nurse’s performance. We’ve all been there at some point whether we’ve given it or received it (Connie).*

Horizontal violence is often covert, and occurs insidiously. *“I notice bullying going on (...) when other nurses have talked about certain nurses behind their backs” (Helen).*

Horizontal violence can also take the form of inappropriate patient assignments or

workload. *“It’s like they wanted her to fall flat on her face” (Mary)*. Gossip is also a method of horizontal violence used between colleagues. *“Be careful what you share at work because not everybody with a listening ear has a caring heart. It might just be for gossip” (Mary)*. There are various manifestations of horizontal violence, and it is present throughout the culture of the unit.

***Lack of respect for nurses.*** A lack of respect for nurses and nursing manifests from various levels within an organization. There can be a perceived organizational lack of respect, or lack of value for the role of nurses in a hospital.

*I don’t think nurses get enough praise for sometimes when we go through a lot of stressful situations or a lot of busy situations. I feel like the only time you hear anything is when you haven’t done something so when you’re being disciplined for something (Gala).*

Family members can also demonstrate a lack of respect toward nurses.

*I remember working for an hour with this patient [describes tasks], and I sat then at the end of the bed and I remember the family member coming in and saying, that’s a nice idea to just have a seat. I was like, I can’t believe you just said that. I think I’m going to have to take a few steps away right now (Mary).*

Nurses can also demonstrate a lack of respect to each other and their profession.

*I was actually personally (...) offended and I still find when [nurses who are burnt out] are like that and say ‘Oh, nursing is terrible. You don’t want to do this job’, I am personally offended by them. You’re talking negatively about my career*

*choice and my profession (...) I find that like very like disrespectful to all nurses and it's the worst when it actually comes from a nurse (Kelsey).*

This discussion related to workplace adversity demonstrates how workplace adversity exerts a negative impact on nurses; however, it would be impossible to completely remove workplace adversity from critical care environments. There are so many sources and foci of workplace adversity, as noted in the preceding discussion that it is unrealistic to attempt to create an adversity-free workplace. However, nurses can be aware of workplace adversity and select their course of action to reduce or address workplace adversity. It is important for nurses to recognize workplace adversity through situational awareness.

### **Situational Awareness**

Situational awareness is the driving force in exposure management. The concept of situational awareness dates back to World War 1, and has been used as a framework in industries such as aviation to promote safety (Fore & Sculli, 2013). Because of this potential to impact safety in the environment, the process of situational awareness has been operationalized for nurses. Situational awareness is characterized by the attributes perception, cognition, and projection (Fore & Sculli, 2013), and is illustrated in Figure 3. Perception is how a nurse identifies and makes meaning from workplace adversity. Cognition reflects how a nurse thinks critically about workplace adversity, and considers possible courses of action. Projecting is a nurse's anticipation of the potential outcomes of a course of action, based on their context and available resources. In addition to the

defining attributes of perception, cognition, and projecting, disclosure is added here as an antecedent factor in the process of exposure management.

Figure 3: Situational Awareness

Situational Awareness			
Disclosure	Perceiving	Cognition	Projection

**Disclosure**

Disclosure of information is an antecedent factor in situational awareness for critical care nurses. Disclosure involves: the acknowledgement to self that workplace adversity in the critical care environment, the validation of its impact on the self, and effective communication among all parties involved about the adversity. In critical care environments, the degree of disclosure can impact how a unit operates.

*The [critical care] staff nurse I don't think understands half the stuff the Care Facilitator does. They just know their patient and their little corner but they don't know that there's 26 other patients, and the families, and the doctors (Ellen).*

Nurses can disclose personal information to management if they are struggling in the workplace. *“Sometimes we have a bit more knowledge of peoples' background, what's going on in their lives so then sometimes I think we try to cut them a bit of slack” (Ellen).*

Disclosure requires more than a nurse sharing information; management structures within critical care environments must acknowledge and validate the workplace adversity.

Otherwise, nurses cannot address workplace adversity in critical care environments. *“I*

*was assaulted by a patient (...) kicked and punched. Initially the team leader tried to pooh pooh it” (Mary).* Disclosure is required in order for nurses to be aware of, and manage exposure.

### **Perception**

In a critical care environment, the impact of workplace adversity for a particular nurse is based on its meaning for that person. From a symbolic interactionism perspective, an external reality exists, and nurses make meaning from this reality based on their experiences and understanding (Corbin & Strauss, 2008). A salient example of the importance of perception is found when nurses notice a change in their reaction to a situation. *“There was definitely crisis within her care and it affected me more than it would have any other patient, any other day” (Ashley).*

**Personal factors influencing perception.** Perception is influenced by many factors. These include a nurse’s experience, personal circumstances, hardiness, and beliefs about nursing. The views of an event are individual, and are shaped by the nurse’s culture, experiences, and beliefs. The impact of personal beliefs is consistent with a symbolic interactionism perspective, that people make meaning from external events on an individual level.

As nurses gain more experience in a critical care environment, they have more experiential knowledge. This knowledge informs their perception of patients, experiences, and priorities in nursing care.

*I can just see the guy coming down the hall on a stretcher and I’ve already got the whole plan of care in my head. So just because I’m smarter and have more*



*experience, [that is] smarter because I have more experience. That has really helped my resilience (Athena).*

Developing perception gives nurses more capacity to manage exposure to workplace adversity.

Nurses' personal circumstances can alter their perceptions in the workplace. For example, a nurse may be comfortable caring for a dying patient. *"If I could feel good about a situation like that, it was the best way a patient could pass, at the end of the day"* (Isabelle). Another nurse may become distressed, having recently lost a loved one. *"I said, I'm going home. I need to go. This patient is reminding me of my mom [who had recently passed] ... I need to go"* (Bethany).

Nurses' hardiness, as a trait, changes their perceptions of workplace adversity. When nurses have higher levels of hardiness, they perceive workplace adversity as a challenge, rather than a threat.

*For me, change is normal. I know it terrifies some people and I am a good self-advocate. For instance, if you told me emerg is overwhelmed we're going to have to send you down there. I'll go down. I won't kick up fight. Some people will just have a meltdown. What I will do when I get down there is because I normally would find the team leader to sign in anyway, and I go look, I don't know where anything is kept. Do you have some sort of an orientation brochure or somebody to show me where ... and people do. That's the thing (Mary).*

This example illustrates how hardiness predisposes nurses to be resilient.

Nurses perceive their roles differently, based on their beliefs about nursing. Some nurses feel that nursing is a vocational profession, and see themselves as part of a broader force for good.

*It's quite empowering. And in fact if it's outsiders, family members, when I get home, they say, an area like that – it must be stressful. And I go I do what I love and I love what I do. I spent a lot of years and time and trouble and training to get to this point and I feel like I'm making a difference (Mary).*

Others view nursing as a job, as a means to support themselves. *“It's a stressful job. This is part of my job. I just have to deal with it” (Sarah).* Nurses can also see their work as something to endure, especially if they are burnt out. *“I'm just here to get stuff done and you know that your heart isn't in it” (Ashley).* These perceptions about their role and their work colour how nurses approach their workday and their responsibilities.

**Workplace factors influencing perception.** Perception can also be impacted by workplace factors, such as the availability of help from colleagues and the support of management. Knowing that colleagues are available to help during crises facilitates nurses' perception of workplace adversity as manageable. For example, if a nurse knows that a colleague will help them, they feel more secure.

*If you have any problems at all I'll just call. I'll just make sure you know what you're doing. I'm just working right there. Come and get me. You're not alone if you have any questions at all. Check on them just to make sure they feel supported and safe (Ellen).*

Help can take the form of tasks or emotional support. Managers also help nurses to feel secure in knowing that they will have management support if needed.

*I think my manager is someone who I think I can trust and does have our best interests at heart and I think that makes for a better working environment and helps so that when we're having troubles we can go to her and when we've got the really bad situations, bad patients, they will try to help us (Ashley).*

Managers foster perceptions of support by being present in the unit and available to nurses.

*[The managers] always do a walk through the unit and pop in on everyone and just you know, who's on isolation and what's going on? How are things? [they] are able to hear concerns and help. Either they'll take on the cause or at least give us direction as to the best way to deal with it (Ashley).*

When nurses perceive that they are supported, they interpret workplace adversity as being manageable.

### **Cognition**

Cognition, a nurse's understanding and critical thinking, can be developed over time through support for learning within the environment. *"I believe in always knowing your options. No matter what it is you can better direct yourself and better handle yourself if you know what your options are" (Bethany).* Nurses build the different domains of their knowledge base, in part by receiving advice and support from colleagues. This advice has a lasting impact with nurses.

*[in the locker room, participant says] Man, that was such a hard day! And then she's a really senior nurse (...) I know she had a busy day too. She had an awful day, awful type of patient case in terms of it being sad and just busy. She was just down the hall from me. And we were both in the locker room and I was like getting my stuff (...) I was like ahh! (...) you had an awful day too. Thank God we're off for 5 days. She's like (...) oh no, I'm fine. We get to leave. These patients, they have to stay. We get to check out. And I was like, oh my God! You're so right! (Isabelle).*

Cognition can also be sharpened through continuing education, as nurses are learning more about caring for patients in critical care environments. “*The continuing education is very helpful. You keep your finger on the pulse of standards of care and that's really important*” (Connie). Activities like a journal club foster continuing education within the unit.

*I like the journal club (...) the presenters are actual employees of the ICU so it gives a chance for them to have a leadership role and that's kind of cool as well. I find that neat (...) it's a good way to help become a better professional, to be a better nurse (Isabelle).*

In addition to continuing education, it is important to have breaks during the shift to facilitate nursing cognition.

*I feel when I don't get a break in the shift, I feel like (...) it affects patient safety (...) I feel like I can't think. I feel like I'm starving and I'm getting a headache*

*and then I'm doing stuff but then my mind's getting foggy. You're just not thinking clearly (Gala).*

Cognition also includes the identification of priorities, and the relative importance assigned to potential courses of action. There are many factors that influence a nurse's cognition in critical care environments, which lead to reflections about potential outcomes, projecting into the future.

### **Projecting**

Projecting represents a nurse's reflection on what could happen with a particular course of action. A nurse considers several options, before deciding how to act in response to workplace adversity. Nurses evaluate the potential outcomes of their actions. Projection is based on a nurse's perceptions and cognitions, and experiences in the critical care environment. This example illustrates how a nurse projects by considering different options when she needed to ask a question about patient care.

*I'm being judged by another nurse for [asking a question] (...) it creates a bad relationship between me and that person even though [the judgment is] perceived and that person may not even know it. (...) I won't ask that nurse a question even though I know that it's important to. I'll go to somewhere else, on the other side of the unit before I would ask that person (...) I would try and see how big of a risk factor it is (...) I made the mistake of asking her and it's this whole lesson that takes a week to complete so I've always made it a point never to ask her any more questions (Bethany).*

After projecting the potential outcomes of their options, nurses choose how to manage their exposure to workplace adversity.

### **Managing Exposure to Workplace Adversity**

The crux of becoming resilient as a critical care nurse lies in managing exposure to workplace adversity, as the core variable in this grounded theory. Nurses face many types of workplace adversity, which are understood via situational awareness. The determining factor in MANAGING EXPOSURE is whether nurses are able to successfully manage the exposure, through their awareness and actions, to limit negative the impact of the workplace adversity. For example, nurses face contaminants every day in the workplace. However, nurses are not sick every day. They wash their hands, change their clothes, wear protective equipment, and take other precautions to enable them to work with people who are sick. Nurses can use the same process to be more resilient, by managing their exposure to workplace adversity. The sub-categories of managing exposure are protecting, processing, distancing, and decontaminating, each of which are described in detail below and illustrated in Figure 3.

These efforts outlined in MANAGING EXPOSURE are used in combination, in a manner that is responsive to the workplace adversity. For instance, if nurses always wash their hands but never wear a mask, they will not be fully protected against the spread of infection. It is also important for nurses to gauge when it is appropriate to take a course of action, through situational awareness. There are times when nurses need to wash their hands, wear masks, or both. It is not only the act of MANAGING EXPOSURE that is important; it is matching the appropriate method of MANAGING EXPOSURE with the

workplace adversity. While each nurse has unique needs, there are many common ways to manage exposure.

Workplace adversity has varying degrees of intensity, and so do the methods of MANAGING EXPOSURE. The depth of management of exposure that is needed reflects the type of workplace adversity, and situational awareness. For instance, a nurse may overhear a patient's family member make a disparaging comment about waiting to come into the unit. The nurse perceives that the person is upset and stressed. The nurse may also assess that it is possible to address this remark, but as it was said in passing, decides that no intervention is immediately necessary. The nurse may use self-talk, or talk about the comment with a colleague, and carry on, otherwise unaffected. This nurse is seen to be resilient, as he or she has addressed workplace adversity quickly and in an effective fashion. This example is used to delineate one possible resilience process through MANAGING EXPOSURE, but this process should not be interpreted as being linear. MANAGING EXPOSURE is fluid and can be enacted differently by each nurse.

If the workplace adversity is severe, such as an incident of violence directed toward a nurse, more exposure management is required. The process of exposure management may take seconds or days, but when the process is used effectively, nurses have the potential to be resilient. It is necessary that nurses have situational awareness in order to actively manage exposure. If nurses do not recognize the impact of workplace adversity, they will not be as able to manage exposure. Nurses may use some of the methods of managing exposure out of habit, such as distancing. Without purposeful engagement in the process of MANAGING EXPOSURE, driven by a nurse's situational

awareness, the techniques will not be fully effective. For example, nurses may recognize that they feel distressed at the end of a shift, and use this situational awareness as the impetus to enact MANAGING EXPOSURE when they finish their shift. This could occur when a nurse debriefs with a partner, goes for a walk, or uses humour for coping. Each nurse has different needs for exposure management, and the effectiveness of the process is not evaluated based on what or how they manage exposure. The effectiveness of the process is subjectively determined by how nurses feel after MANAGING EXPOSURE and if they have reached a personally acceptable level of resilience. The techniques of managing exposure are illustrated in Figure 4 and are explained in detail in the following section.

Figure 4: Managing Exposure

<b>Techniques of Managing Exposure</b>			
<b><i>Protecting</i></b>	<b><i>Processing</i></b>	<b><i>Decontaminating</i></b>	<b><i>Distancing</i></b>
Developing a shell	Rationalizing	Developing relationships at work	The bedside
Disengaging	Reflecting	Fostering relationships outside of work	The unit
Depersonalizing	Talking about it	Engaging in meaningful activities	Planning an exit strategy
Humour Getting help	Avoiding rumination Debriefing		



**Protecting**

Nurses build emotional and cognitive barriers to protect themselves against workplace adversity. These barriers include developing a shell, disengagement, depersonalization, humour, and getting help.

**Developing a shell.** Nurses develop emotional barriers within themselves to protect against workplace adversity. This is termed developing a shell, or a thick skin. When workplace adversity pierces this shell, it has negative consequences for a nurse. “*This situation had gotten under my skin (...) you’ve got your defensive, professional shell and then this had gotten underneath it*” (Ashley). Nurses indicate that this shell develops over time, as they work in critical care environments.

*Back then, I was very sensitive. I didn’t have this tough exterior. I didn’t have that tough shell that you get after you’ve worked for a little while. I remember (...) the family member of the patient (...) screamed at me at the end of the shift and basically accused me of not caring for her loved one very well and yelled at me in front of other people (...) I was a brand new nurse and I did not have that tough shell, but now, I take it with a grain of salt (Connie).*

The representation of the shell serves to protect a nurse emotionally, almost like a suit of armour, when nurses face workplace adversity in critical care environments.

**Disengaging.** Nurses disengage with a person or with a situation when they are becoming overwhelmed to a level where their functioning is threatened. Disengaging is often found in the language that nurses use. For example, terms like ‘patient’ and ‘case’ are used rather than a name or person. Rather than say dying, nurses use the terms

‘negative outcome’, ‘end-of-life’ or ‘comfort measures’. This terminology creates emotional distance between a nurse and an overwhelming or threatening situation.

Disengaging can also occur when a nurse seeks physical or emotional disengagement from the bedside. *“I like [working different roles in the unit] because I don’t have to get too attached to the patients” (Ellen)*. Avoiding attachment is a way to disengage with patients. *“I don’t emotionally get attached to [patients]. I could never care for children because I would get emotionally attached to them” (Athena)*.

Disengaging can also mean viewing nursing in a work and task focused way. *“I guess you just become more stoic and it’s more about well, this is my job and nobody else is going to do it” (Sarah)*. Disengaging is a means of holding back the emotional burden associated with a patient or situation, to limit its impact on a nurse.

**Depersonalizing.** Depersonalizing occurs when nurses minimize the humanity of the patient as a protective action. Nurses will depersonalize a patient as a protective mechanism during difficult situations.

*When the family is around and there’s this great outpouring of grief and all of this emotional baggage in the room, I’m deeply affected by that. If they’re not in the room, it’s just a body in a bed. I’m much more detached. I can stay much more detached (Sarah)*.

Depersonalizing shifts the focus of nursing from caring to task completion.

*I’ve seen nurses not even talk to the patient all day. They just treat the patient like they’re not even there. And they don’t do anything special for them (Ellen)*.

Nurses use depersonalizing as a mechanism for emotional protection in the face of workplace adversity.

**Humour.** Dark humour has been a protective mechanism for many who face death at work, such as soldiers (Cook, 2013). Nurses also use humour to diffuse tension and ease stress.

*I think every type of nurse has its own type of black humour but I realized a lot of it is a coping mechanism and a way of protection to get yourself through the day (Ellen).*

Some of this humour can be inappropriate so nurses use this humour on nightshifts when family members are not present in the unit. *“Because that’s not really that professional, being that respectful, but it was funny. And it was on nights” (Ellen).* Humour is viewed as a coping mechanism to offload stress. *“You still respect [the patients]. It doesn’t mean that you don’t respect them. It just means that it’s a bad situation and that’s how you cope” (Bethany).*

**Getting help.** When nurses risk becoming overwhelmed at work, they seek out supportive colleagues to help them. Help can take the form of assisting with tasks, providing emotional support, or assisting with patient care. Assistance can decrease the time spent alone with a patient or family member who is difficult or threatening, and act as a measure of protection.

*Every time I went in the room, he just for some reason hated me, and didn’t want me around and refused all the cares that I was providing. It’s easier to seek out a colleague who he did not have this feeling about and get her to do some of the*

*cares. I would provide cares to her patient in exchange and we would kind of tag team and work together (Connie).*

Getting help can increase the perceived safety for nurses, because there is someone else present to witness and support them in a difficult situation.

### **Processing**

After nurses experience difficult situations, they can find relief in processing the event. Processing can be an internal, individual activity, or it can take place with others.

**Rationalizing.** Rationalizing occurs when a nurse evaluates a difficult situation and takes a reason-based perspective. It is usually difficult to rationalize immediately after a stressful situation because emotions are running high. Rationalizing takes place after these strong emotions have settled, and a nurse can review an event with a neutral perspective.

*And so after [the patient arrested] I said, "Did I miss something?" And he said, "No, he's been laughing with you all morning, having a great old time." You know, there's no way... his vitals looked excellent. His cardiac status looked excellent. He was hemodynamically stable so going through everything and just making sure that we you know, we were rational in our thought process (...) it's more objective rather than subjective. You're logically going through the process, does the science back me? (Connie).*

The focus on the facts of the situation helps nurses to accept an event at face value.

**Reflecting.** Reflecting occurs after a stressful situation at work, when a nurse considers the event again. Reflecting differs from rationalization because during

reflection, the nurse focuses on his or her own actions, and in rationalization a nurse considers the facts surrounding a sequence of events.

*I learned from that, and I think that I've definitely reflected on that as well as to what I could do better. I think that would be a good starting point in terms of where I started building resilience (Bethany).*

Reflection provides an opportunity for nurses to evaluate what they would do differently in the future, and learn from their experiences.

**Talking about it.** One of the most important means of MANAGING EXPOSURE is talking about workplace adversity. Talking about it makes an experience real through validation, which eases doubt. *"It usually just needed to be said"* (Ashley). Talking about it can take many forms. Nurses engage in self-talk to de-escalate their own emotions, especially during a crisis. *"In the back of my head I was just saying, "Dear God, she's not going to die on me today!"* (Ashley). Nurses talk to each other, because they can speak to someone who understands their experiences. There is an emphasis on nurses connecting with someone who will be understanding of and compassionate about the situation.

*Because they share the same experiences as you. They know the difficulties and the advantages of our profession and you have the same war stories or great situations that happened (Connie).*

In contrast, nurses will avoid speaking to someone who they feel will not understand.

*I can't talk to my boyfriend about it because he's not a good listener, so to speak, you know all the other qualities that a listener has to have. He's always trying to*

*say, well why do you ... he's always making reasons why I should, don't do this or you should do that or you shouldn't internalize it or whatever, very unhelpful statements (Sarah).*

Nurses will seek out managers to talk about challenges they are experiencing.

*I'm sure she doesn't want to have 26 people in there every day but you know, if something is really, really bothering us, to feel that we're welcome to go in and speak to her not that she can help us with anything but certainly, when I'm in charge sometimes I just like to go in, shut the door, and just say argggg and then go back out and be okay, and she allows us to do that (Ellen).*

Professional supports, such as psychologists or social workers, act as valuable resources for nurses to access to talk about workplace adversity. *"I was seeing a psychologist and so I did talk to her, of course with maintaining confidentiality. I talked to her about some of the incidences too" (Helen).* Confidential support services within the hospital also provide nurses with a safe place to talk about workplace adversity.

*I've contacted EAP [employee assistance program] a number of times and I have no hesitation about doing it. I'm not toughing this out on that one. Because you need to have a safe, neutral place, somebody to hear you and work through that issue (Mary).*

Nurses also talk about it to people in their personal lives who are understanding and supportive. *"I find like a good glass of wine, and a girlfriend to talk to is pretty good as well" (Kelsey).*

**Avoiding rumination.** As mentioned, after nurses encounter workplace adversity, they often reflect on the event. However, nurses can also avoid ruminating, or thinking about a negative experience over and over. *“I was too close to the situation and was thinking about it too much” (Ashley).* Nurses avoid rumination because the emotions that are associated with the event, such as anxiety and stress, are raised with the repetitious thoughts.

*You’re reliving it and I think that’s the stressful part of it because you’re like oh God! I was so busy! (...) So that part when you’re reflecting on it. That’s the part that like brings back that anxiety and that stress (Gala).*

Nurses seek a balance between reflecting or rationalizing an experience, and avoiding rumination.

**Debriefing.** Debriefing, the act of a group of colleagues discussing a crisis, is an important form of processing for nurses. Debriefing can be formal or informal. Formal debriefing is usually organized by management, and has a formal leader, such as a social worker. There is a specific structure to this type of debriefing, and it usually takes place outside of the critical care environment, on a day when nurses are not working.

*It was removed from the unit because people talk about work in the lounge and stuff, but this was removed from that ... it was still at the hospital but it was definitely outside of [the unit]. It was on a day when we weren’t working so we weren’t focusing on other things and we were able to say, this is what’s hit me hard about it. That’s what’s hit you hard and just being able to talk about it in that way and just to be able to be honest about it (Ashley).*

Nurses can suffer when they are not included in debriefing processes.

*Some of the staff went in and debriefed but didn't invite all the nurses to debrief at the same time so we were ... we felt really excluded because a lot of us were helping out. We were participating in the code and then they didn't even include us in the debriefing. It was very disturbing, and I thought about that incident for months after (Helen).*

Informal debriefing also occurs after a crisis, but is ad-hoc in nature. Colleagues may gather at the desk in the critical care environment and discuss the event, with no clear leader or framework.

*We just discussed at the bedside, like what just happened? And [the rest of the team] corroborating saying that there's nothing that we could have done. We couldn't have foreseen this. He looked great. That just instils confidence in all of our nursing expertise, physician expertise (Connie).*

Nurses also use report as an opportunity for regular informal debriefing. *"I think most of the time the report is actually debriefing"* (Ellen). Nurses recount the medical information that is necessary to share with their colleagues, and then share their emotional experiences as well. Report is a prime opportunity for debriefing because of its private nature, with the presence of an understanding colleague. Nurses manage exposure using both types of debriefing.

### **Decontaminating**

Decontaminating is a means of removing the influence of a workplace adversity. When nurses are exposed to biohazardous materials, they remove personal protective



equipment and clean their hands to ensure that a contaminant does not stay with them.

The same logic can apply to removing the impact of workplace adversity for a nurse in critical care.

**Developing relationships at work.** Nurses can decontaminate by having supportive relationships with colleagues in the workplace. *“We supported each other and (...) it just confirmed that we went through it together and just solidified kind of that connection” (Ashley).* These relationships enable nurses to spend social time together in the critical care environment, and on breaks. Nurses can be available for informal debriefing, as previously detailed, but they can also be available more generally for support.

*Almost every day I like to have some kind of social rapport with the nurses around me and find out what’s going on in their lives and have it reciprocate, I tell them about my life (Helen).*

In addition, these supportive relationships play a positive role for nurses who can meet outside of work to decompress. There can also be bonding amongst colleagues through a sense of shared experiences. *“To this day, I have friends from working [on a unit] because you know, you work hard, you play hard, you remember the tougher days” (Mary).* These supportive relationships in the workplace can help nurses to decontaminate from the critical care environment.

Relationships with patients and their families can also help nurses in MANAGING EXPOSURE. These positive interactions can foster job satisfaction among nurses.

*I like to always humanize the experience by asking more about [the patient]. For example, my last night shift there was a photo in my patient's room with him and his dog (Isabelle).*

The interaction between nurses and the patients and families helps nurses to feel as though they are making a difference.

*Even if it's just something simple like you talked to a family member and you made them feel good and you somehow helped them, even if you didn't help the patient you helped the family and you feel good about that and again, it's that feeling that you did good. Taking that home, I think you leave on a happier note, maybe you just feel more positive about everything (Kelsey).*

**Fostering relationships outside of work.** Nurses benefit from having supportive relationships outside of work as well. While this is logical, it is important to note that supportive relationships outside of work benefit nurses at work as well.

*I think really making time for yourself is important in the type of nursing that we do and then ensuring that your family understands what role you play. My significant other is very understanding of what a bad day means to me and the fact that if I come home and I'm in a bad mood, it could be because somebody died that I took care of and that affected me. So just having that open communication and making sure that your family doesn't fault you for having bad days is really important (Connie).*

Having relationships that are not necessarily focused on nursing provides an opportunity for nurses to decontaminate from the impact of workplace adversity, because nurses can

mentally and physically separate their personal lives from the critical care environment.

*“I can talk to my best friends. You can talk to them about the emotion of it, the emotionalness of it, or the emotional burden” (Sarah).*

**Engaging in meaningful activities.** Nurses reported substantial benefit from cultivating meaningful activities outside of work.

*I think it’s great because people need to have a proper balance and I think this younger generation has a better way of it ... it took me a long time to learn that and now I’ve learnt that. I have to have this proper balance and this little routine to maintain a healthful functional life, and I think the younger ones know that which is good (Athena).*

These activities provide nurses with enjoyment, support physical health, and provide an engrossing hobby that shifts their focus away from working in a critical care environment. Decontaminating includes physical activities such as yoga, swimming, running, and skiing. Nurses also enjoy creative outlets such as reading, playing video games, knitting, and art. These activities have the common elements of creativity and escapism, and provide a means for nurses to take care of themselves. These serve to decontaminate nurses from workplace adversity.

### **Distancing**

Distancing is an essential aspect of MANAGING EXPOSURE. Distancing is when nurses are physically removed from the site of workplace adversity, which is often the bedside. This removal affords nurses physical and emotional space to deescalate the emotional impact of workplace adversity.

**The bedside.** Nurses will move away from a source of workplace adversity to manage their exposure in a critical care environment. Conversely, nurses are required to provide constant monitoring to their unstable patients, as part of their professional role in critical care environments. Nurses will either move a short distance away, such as a supply area, or they will ask a colleague to cover their patient for a few moments. *“One of my co-workers, I think her patient was in the OR or something so she actually took over the patient for me while I went away (...) after everything had settled down” (Ashley).* This enables nurses to stay in the critical care environment and still establish some distance. Nurses will pre-emptively create distance if they know they will experience a high intensity day. Nurses will go to the length of drinking more fluid so that they go to bathroom more frequently.

*If it's a day where I'm calling on all of my will power to get me through the day, then I take frequent walks around the unit or frequent bathroom breaks or quickly stepping away, if I can, take one of my breaks. Might drink a little bit more coffee during the day (...) Obviously, removing yourself from those situations so you can de-stress a little bit (Sarah).*

If nurses experience a crisis, colleagues can cover for them so that a nurse can step away from the bedside to deescalate, often by charting.

*If sometimes it's just so freaking busy that you actually need to just go and clear their mind maybe you go pee, get a drink because they haven't gone all day, get something to eat because you can't even think, we always say. And sometimes we*

*say just take your paper with you, because they're all worried about how far behind they are in their charting. Just go over there and we'll carry on (Ellen).*

Nurses create physical space away from the bedside, in order to manage their exposure.

**The unit.** Within the critical care setting, nurses will create distance by leaving the unit for breaks. Nurses can go to a designated break room, which provides an opportunity to leave the bedside, but still access a private space close to the unit. This saves nurses the time of walking to a cafeteria, to conserve break time to rest. Additionally, breaks in a private space near the unit create space for informal debriefing and for building interpersonal relationships with colleagues.

*Everybody goes in the break room and goes, "Oh my God. Can you believe what they're ... I can't understand!" And you leave it in the break room and you go back to the bedside and you don't talk about it around the bedside until you're back in the break room again (Sarah).*

As an alternative, some nurses will avoid the break spaces and go to the cafeteria if they want more physical space from the unit, or if they want to avoid speaking about patients during nursing breaks. *"In fact, often for lunch I leave because I thought you know what? I don't feel like living this every single minute of my shift, so often I'll go downstairs"* (Ellen). The importance of these breaks are so significant for nurses that they will plan their entire shifts to accommodate this time away from the unit.

*First thing after they got report they'd say okay, what break do you want to go to? I'm like why do you .... But now I understand why they need to figure that out because that's kind of how you plan your day, based on your breaks (Ellen).*

Based on personal preference, nurses will negotiate their time within the unit to optimize their ability to manage exposure.

Nurses also limit their time within the hospital environment in order to manage exposure. The primary way nurses do this is by taking vacation from work. Each participant in this study specifically discussed the necessity of having vacation time in order to manage exposure effectively. Vacations provide nurses with an opportunity to be completely removed from their responsibilities in a critical care environment, and rejuvenate. *“I find it gives you a chance to just stop and think” (Isabelle)*. It is problematic for nurses when they are not able to get vacation, especially for nurses that have lower seniority. Nurses will work shift switches in order to get time away from the critical care environment. However, this increases the time a nurse spends at work on either side of a vacation, which may not prove to be restful.

*I didn't get vacation granted because I was so junior (...) it was my choice to go away for the month so I had to do a lot of switches and so sometimes you're working 5, 6 shifts in a row with a day off and then another 2 and then you know, 2 days off and then you're back on your 5 days so did I do it to myself? For sure. But it was nursing burnout for sure (Connie).*

Nurses will also avoid overtime shifts to limit their time spent at work. *“A lot of people that get burnt out faster I found are the people that do a lot of overtime. So if you don't want to get burnt out, then don't do a lot of overtime” (Gala)*. Additionally, nurses have decreased their working commitment from full time to part time to create more flexibility within their schedules, and create more time between shifts.

*I find that since I've gone part-time (...) it's been amazing. I'm happy to be at work. You have little breaks in between and there's definitely a change. I don't worry about vacation anymore because as a part-timer you don't really get vacation but also you don't need vacation. (...) You can just say when you're not available and then you can do switches ... and then you get paid in lieu of vacation so (...) vacation isn't even an issue (Connie).*

Ultimately, if nurses are not able to regulate their time within the unit and at the bedside to a personally acceptable standard, they will leave the critical care environment. *"I'd like to have a more normal work life balance down the road so that's why I know ICU is not going to be for me forever"* (Isabelle).

**Planning an exit strategy.** Nurses recognize the high levels of workplace adversity within critical care environments, and will plan their exit strategies years in advance. Nurses know that they can manage the intensity of working in critical care for a defined period, such as several years, but will make plans to leave the environment for a job they perceive as being less adverse. Nurses begin educational programs while they are working in critical care environments, so that they will have the necessary education to leave critical care and work elsewhere.

*There are times when I don't want to work in ICU anymore, but is not that easy. It's not that easy for me because I'm a diploma nurse (...) I've start being more involved in nursing, not so much at the bedside (...) going back to school, doing education days, and expanding my knowledge base rather than just coming to work, doing my job and leaving again. It will also open doors to allow me to move*

*away from the bedside (...) I think that's the only way for me to stay resilient is to keep stepping away from the bedside, because that's where all the stress is for me, it's at the bedside. You need to remove yourself from the situation (Sarah).*

A short time after arriving in critical care, some nurses recognize that it is a place they cannot stay, and plan accordingly.

### **Indicators of MANAGING EXPOSURE**

There is a spectrum of indicators that reflect how nurses are able to address workplace adversity by MANAGING EXPOSURE. These indicators do not necessarily identify the aptitude of an individual nurse; rather, the indicators demonstrate the entire process of MANAGING EXPOSURE. These indicators can be presented on a spectrum Figure 5. It is important to note that these indicators are subjectively determined, and represent a general trend of nurses' experiences. The far positive end of the spectrum is thriving, for nurses that are fully engaged in and love critical care nursing. Nurses who manage exposure effectively are able to be resilient. Nurses who manage exposure to a sub-optimal extent are just at a surviving level. Nurses who are not able to manage exposure become burnt out. There is also a theoretical extension of this spectrum, beyond burnout to Post Traumatic Stress Disorder (PTSD). Nurses who are thriving or resilient still have bad days, but they are able to manage their exposure to an extent that they self-identify as having positive indicators. MANAGING EXPOSURE and its resultant indicators exist as fluid processes, and it is expected that nurses would experience different indicators during their careers. Rather than see these indicators as fixed



endpoints, the indicators can serve as sensitizing concepts to cue nurses towards MANAGING EXPOSURE, and self-reflection.

Figure 5: Indicators of MANAGING EXPOSURE

Indicator Spectrum				
Thriving	Resilience	Survival	Burnout	<i>Post Traumatic Stress Disorder</i>

While this conceptualization helps to illustrate the indicators of MANAGING EXPOSURE, it should not be assumed that a nurse who is burnt out is necessarily at fault or has poor coping skills. Burnout is an indicator of the process of MANAGING EXPOSURE, which could reflect substantial amounts of workplace adversity, a lack of disclosure during self-awareness, barriers to managing exposure, or other factors external to a nurse. To be most accurate, this spectrum provides sensitivity to the process of MANAGING EXPOSURE. Resilient nurses would have manageable levels of workplace adversity, adequate situational awareness, and be able to manage their exposure in a meaningful way. Burnout provides an indicator that the process of MANAGING EXPOSURE is becoming derailed, and the entirety of the process can be revisited to reveal the source of burnout.

This spectrum of indicators is fluid, and nurses can find themselves at various points of the spectrum over the course of their careers, and also shift to shift. As nurses refine their situational awareness, through continuing education, development of experiential knowledge, and development of their exposure management strategies, they

gain capacity to be resilient. Burnout can limit a nurse's capacity to manage exposure, and can instigate a downward spiral. However, burnout can also be a source of learning for nurses, who can successfully address burnout to become resilient. The goal of exposure management is to recognize that nurses will not be resilient every time they face workplace adversity in a critical care environment, but drive the overall trend of MANAGING EXPOSURE towards resilience.

In addition to MANAGING EXPOSURE, it is also important to critically appraise the presence of workplace adversity in critical care environments. If systemic barriers to MANAGING EXPOSURE are in place, it will be very difficult for nurses to manage exposure. In such a case, a system level problem could have substantial personal consequences. Efforts to support nurses in MANAGING EXPOSURE do not preclude the necessity of addressing workplace adversity.

### **Burnout**

Burnout is a manifestation of negative consequences for a nurse, following exposure to workplace adversity in a critical care environment. Burnout can be reached in two ways: nurses may lack situational awareness, and develop burnout because they don't realize the impact that workplace adversity is having on them, or nurses have situational awareness, but cannot regulate exposure effectively. Both of these paths result in the same burnout consequences. “[Burnout is] *Going through the motions*” (Ellen). Burnout encompasses physical symptoms, such as a lack of energy, feelings of tension, or physical illness.

*[being resilient comes from] Trial and error. In my day, you worked till you dropped. If you throw up, you're not going home. If you have a migraine headache, you're not going home. Basically if you're on the floor unconscious, we'll bring you to the ER (Athena).*

Emotional symptoms of burnout are also present, and they include anxiety, fear of coming to work, irritability, and decreased job satisfaction. *"It's exhausting some days" (Ashley)*. Burnout is a familiar phenomenon for nurses, one that they can readily name and identify. *"I've just had enough and I just can't face another day" (Ellen)*.

Every participant in this study identified that they had been burnt out at some point in time while working in the critical care environment. However, all of the participants continued to work as critical care nurses; thus, they had recovered from burnout and displayed a degree of resilience. For many participants, their experiences with burnout had been learning opportunities. Nurses can make changes in their lives following periods of burnout, and have increased situational awareness.

*I could see the triggers and that the 20/20 hindsight that I was seeing a bit then but now looking back now, definitely it's clearer, and hopefully with that I would recognize it sooner and possibly be able to change the situation sooner than at the outcome (Ashley).*

Nurses may also speed their process of MANAGING EXPOSURE after experiencing burnout, recognizing that they will feel worse if they do not work to actively address workplace adversity. Nurses will actively manage their exposure to try and prevent repeat incidents of burnout, and promote their resilience.

In MANAGING EXPOSURE, the theoretical extension of burnout is PTSD. It is beyond the scope of this study to directly address PTSD for nurses, as PTSD is a clinical diagnosis. However, workplace adversity may have the potential to lead to PTSD, because PTSD represents an extreme manifestation of burnout. It is important to be mindful of PTSD as a potential consequence of burnout, in order to prevent burnout from reaching this state.

### **Survival**

Survival is the ability to manage exposure enough to maintain functioning, but not at an optimum nursing capacity. Survival is characterized by the adage of ‘getting through it’. *“Just trying to cope and get through the day on my own because I’m not feeling like I was getting the support that day that I needed” (Helen)*. Survival can represent a victory on days when there is a high level of workplace adversity in a critical care environment. Survival indicates a nurse is attempting to manage exposure, and is achieving a degree of success.

### **Resilience**

Resilience a positive state on the indicator spectrum, and it occurs when nurses use situational awareness as a driver and effectively manage their exposure to workplace adversity. *“Because bad things happen, everyone has that but to be able to come back out of it, in a healthy way” (Ashley)*. Resilience does not mean that nurses do not face workplace adversity; resilience occurs when workplace adversity is manageable and nurses are able to address this adversity to their satisfaction. When nurses are resilient,

they provide compassionate nursing care to patients and their families. *“Resilience for me would be in that I’m always empathetic. I’ve never lost that” (Athena).*

Nurses describe resilience in a variety of ways, reflecting the core category of MANAGING EXPOSURE.

*I think resilience is the ability to handle difficult situations with poise and be able to come back to work the following day and have a fresh new day and not let your previous experiences build up day after day. Just being able to recharge your batteries, come back with a new blank slate and just carry on (Connie).*

A nurse’s capacity for resilience develops over time. Nurses reported that they do not always feel resilient, but that they can enact resilience as a self-fulfilling prophecy. *“Having a student did help me be more resilient because I had to fake it till you make it kind of attitude in front of them. You’re trying not to show your fear, like it’ll be okay, whereas meanwhile, you’re like, oh my God!” (Isabelle).* Resilience changes day to day, and over the course of a nurse’s career.

Nurses report that their resilience is influenced by formal education, informal education, self-reflection, and role modelling.

*I think [resilience is] the ability to learn from your experiences and to be able to use those experiences for future situations. I also think that resilience is the ability to (...) handle those experiences again (...) Not in terms of a right or wrong way but just the person’s ability to feel like they can handle that situation or not (Bethany).*

Colleagues play a role in fostering resilience amongst each other.

*There's a lot of seasoned, well knowledgeable nurses and I can't see them doing anything else because it seems they love what they do and they're just good at it. It makes me want to learn more and it doesn't make me scared to ask questions to those people (Bethany).*

Nurses report that when they are resilient, they experience increased job satisfaction, passion for the nursing profession, and feeling professionally and personally valued.

*So what happens when I'm at my most resilient (...) everything clicks into place. (...) I don't even need to look in the drawers. I know where everything is kept because everything I laid out pretty much the same way and you do what you do best and I have my entire team because I know ... they're going to appear (...) I had a patient that arrested and I hit the arrest button. Everybody shows up, who's writing? Who's pushing ... and you go, like popcorn. It's not the care that you see on TV. It's something that we know what we have to do. There are algorithms, a whole lot of things that we follow and we do it well and I think that we make a difference, for patients and their families, they're in the best place right now. This is what we do all day, and for our living and we want the best outcome as well (Mary).*

When nurses are resilient, they are proud of their profession and of their work.

### **Thriving**

The extension of resilience is thriving. While the resilience spectrum can negatively extend to PTSD, it can extend positively to thriving as well. There is evidence

for thriving from nurses who have sustained long careers in critical care environments and do not report being burnt out.

*But like thankfully I've met other nurses nurse in ICU, like this nurse has been there for 30 something years, longer than I've been alive is what she told me and she's awesome. She's the ideal person that you want to look up to as a nurse. She still takes her chair, pulls it into the room, sits with the family, talks to the family, does everything to a tee, exactly how you would picture yourself being the best nurse ever. And she's still doing that and you're like okay, thank God there's someone who's not burnt out... not that like old, crotchety, burnt out kind of nurse. It gives you hope (Kelsey).*

Thriving is possible for nurses in critical care environments when they are able to manage exposure to workplace adversity.

### **Conclusion**

The primary concern of exposure to workplace adversity is burnout, if the exposure is left unmanaged. The process of MANAGING EXPOSURE begins with the exposure to workplace adversity, and is followed by the employment of situational awareness. When nurses are able to disclose, perceive, cognate, and project about workplace adversity, using the situational awareness process, they can select a course of action that manages exposure. Nurses manage exposure through the methods of protecting, processing, decontaminating, and distancing. This process will result in an experience along the spectrum of indicators. MANAGING EXPOSURE evolves over time, and is used by nurses on a short- and long-term basis in critical care environments.

## CHAPTER 5: DISCUSSION

The process of MANAGING EXPOSURE advances the nursing epistemological base on the understanding of critical care environments, resilience, and burnout. MANAGING EXPOSURE consists of nurses being exposed to workplace adversity, employing situational awareness, and managing exposure, which results in indicators such as burnout or resilience. In this chapter, the findings of this research study are discussed with existing literature. The various levels of workplace adversity are discussed, followed by situational awareness, managing exposure, and indicators of MANAGING EXPOSURE. The chapter also presents recommendations based on the findings of this research, the limitations of the current study, and opportunities for future research.

In the current study, the process of MANAGING EXPOSURE begins with the existence of workplace adversity. While the current study provides examples of workplace adversity, it is notable that nurses determine what they consider to be adverse, based on their experiences. Some nurses reported horizontal violence to be their most challenging form of workplace adversity, while other nurses focused on powerlessness and moral distress. The findings of the current study also suggest that regardless of what is considered adverse, it is possible for nurses to become more resilient.

From the experience of workplace adversity, nurses operationalize situational awareness to drive the process of MANAGING EXPOSURE. Situational awareness is made possible through disclosure, and encompasses how nurses apply perception, cognition, and projecting in relation to workplace adversity. Without situational



awareness, nurses cannot enact the process of MANAGING EXPOSURE and they will become burnt out. There were no examples in the literature of situational awareness as a driver for a resilience process. Fletcher and Sarkar (2012) identified the similar concepts of challenge appraisal and meta-cognition in their grounded theory of resilience. Fletcher and Sarkar (2012) studied gold medal athletes, and the differences between drivers in their resilience theory and MANAGING EXPOSURE could be related to the differences in research population.

Ultimately, resilience is an indicator of nurses' abilities to manage their exposure to workplace adversity. Jackson et al. (2007) focus their definition of resilience on an individual's ability to overcome adversity and move forward in a positive manner. This definition proves to be robust, based on the findings of the current study. However, Jackson et al. (2007) see this definition as resulting from a resilience process, while the findings in the current study demonstrate that resilience is an indicator of the MANAGING EXPOSURE process. Thus, the definition of resilience is the same, but MANAGING EXPOSURE presents an alternative conceptualization of the path to reach resilience, and what resilience represents.

### **Problem: Workplace Adversity**

In the current study, nurses identified many forms of workplace adversity. The majority of these forms of workplace adversity are similar to findings in existing literature. One of the most surprising findings of this current study is that a source of adversity can be abstract and far removed from a critical care environment, such as the depictions of nurses in pop culture, and still exert a negative influence on patient care at

the bedside. Workplace adversity is discussed in more detail below, through the macro, meso, and micro levels of adversity.

### **Macro Level Workplace Adversity: Systems**

There are many system level concerns that impact critical care nurses. These issues are broad, societal level concerns, and they impact nursing care at the bedside. System level workplace adversity includes factors like inadequate health care funding, the nursing shortage, absenteeism, health care culture, nurses in the media, and organizational policy, which are discussed in more detail below.

**Inadequate health care funding.** Health care budgeting and funding concerns create workplace adversity for nurses. Nursing organizations have long called for adequate funding in hospital settings (Ontario Nurses' Association, 2014). Interestingly, nurses in the current study expressed concerns over funding within the health care system, but did not specifically name their wages as a source of workplace adversity. This is in contrast with Boggossian et al. (2014) who found that lower wages led to nurses to feel undervalued by their employers. In the current study, nurses expressed concern over hospitals being adequately funded. Nurses identified that their workloads increase when other services, such as social workers, faced cutbacks. It was not hourly wages that nurses found to be problematic; rather, the funding for health care provision overall, which has trickle down effects to nurses in critical care environments.

In an effort to reduce costs, measures were put into place that nurses identified as workplace adversity. For example, nurses indicated that cutbacks created concerns about nursing job security, increased nurses' workloads, and also increased pressure on staff in

hospital settings due to a lack of available beds for patients. Constraints related to inpatient capacity and bed flow can also be adverse in critical care environments (Olafson et al., 2015). The findings in the current study are similar, as nurses reported bed flow and availability to be possible sources of workplace adversity.

**Nursing shortage.** Hodges et al. (2008) identified the nursing shortage as a form of workplace adversity. Nurses in the current study did not directly address a macro level nursing shortage as a source of workplace adversity. However, nurses did speak to the impact of working without adequate nursing staffing. Nurses in the current study identified that working without enough nurses or other professionals increased their burnout, impacted the quality of nursing care, and risked patient safety. While nurses in this research study did not address the issue of a macro level nursing shortage, it is evident that working without enough nurses at the bedside in a critical care environment is a source of adversity.

**Absenteeism.** The findings of the current study reinforce the cyclical nature of burnout and absenteeism or sick time in the workplace. Increased burnout has been associated with increased absenteeism (Schaufeli, Bakker, & Van Rhenen, 2009). When burnout is viewed as a contributor to nursing absenteeism, the focus shifts from the absenteeism of individual nurses to addressing burnout-producing systems within health care. There is the potential that decreasing nurses' burnout through MANAGING EXPOSURE could decrease nursing absenteeism. Decreasing nursing absenteeism has potential cost savings for staffing expenses, which could promote sustainability within the Canadian health care system.

**Health care culture.** Canadian health care culture is also influential in the process of MANAGING EXPOSURE for critical care nurses. It is known that a patriarchal, hierarchal model in critical care units can negatively impact nurses (Bridges et al., 2013; McGibbon et al., 2010). Patriarchy can be defined as a belief system that holds men as being superior to women, and places power and authority for decision-making with men (Rawat, 2014). The presence of patriarchy within the health care system means that physicians (a traditionally male role) are more highly valued than nurses (a traditionally female role). This attitude towards relative value can manifest in concrete ways. The implementation of a patriarchal model in Canadian health care predisposes nurses to face workplace adversity, as nurses are mostly female. In the current study, nurses reported a feeling of powerlessness, relative to physicians, and a lack of respect that reflected gender inequality.

**Nurses in the media.** It has been established that negative portrayals of nurses in society have consequences for nurses (Rezaei-Adaryani, Salsali, & Mohammadi, 2012). Weaver (2013) found that examples of nurse and physician relationships on television programs reinforce conflict between the professions, rather than depict collaboration. A lack of respect for nurses from the public can have negative consequences for nursing care in hospitals (Takase, Maude, & Manias, 2006). The findings from the current study align with these conclusions. Nurses in the current study reported that they feel that nursing is not understood or valued in Canadian society, and within the health care system. The negative portrayals of nurses in the media impact the expectations of patients and their families, which can create workplace adversity for nurses. Nurses in the current

study identified their role and expertise can be diminished or outright ignored. Negative portrayals of nurses in the media contribute to workplace adversity in critical care environments.

**Organizational policy.** Researchers have examined several aspects of organizational policy and workplace adversity. Issues within an organization and the perceived support of nurse managers can influence nursing stress (Happell et al., 2013). This finding is supported in the current study, as nurses stated that it is easier to enact MANAGING EXPOSURE when they perceive that their managers and their organization supports nurses.

There are several forms of organizational policy that have been identified as adverse, such as parking. Nurses without access to parking report feeling stressed about finding parking spaces before coming to work (Happell et al., 2013). Difficulty parking has been associated with occupational health and safety concerns (“Nurses Win Parking Permits”, 2014), especially for nurses that can’t use public transit due to shift work (“Parking Crusade Wins Concessions”, 2014). Parking was identified as an organizational policy that acts as a source of workplace adversity for nurses in the current study as well. Nurses reported that they felt devalued, and that a lack of staff consultation and accommodation conveyed a lack of respect for employees. The impact of organizational policies, such as policies surrounding parking, should not be underestimated. These policies can considerably influence nurses’ perceptions of their value and importance to their organizations, and can result in nurses feeling that their contributions are minimized.

### **Meso Level Workplace Adversity**

There are several forms of meso-level workplace adversity that were identified in the current study. This section will address the unit culture, the physical environment, staffing, and the nature of critical care.

**Unit Culture. Violence.** There are several aspects of a unit's culture that have been identified in literature that were similar to the findings of the current study. A lack of workplace safety, and violence in health care have been identified as forms of workplace adversity (Bogossian et al., 2014; Edward et al., 2014; Spector et al., 2013). Nurses in the current study expressed fears about violence in their workplace, and how their concerns about violence may be diminished by management. Nurses know that they can be in danger in their roles, and fear the consequences of violence in their workplaces.

**Complaining.** Nurses in the current study identified complaining as an aspect of unit culture that contributes to workplace adversity. In the current study, complaining is an expression of negative sentiments that is not a sincere effort to debrief and is not goal directed. Interestingly, complaining has been found to be a reflection of nursing powerlessness (Traynor & Evans, 2014). Complaining about the nursing profession and role was deemed to be a reflection of the historical vocational/religious nature of the nursing profession, and the gender struggles inherent within nursing. The presence of complaining in the critical care environment may suggest powerlessness among nurses.

**Physical Environment. Logistical support.** The process of MANAGING EXPOSURE is linked to practical issues within critical care environments. These issues include the physical layout in critical care environments, and logistical concerns. Nurses

in the current study identified the importance of logistical support and having adequate supplies. Hurst and Koplin-Baucum (2005) also identified the need for clerical and logistical support, as well as working supplies (such as beds), in promoting nurses' hardiness.

***Layout of the unit.*** The physical layout and availability of break rooms in clinical areas has also been associated with nurses' stress (Happell et al., 2013). If there is not enough designated space for nurses within hospitals, nurses will not be able to debrief or provide informal emotional support for colleagues in a private setting (Happell et al., 2013). Adriaenssens, De Gucht, and Maes (2015) discussed the importance of workplace supports and the physical environment in reducing burnout. In the current study, nurses highlighted the importance of having a quiet, designated space to have breaks. This space provided a sense of reprieve from the critical care environment. Nurses that did not wish to discuss work-related topics during their breaks would leave the break room to find quiet spaces elsewhere. Nurses identified protected space for breaks and areas with less noise as factors that facilitate MANAGING EXPOSURE.

**Staffing.** Staffing concerns and workload management are practical issues that have been widely discussed in nursing literature. Shift work and difficult workloads result in negative consequences for nurses (Bogossian et al., 2014; Happell et al., 2013). The nature of shift work can create a variety of negative outcomes for nurses (Allen et al., 2014; Bogossian et al., 2014; Zhao et al., 2010). Nurses in the current study reported that shift work caused negative physical consequences, as well as disruptions in their personal lives.

In addition to shift work, staffing is influential in the quality of the working environment (Ulrich et al., 2014). Adequacy of staffing is a factor in a nurse's decision to stay in the nursing profession (Chan et al., 2013). This is similar to findings from the current study, that nurses may make decisions to leave their positions in critical care environments because of inadequate staffing and lack of scheduling options available to them, and not because of the patient care. The novelty in this finding is that nurses will leave critical care environments not because of burnout, but because of the staffing or scheduling conflicts that entrench burnout. In the current study, nurses recognized their burnout but could not change their schedules in order to enact MANAGING EXPOSURE. Nurses discussed leaving the critical care environment because they experienced barriers in scheduling which prevented them from MANAGING EXPOSURE, and they felt they had no other option to address their burnout. It is not surprising that staffing, scheduling, and workload can be adverse for critical care nurses, as these issues are present in many aspects of the nursing literature.

**Nature of Critical Care.** Critical care environments have a culture that can be challenging for nurses (Epp, 2012). There are many challenges for critical care nurses that relate to high patient mortality rates in critical care environments, as well as the circumstances surrounding end of life care. Moral distress and mortality, technology and noise, and knowledge base are all forms for workplace adversity relating to the nature of critical care, which are discussed in detail below.

***Moral distress and mortality.*** The orientation of critical care towards saving lives can frame a patient's death as a failure, rather than a natural life process (Weiser &



Cooper, 2011). This sense of failure can compound with moral distress, which is the “psychological, emotional and physiological suffering that nurses and other health professionals experience when they act in ways that are inconsistent with deeply held ethical values, principles or commitments” (McCarthy & Gastmans, 2015, p. 132). The moral distress that can be associated with ethical decision-making, such as end of life decisions, can be profound for nurses (Wiegand & Funk, 2012). The most difficult situation for nurses with ethical decision-making occurs when nurses disagree with patient families over the plan of care (Epp, 2012). It has been well established that the nature of critical care environments can lead to compassion fatigue (van Mol, Kompanje, Benoit, Bakker, & Nijkamp, 2015), moral distress (Epp, 2012; McCarthy & Gastmans, 2015; Oh & Gastmans, 2015), and grief (Shorter & Stayt, 2009). Nurses who participated in the current study verbalized that they had experienced all of these phenomena at some point during their practice. Nurses reported feeling distressed when they provided care that was inconsistent with their personal or professional ethics. The feelings of distress constitute a source of substantial adversity in critical care environments.

***Technology and noise.*** Nurses also identified the high degree of nursing and technical proficiency as potentially adverse aspects of the critical care environment. The heavy reliance on technology for critical care nurses can be stressful (Epp, 2012). Noise, which can result from using technology, can also be adverse for nurses (Epp, 2012). Watson et al. (2015) found that noise was not associated with nurses’ stress levels, but was significantly, positively linked to nurses’ heart rates. In the current study, nurses identified the adverse impact of noise in the critical care environment. Nurses also

indicated that technology can play a role in depersonalizing a patient, as the focus shifts towards monitoring the machines and instead of caring for a person.

**Knowledge base.** Additionally, nurses in the current study reported that they can feel intimidated by the knowledge base required in critical care environments. Nurses also have high expectations of themselves, in terms of their knowledge base and technical proficiency. The expectations placed on critical care nurses in terms of their knowledge base and technology use were found to be intimidating for nurses, as they begin working in critical care environments (McGrath, 2008). Critical care nurses also have very high expectations of themselves and their care, and may experience distress if they are not able to meet these expectations (Epp, 2012). In the current study, nurses reported feeling intimidated by the knowledge base that is necessary to practice safely in critical care settings. Nurses experienced distress when they provided care that did not meet their personal standards and they felt inadequate when they saw that colleagues had a broader knowledge base.

#### **Micro Level Workplace Adversity: Interpersonal**

There are several forms of workplace adversity that impact nurses at a micro, or interpersonal level. These include interprofessional conflict, horizontal violence, and intergenerational conflict, which are discussed in more detail below.

**Interprofessional conflict.** In the current study, there are several examples of interpersonal workplace adversity. One of these examples is nurse bullying, specifically from physicians. Edward et al. (2014) highlighted abuse that can be experienced by nurses at the hands of physicians. Additionally, Pijl-Zieber (2013) identified that the term

'orders' in reference to the physician's written plan of care diminishes the professional nature of nurses, and entrenches conflict between the professions. Nurses in the current study identified several examples of how physicians can be hostile towards nurses. Nurses also described the history of nurse abuse from physicians, and how the phenomenon has changed over time. For instance, physicians used to demonstrate acts of overt violence towards nurses, and now may exhibit passive aggressive behaviours. These behaviours can contribute to nurses' experiences of workplace adversity.

***Horizontal violence.*** Horizontal violence, which is aggressive behaviour that is directed between nursing colleagues, has a substantial, negative impact as a form of workplace adversity (Becher & Visovsky, 2012; Happell et al., 2013). In the current study, nurses identified the negative impact of horizontal violence. Nurses explained how horizontal violence results in decreased support from colleagues, and can deter nurses from asking questions about patient care. When nurses feel unsupported or afraid to seek guidance, workplace safety may be jeopardized.

***Intergenerational conflict.*** Intergenerational conflict has also been examined among nurses. In the current study, nurses spoke about the presence of nursing bullying. A common refrain was the impact of bullying across generations; specifically, older nurses bullying younger nurses. There are four generations active within the nursing profession, and there are distinct values and preferences of each generation (Hendricks & Cope, 2013). The presence of four generations within the nursing profession creates challenges in connecting across generations. Dols, Landrum, and Wieck (2010) indicate that managers should be empowered to remove toxic elements within workplaces that

fuel intergenerational conflict, because of the negative impact on all nurses. The findings of the current study also identify intergenerational conflict as a form of interpersonal workplace adversity, which is most pronounced in bullying by older nurses.

The findings of the current study help to identify what can contribute to workplace adversity in critical care environments, and why this adversity can be so toxic. In the current study, it is confirmed that critical care environments are challenging workplaces. While workplace adversity cannot be completely eliminated, there are opportunities for nurse leaders to reduce the amount of adversity that nurses face in critical care environments. If nurses are not able to manage their exposure to workplace adversity, they can experience burnout. It is important to address workplace adversity at a system level to prevent burnout for nurses.

Efforts to reduce all levels of workplace adversity could rightly be framed as burnout prevention strategies. When nurses face less adversity, it is likely that they could provide better care. In turn, patients may be positively impacted. Burgess et al. (2010) found that critical care nurses did not experience adverse stress. Burgess et al. (2010) attributed this finding in part to the quality workplace environment, and suggested that it is possible to create critical care environments where nurses do not experience adverse stress. While it is not possible to create an adversity-free workplace, nurse leaders can be empowered to reduce adversity and foster positive workplace environments in critical care environments.

### **Driver: Situational Awareness**

The proposed grounded theory of MANAGING EXPOSURE advances the understanding of critical care nurse resilience with situational awareness as the driver of MANAGING EXPOSURE. The following section discusses situational awareness and its related concepts.

#### **Elements of Situational Awareness**

Situational awareness has been used in various industries to foster a culture of safety, and consists of perception, cognition, and projection (Fore & Sculli, 2013). Singh, Petersen, and Thomas (2006) proposed a situational awareness framework as an explanation for how competent clinicians can make errors in the face of workplace adversity. It is recommended to use situational awareness to promote patient safety (Singh et al., 2006). Situational awareness was recently operationalized for nursing by Fore and Sculli (2013), who adopted Endsley's definition of situational awareness as "the perception of elements in the environment in a volume of time and space, the comprehension of their meaning, and the projection of their status in the near future" (1995, p. 36). Fore and Sculli (2013) created a framework for patient safety, where system factors (such as safety culture) impact situational awareness, influencing patient care outcomes. Nursing researchers have not applied situational awareness to processes that directly affect nurses; rather, situational awareness frameworks have been aimed toward interactions with patients.

Other nurse researchers have studied factors that relate to situational awareness. For example, Zander et al. (2009) found that perception was very influential in how

nurses interpreted a stressor. While Zander et al. (2009) did not use the term situational awareness (which had not been operationalized in nursing at the time), they discuss elements of perception, insight, and problem solving as being important for nurses to develop resilience. Burgess et al. (2010) reported that planning and reframing, which associate with situational awareness, were helpful for nurses to avoid excess stress in a critical care environment. Li and Lambert (2008) also identified the role of planning in reducing nurses' stress.

There is evidence to suggest that situational awareness can be improved using education and feedback (O'Meara et al., 2015). Nursing students participated in simulation activities, followed by debriefing sessions. At the conclusion of the exercise, nursing students had statistically significantly higher levels of situational awareness. In light of this evidence, it is possible that critical care nurses' situational awareness could be improved as well, through education or simulation.

### **Appraisal**

Nurse researchers have used appraisal in nursing, as a similar conceptualization to situational awareness. Appraisal can be a product or a process, and refers to making a judgment of value (Nanney, Constans, Kimbrell, Kramer, & Pyne, 2015). Appraisal can also be defined as the process through which the person evaluates whether a particular encounter with the environment is relevant to his or her wellbeing (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986, p. 992). Appraisal is similar to situational awareness because both concepts relate to how nurses make judgements before taking action in a clinical environment. In the current study, situational awareness was identified

as the driver of MANAGING EXPOSURE, instead of appraisal. Situational awareness was used in MANAGING EXPOSURE because awareness can be considered antecedent to appraisal. A nurse must be aware of a phenomenon in order to appraise its significance. In MANAGING EXPOSURE, nurses need to be aware of workplace adversity in order to respond.

### **Disclosure**

The conceptualization of situational awareness has also been advanced by the findings of the current study. In addition to the three concepts within situational awareness (perception, cognition, and projection), the findings of this study add an antecedent concept, disclosure. The addition of the concept of disclosure is an extension of the understanding of situational awareness. Fore and Sculli (2013) include cognitive capacity as an antecedent to situational awareness, but do not include system factors like disclosure as an antecedent concept. Disclosure is an antecedent concept because nurses cannot be aware of information that is not disclosed. If nurses do not have full disclosure and acknowledgement of the presence and impact of workplace adversity, they will have difficulty reaching resilience.

In the current study, nurses reported anger when they felt their employer had not fully disclosed information that would impact nursing practice. Nurses also felt upset when management downplayed issues, such as workplace violence. Disclosure has an important role in situational awareness. When combined, disclosure, perception, cognition, and projecting all drive the process of MANAGING EXPOSURE.

### **Core Category: Managing Exposure**

Managing exposure is the core category of the theory of MANAGING EXPOSURE and addresses nurses' exposure to workplace adversity. There are findings in nursing literature that are similar to the techniques used by nurses in the current study to manage their exposure. Managing exposure can occur in the categories of protecting, processing, decontaminating, and distancing, and each of these areas is discussed in more detail below.

#### **Protecting**

In the current study, protecting encompasses the strategies that nurses use to emotionally and psychologically protect themselves against workplace adversity. Protecting can be enacted through developing a shell, disengaging from a situation, depersonalizing a patient, using humour, and seeking assistance to manage workload. There are many methods of protecting that are discussed in nursing literature. Shorter and Stayt (2009) found disengagement to be an important source of protecting after a patient's death, in order to manage grief. Patient death is common in critical care environments, and it is adverse for nurses because death is often framed as a medical failure rather than a natural life event. Epp (2012) identified detachment as a second phase of burnout, and it represented nurses shutting down emotionally to protect themselves when they faced grief and powerlessness. In the current study, nurses identified protective techniques as part of their process of MANAGING EXPOSURE.

Discussions in the nursing literature suggest an association between protective forms of managing exposure and burnout. In their review of burnout among emergency



room nurses, Adriaenssens et al. (2015) found that passive emotional coping strategies, such as avoiding, were generally ineffective in preventing burnout. Michaelsen (2012) identified that nurses who use emotional distance as a coping mechanism with so-called difficult patients missed information about patients, and did not address patient concerns. Emotionally disengaging became a patient safety issue.

There may also be a question of the number of different techniques used and the degree to which they are used. Nurses in the current study used various forms of protecting to withstand the emotional burden of working in critical care environments. Since these nurses have stayed in critical care nursing, they must be achieving a degree of resilience. The findings of the current study suggest that some depersonalization or disengagement can be adaptive for nurses during times of crises, or as part of a milieu of techniques for managing exposure.

### **Processing**

Processing was identified as another means of managing exposure, and occurs when nurses reflect on experiences to reach an understanding about the meaning of these experiences. Techniques of processing have been identified as being important for nurses working in critical care environments. Two of these techniques, debriefing and self-talk, are discussed in this section.

**Debriefing.** In the current study, nurses identified that talking about their experiences was a crucial aspect of processing. Zander (2009) also found that talking about experiences was an important part of nurses' resilience. One of the most discussed aspects of talking about workplace adversity in nursing literature is debriefing (Epp,

2012). Moola et al. (2008) highlighted the importance of formal and informal debriefing for nurses. Shorter and Stayt (2009) found that nurses preferred informal debriefing, which included talking about grief with a colleague who is perceived as understanding. However, designated debriefing teams have also been found to be effective in assisting nurses to manage grief (Brosche, 2007). In the current study, nurses had limited experience with formalized debriefing processes, and stated that these processes were rarely used. They had mixed experiences with formal debriefing, with some nurses reporting personal benefits while others found the process too formal for candid discussion. Nurses preferred informal debriefing, such as discussing their shifts with colleagues during report, or having an ad hoc gathering of colleagues after a crisis. These avenues proved to be beneficial for nurses, and assisted nurses in becoming more resilient.

**Self-talk.** Critical care nurses can employ other forms of processing. Mealer et al. (2012) identified the importance of positive cognition in overcoming adversity, which may reflect an element of processing through reflection or self-talk. Zander (2009) also reported the importance of reflection and self-talk for nurses to become resilient. de Boer, van Rikxoort, Bakker, and Smit (2014) found that nurses use processing to overcome critical incidents. In the current study, nurses practiced reflection, rationalizing, and avoiding rumination, as forms of meta-cognition to process their experiences. Nurses use processing after experiencing workplace adversity as part of managing their exposure.

**Decontaminating**

Decontaminating represents an important aspect of managing exposure for critical care nurses. Decontaminating is a process whereby nurses limit or remove the impact of workplace adversity by engaging in restorative activities and relationships. In the current study, decontaminating took the form of positive relationships at work and outside of work, and engaging in meaningful activities. These findings are similar to Mealer et al. (2012), who highlighted the importance of social supports and self-care for nurses in preventing burnout.

Positive relationships at work can help nurses to offset the year-round nature of shift work. Happell et al. (2013) also indicated that special events, such as birthday celebrations, were important for nurses working together in a hospital setting. In the current study, nurses reported that supportive relationships outside of work, such as family, friends, and neighbours, were beneficial because these relationships help nurses to achieve balance in their lives. Nurses reported that meaningful activities provided them with physical and creative outlets to offload their stress, and feel rejuvenated. While Jackson et al. (2007) discussed the importance of balance for nurses to be resilient, they did not directly review the role of physical or creative activities for nurses.

**Distancing**

Distancing refers to when nurses leave the site of workplace adversity in order to limit their experiences of that adversity. Distance can be created through breaks, and vacation from the critical care environment. Both of these areas are discussed in this section. There has been very little study of distancing in nursing, and distancing

represents one of the most important techniques of managing exposure for critical care nurses.

**Breaks.** Happell et al. (2013) identified the importance of nurses receiving breaks, so they could step away from the bedside. Excessive workload was identified as the main reason nurses did not receive breaks during their shifts (Happell et al., 2013). Wendsche et al. (2014) found that organized nursing breaks were negatively associated with nursing turnover for geriatric nurses. Hurtado, Nelson, Sorensen, and Hashimoto (2015) stated that when supervisors are supportive of nurses receiving breaks, nurses are more likely to have breaks for meals. Nurses who received their breaks were also significantly less likely to report psychological distress.

This evidence reinforces the importance of nurses receiving breaks during their shifts. While breaks are mandated as part of the nurses' union collective agreement, it is not always possible for nurses to take breaks, because of their workload. In the current study, distancing was a priority for nurses to manage their exposure. Breaks were so essential for MANAGING EXPOSURE that nurses reported that they would plan their shift around their scheduled breaks. Nurses also created opportunities for distancing within the critical care environment, outside of their break times, by stepping away from the bedside for a moment. Nurses stressed the impact that distancing had on their practice, and how they used distancing in MANAGING EXPOSURE.

**Vacation.** In addition to breaks, vacation time was identified as a form of distancing. Vacation is a major concern for nurses as it is a key way they respond to feelings of burnout in MANAGING EXPOSURE. No studies were found that examined

the role of vacation for nurses. In the current study, nurses identified vacation as a major component of their process of MANAGING EXPOSURE. Nurses reported that they would consider leaving the critical care environment to work elsewhere if they were not able to have vacation time. Nursing unions can work with nurse administrators to ensure that nurses are receiving their vacation allotments, as this will likely have a positive impact on MANAGING EXPOSURE for critical care nurses. All of these techniques of managing exposure lead to the indicators of MANAGING EXPOSURE, which are discussed in the next section.

### **Indicators of MANAGING EXPOSURE**

The indicators of MANAGING EXPOSURE reflect how effectively a nurse has used the techniques of managing exposure to address workplace adversity. These indicators are evident after a nurse manages their exposure, and reflect a spectrum of thriving- resilience- survival- burnout. There is also a theoretical extension of this spectrum to PTSD. These concepts are discussed in detail in the following section.

### **Definitions**

The central definitions for this research study were: burnout, critical care setting or environment, resilience, and workplace adversity. These definitions were found to be robust in relation to the extant literature. Epp (2012) characterized burnout as a phenomenon that manifests in emotional exhaustion and detachment. In the current study, nurses identified burnout as a feeling that is accompanied by physical and emotional symptoms, which impact nursing capacity for patient care. Jackson et al. (2007, p. 3) defined resilience as “the ability of an individual to adjust to adversity, maintain

equilibrium, retain some sense of control over their environment, and continue to move on in a positive manner”. In the current study, nurses corroborated this definition with their descriptions of resilience, saying resilience can occur in response to workplace adversity. However, the conceptualization of resilience in the current study positions the concept as an indicator of MANAGING EXPOSURE, which is discussed in more detail below. Finally, Jackson et al. (2007, p. 3) defined workplace adversity as “any negative, stressful, traumatic, or difficult situation or episode of hardship that is encountered in the occupational environment”. The nurses in the current study reflected upon many types of workplace adversity, indicating that adversity can take many forms and have different meanings for each individual. Each of these definitions is discussed in more detail below.

### **Resilience and Burnout**

The purpose of the current study was to delineate the process of resilience in critical care nursing. Koen et al. (2011) demonstrated that nurses have the capacity for resilience. However, an understanding of the process of how nurses become resilient remained unreported. In the current study, resilience was found to be an indicator of MANAGING EXPOSURE. This means that when nurses can manage their exposure to workplace adversity effectively, they exhibited resilience. When nurses cannot manage their exposure effectively, they experienced burnout. In this context, burnout and resilience are not fixed endpoints; rather, they reflect a nurses’ ability to manage exposure, and dynamic over time. If nurses experience stressful shifts, they are not fixed in a state of burnout. They may leave the hospital at the end of their shifts (distancing themselves) and go home to relax (enacting processing and decontaminating). Nurses

may become resilient through their use of MANAGING EXPOSURE. Over time, nurses may find that they are generally more burnt out or generally more resilient, based on their cumulative experiences of MANAGING EXPOSURE.

When comparing the conceptualization of resilience in the current study to the literature, it is notable that resilience has an array of conceptualizations, which have evolved over time (Jackson et al., 2007). The general trend in resilience descriptions has moved from a trait to a process (Jacelon, 1997). In the current study, nurses indicate that MANAGING EXPOSURE can be considered a resilience process, as it can result in resilience. However, when nurses are unable to manage exposure the process could be considered a burnout process, if MANAGING EXPOSURE is not enacted in a way that meets nurses' needs. Based on the data analyzed in the current study, it is fitting to conceptualize resilience and burnout as indicators along a spectrum, and not processes unto themselves. Just as dating can lead to either a breakup or a marriage, MANAGING EXPOSURE can lead to burnout or resilience.

The current study provides evidence that burnout and resilience represent a spectrum of indicators of managing exposure. The spectrum consists of thriving towards the one end as a positive indicator, resilience, survival, and burnout towards the opposite end as a negative indicator. These indicators help to identify how effectively nurses manage their exposure to workplace adversity. This indicator is subjectively determined by each nurse, and does not assign a value judgement to an individual. Rather, this spectrum of indicators can help to empower nurses to recognize the spectrum and to understand how they could apply MANAGING EXPOSURE for their own resilience.

Examples from nursing literature have focused largely on either burnout or resilience as outcomes of resilience processes. There has been little discussion of the relationship between burnout and resilience, and the terms have been described as binary outcomes. That is to say, a nurse is burnt out or not. Placing burnout and resilience together on a spectrum of indicators enables nurses to evaluate an array of possibilities. For example, nurses could have shifts where they feel very burnt out, and still generally trend towards resilience. This conceptualization of resilience as a point on a spectrum is similar to Szanton and Gill's (2010) findings, who identified that an individual can experience a variety of outcomes relative to their baseline functioning and still be considered resilient. Resilience and burnout can vary, and nurses can be open to interventions. A spectrum also provides alternative language to the common ideas of being burnt out or not burnt out. This may be helpful for nurses who wish to shift the critical care discourse away from its emphasis on burnout.

### **Resilience**

The grounded theory of MANAGING EXPOSURE expands the scope of the nursing understanding of resilience. The process of MANAGING EXPOSURE is impacted by systems- level factors. For example, factors such as inadequate health care funding and patriarchy negatively impact nurses in critical care environments. Much of the workplace adversity that nurses are exposed to results from broad influences. This realization demonstrates that the process of MANAGING EXPOSURE is larger than individual nurses. This finding aligns with the work of Epp (2012) who identified



systems-level factors that impact burnout. This perspective serves to reduce the responsibility for burnout that is placed on individual nurses.

In the current study, nurses identified many factors that influence burnout that are beyond an individual nurse's control. A system perspective of burnout and resilience creates the opportunity for nurses and organizations to develop system level interventions. These interventions have the potential to positively impact nurses across critical care environments. Attempts to reduce burnout in critical care environments could be more impactful using a system perspective, as they can target workplace adversity to create healthier working environments.

MANAGING EXPOSURE can be considered among theories of resilience because it is conceptually abstract enough that its explanations for the phenomenon of resilience could apply beyond the research population. The most closely related theoretical framework is Fletcher and Sarkar's (2012) grounded theory of psychological resilience that was generated with gold medal athletes. Fletcher and Sarkar's (2012) theory of psychological resilience begins with exposure to stressors, followed by challenge appraisal and meta-cognition, which produce adaptive responses, leading to an optimal sport outcome. The primary difference between the theories is that Fletcher and Sarkar (2012) emphasize the appraisal and cognition aspect and focus less on the responses. Here, MANAGING EXPOSURE, the response, or behaviour that is used to manage exposure, is the primary focus. There are also differences in the theories that most likely are attributable to different research populations. Fletcher and Sarkar (2012) found that resilience is influenced by intrinsic and extrinsic factors, which is similar to

the current study. The common elements between these grounded theories supports the idea that similar behaviour can manifest across different populations.

It is challenging to compare MANAGING EXPOSURE directly to other existing resilience theories, due to the practice level of the theory. Polk (1997) generated a middle range theory of nursing resilience using a concept synthesis that encompassed different domains of thought and behaviour. Polk's (1997) work describes resilience manifesting across different domains simultaneously, but did not aim to address how one becomes resilient. Polk (1997) states that there is no empirical evidence to support her model and encouraged other researchers to explore this avenue. To date, no empirical work on Polk's (1997) theory has been established.

At a higher level of abstraction, Richardson (2002) proposed the broadest level of resilience theory, which discussed resilience as a driving force in the universe. Richardson's (2002) theory has been criticized for being overstated (Fletcher & Sarkar, 2013) and the theory does not tie conceptually to the findings of MANAGING EXPOSURE. Szanton and Gill (2010) took a different approach to resilience theory, and created the society-to-cells framework of nursing resilience. They identified many factors that influence resilience, and range from macro social factors to oxidative stress at a cellular level. The findings of the current study are not abstract enough for direct comparison between these examples of middle range and grand theories. However, the findings in the current study reinforce the idea that resilience is broadly influenced, and many factors impact upon an individual's capacity to be resilient.

**Burnout**

One of the most valuable contributions of this study is the explanation of how a nurse can experience exposure to workplace adversity, and subsequently become burnt out. Burnout was characterized in nursing literature in 1978 as a “progression to disillusionment” (Shubin & Milnazic, p. 22). Burnout has remained a systemic problem since that time. The majority of literature focusing on burnout includes descriptions of burnout (Epp, 2012) and prevalence of burnout (Adriaenssens et al., 2005; Poncet et al., 2007). Missing from this discourse has been a theoretical explanation of how burnout is generated, and how it is overcome. In trying to understand the process of nursing resilience, the resultant theory of MANAGING EXPOSURE suggests how burnout can result from exposure to workplace adversity. The theory of MANAGING EXPOSURE provides a framework to prevent burnout through intervention. Researchers have begun to address burnout through interventional research programs to support nurses (Mealer et al., 2014). These efforts could be aided by MANAGING EXPOSURE, as it creates a theoretical foundation for burnout prevention.

**Thriving**

There is evidence to support the extension of resilience to thriving. Szanton and Gill (2010) describe rebounding, which occurs when an individual can exceed baseline functioning after a crisis. Keyes (2002) identifies a spectrum of mental health outcomes that range from languishing to flourishing. Additionally, Mangelsdorf and Eid (2015) describe thriving as being associated with post-traumatic growth. In the current study, there were nurses who reported loving the nursing profession even after decades of

practice in critical care environments. These nurses described themselves as thriving, and they are living examples of how it is possible for nurses to work in adverse work environments and continue to experience satisfaction and meaning in their work. Thriving appears to be possible for critical care nurses, and represents an opportunity for future theoretical development. The findings of the current study suggest the need for more research to explore this dimension of MANAGING EXPOSURE.

### **Post Traumatic Stress Disorder**

Conversely, it is known that PTSD affects many nursing populations, including oncology, emergency, and critical care nurses (Mealer & Jones, 2013). Mental health nurses also experience PTSD, with estimates of about 10% of that population affected (Jacobowitz, 2013). PTSD is characterized by intrusive thoughts, emotional avoidance, and hyper-arousal (Mealer & Jones, 2013). It was beyond the scope of this study to explore linkages to PTSD, as it is a clinical diagnosis. However, it is important to consider the possibility that untreated burnout could escalate to PTSD, with substantial negative consequences for nurses.

### **Limitations**

This research study proposes a substantive grounded theory of the process of MANAGING EXPOSURE for critical care nurses, in order to promote nursing resilience. This proposed theory offers an explanation for the phenomenon of MANAGING EXPOSURE. However, this research study is limited by several factors. The sampling pool was limited to nurses at one institution, which limits the representation of nursing experiences. The participants were also a fairly homogenous group and they self-selected

for the current study. It is possible that there could be additional explanations for MANAGING EXPOSURE that may have surfaced if a broader range of participants had taken part.

It is also acknowledged that it is impossible to account for all factors that influence a process, and that this account of MANAGING EXPOSURE is not exhaustive. There are undeniable impacts on the process that extend outside of the workplace. Nurses' personal and work lives are not mutually exclusive. While inferences can be made to other contexts where MANAGING EXPOSURE may well provide an explanation, this substantive theory does not directly address issues arising outside of a workplace context.

The research process may be impacted by environmental factors. Some participants chose to meet the researcher at public locations, such as in coffee shops. The sound quality of the audio recordings was impacted at times, by the nature of the busy, public area. Each of the audio recordings was verified against the transcription of the text, in an attempt to ensure the quality of the text and mitigate the potential limitations of the interview environment. Participants may have also self-censored their responses in light of being in a public place. While the researcher reinforced the confidential nature of the interviews, it is possible that participants chose to withhold relevant opinions due to personal factors. There are a multitude of factors that could potentially influence a research interview, and subsequently, the findings of this research study.

### **Implications of MANAGING EXPOSURE to Nursing**

MANAGING EXPOSURE contributes to the understanding of nursing in critical care environments, in the context of the Canadian health care system. This research study was conducted to answer the question, what is the process of critical care nursing resilience in workplace adversity? In response, there are valuable insights about nurse resilience, burnout, and workplace adversity.

The theory MANAGING EXPOSURE is conceptually broad enough to reveal implications for critical care nurses. While the intent is not to generalize, MANAGING EXPOSURE may be useful to other practitioners in critical care environments. It is important for another practitioner to appraise the transferability of this theory and its usefulness before applying it to another practice setting. The concepts presented in this theory can sensitize critical care nurses to the process of MANAGING EXPOSURE, beyond the research setting. MANAGING EXPOSURE has the potential to impact nurses and critical care environments across the four domains of nursing practice: clinical practice, education, research, and administration. Implications for each of these domains are discussed in the following section, as well as the implications of MANAGING EXPOSURE for the nursing profession.

#### **Clinical Practice**

There is preliminary evidence to suggest MANAGING EXPOSURE has implications for patient safety. In the current study, nurses reported that when they did not have opportunities to leave the critical care environment, their resilience was impacted. Nurses described themselves as burnt out, and identified that they had periods

where they were dissatisfied with their patient care. Burnout has been linked to perceived decreases in patient safety (Halbesleben, Wakefield, Wakefield, & Cooper, 2008). It is reasonable to consider that if nurses have opportunities to leave the critical care environment for breaks and vacation, they may experience more resilience. This resilience may result in increased patient safety in an organization.

MANAGING EXPOSURE also has implications for the operation of critical care environments. The physical structure of the unit and adequacy of support staff and supplies all represent practical issues that can be addressed to minimize workplace adversity in critical care environments. Clinical nurses can be empowered to address practical issues within critical care environments, through problem solving and professional advocacy. The findings of this research study identify the importance of practical issues in providing nursing care.

Managers in critical care environments can be sensitized to nurses' experiences and can ensure that nurses have adequate supports and resources in place. Workload is one area that was identified as a source of workplace adversity. Nurses also reported the need for teamwork, collaboration, assistance with tasks, and emotional support in critical care environments. Nurse leaders can collaborate to create a culture that decreases workplace adversity, and optimizes MANAGING EXPOSURE. For example, managers can work to ensure that nursing staffing is appropriate for the workload in the critical care environment. Nurses can also work together to foster teamwork and collaboration with colleagues. By creating healthy workplaces, nurse leaders can support resilience among critical care nurses, promoting optimal patient outcomes.

**Education**

Nurses can learn about MANAGING EXPOSURE to increase their awareness of how to prevent burnout. Mealer et al. (2014) found that two-day educational sessions about resilience and Post Traumatic Stress Disorder (PTSD) were impactful for critical care nurses, using a randomized control trial. Nurses who completed an education program had a statistically significant decrease in PTSD symptoms after their participation. Mealer et al. (2014) indicated that their team is conducting additional research to explore the impact of these education sessions. McDonald et al. (2012; 2013) also found that educational programs about resilience were effective in promoting resilience for nurses.

Nurses participate in continuing education across a wide variety of subjects. It is possible that continuing education programs that address MANAGING EXPOSURE would be helpful for nurses in critical care environments. When nurses engage in education on MANAGING EXPOSURE, they may integrate aspects of the theory into their practice. Nurses may also be empowered to work together to address workplace adversity, knowing the potential benefits.

Additionally, nurses identified the impact of their undergraduate nursing education on their development of resilience. Even after 30+ years of nursing experience, participants could clearly recall times where nursing educators had given them information about resilience. These findings provide powerful evidence on the potential impact of teaching resilience promoting strategies in all levels of nursing education programs.



**Administration**

The process of MANAGING EXPOSURE holds many implications for nurse leaders and health care organizations. Administrative nurses can be sensitized to the theory of MANAGING EXPOSURE and provide professional advocacy to create supportive structures in critical care environments. These structures could include quiet space for breaks, guaranteed vacation hours, and nursing staffing policies that are responsive to workload. There is also evidence to suggest that organizational policies can act as barriers to nurse resilience, and result in nurses feeling de-valued. It is important that nurse administrators consider the impact of organizational policy in the context of nurse resilience. MANAGING EXPOSURE provides a framework for nurse leaders to decrease workplace adversity and promote resilience in critical care environments.

Increasing the resilience of nurses has the potential to promote financial sustainability within the Canadian health care system. In the current study, nurses reported calling in sick when they were experiencing burnout. Preventing burnout could reduce the number of sick calls, decrease compensatory overtime, reduce nursing turnover, and promote job satisfaction. Thus, it is advantageous for nurse leaders to foster resilience within critical care environments.

**Research**

As a proposed, substantive grounded theory, MANAGING EXPOSURE adds to the knowledge base for both resilience and burnout. The theoretical development of MANAGING EXPOSURE advances nursing theory by increasing the level of abstraction, and thus generalizability, in resilience and burnout research. Additional

research can continue to expand the ideas of MANAGING EXPOSURE to generate a broader theory, for application in various nursing environments. There can also be more research on the relationship between resilience and burnout, and the spectrum that unites these concepts.

There are many forms of workplace adversity present in critical care environments that have received minimal attention by researchers, such as: breaks, vacation, and the impact of organizational policy on nursing resilience, among others. Researchers could examine workplace adversity in more depth. Additionally, it would be advantageous to explore potential linkages between types of workplace adversity, such as the intersection between patriarchy and interpersonal challenges with colleagues. The theory of MANAGING EXPOSURE can be advanced and refined through exploration of workplace adversity.

Additional research can also explore the categories of MANAGING EXPOSURE. The concept of situational awareness is relatively new in nursing research, and has been applied in an innovative way in MANAGING EXPOSURE. Disclosure has been added as an antecedent concept, which may prove to be robust in future research. Situational awareness can be investigated more fully to learn the nuance of this concept, and its potential applications for nurses.

Nurse researchers can examine the techniques of managing exposure to learn more about how and when these techniques are applied. There is also the opportunity to evaluate the efficacy of the techniques for critical care nurses. There may be more ways to manage exposure, beyond the techniques identified here. It may also be that some

techniques are more effective than others, based on different types of workplace adversity. Nurse researchers can investigate this category to provide more strategies for nurses to manage their exposure.

While critical care environments have many unique factors, they are not the only high intensity workplace where professionals could be at risk of burnout. The theory of MANAGING EXPOSURE may have implications for populations outside of the critical care environment, and also outside health care. The theory of MANAGING EXPOSURE could serve as a sensitizing concept for researchers in nursing and in other sectors.

### **Nursing Profession**

There are also implications for MANAGING EXPOSURE for the nursing profession. The theory of MANAGING EXPOSURE delineates the process of resilience for nurses on an individual level. However, many of the forms of workplace adversity in the theory apply to the whole nursing profession, such as patriarchy or inadequate health care funding. Nurse leaders would be well advised to address these sources of workplace adversity because of the potential for a substantial, positive impact on the nursing profession. Resilience has proven to be important for firefighters (Blaney & Brunsten, 2015) and teachers (Doney, 2013; Taylor, 2013) and is likely to have professional implications for nursing as well. Future research can explore the possibility of extending MANAGING EXPOSURE to encompass the nursing profession, through a broader range of nursing theory.

### **Conclusion**

The findings of this research study extend the understanding of resilience and critical care nursing beyond the extant knowledge relating to forms of workplace adversity, and the presence of resilience and burnout in critical care environments. One of the most important contributions of this study is the finding that burnout and resilience do not manifest through different processes; rather, burnout and resilience can both occur along a spectrum, in response to workplace adversity. The theory of MANAGING EXPOSURE has implications for nurses across clinical, educational, administrative, and research domains of nursing practice.

## CHAPTER 6: CONCLUSIONS

Nurses working in critical care environments encounter workplace adversity. This adversity can range in scope, and workplace adversity negatively impacts nurses. This research study was conducted to learn more about nurse resilience in response to workplace adversity in critical care environments. The research question that guided this investigation was what is the process of critical care nursing resilience in workplace adversity? This grounded theory investigation was conducted at a large, multi-site urban hospital with 11 critical care nurse participants, who completed open-ended interviews about resilience and burnout in critical care environments. The proposed, resultant grounded theory is entitled *MANAGING EXPOSURE: A Grounded Theory of Burnout and Resilience in Critical Care Nurses*. To address the problem of workplace adversity, nurses enact the process of *MANAGING EXPOSURE*. The core category of managing exposure counters the basic social process of dealing with workplace adversity. The driver of the process is situational awareness, which includes the four sub-categories of disclosure, perception, cognition, and projection. Once nurses are aware of workplace adversity, they can implement the process of *MANAGING EXPOSURE*, using different techniques such as protecting, processing, decontaminating, and distancing. A nurse will experience a range of indicators from this process, identified here on a spectrum. This study advances the understanding of burnout and resilience in critical care environments by demonstrating how nurses manage their exposure to workplace adversity. There are opportunities for nurse leaders to advance the process of *MANAGING EXPOSURE* to promote resilience for nurses.

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## Appendices

### Appendix A



September 24, 2014

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Athabasca University

File No: 21554

Certification Category: Human Ethics

Expiry Date: [September 23, 2015](#)

Dear Ms. Jennifer Jackson,

The Faculty of Health Disciplines Departmental Ethics Review Committee, acting under authority of the Athabasca University Research Ethics Board, to provide an expedited process of review for minimal risk student researcher projects, has reviewed your project, 'The Process of Critical Care Nursing Resilience in Workplace Adversity'.

Your application has been **Approved on ethical grounds** and this memorandum constitutes a **Certification of Ethics Approval**. You **may** begin the proposed research. It is noted that the beginning sentence in question 4.1 seems to have been cut off (perhaps when copying text from another tab). Please correct this sentence in the application for file purposes.

AUREB approval, dated [September 24, 2014](#), is valid for one year less a day.

As you progress with the research, all requests for changes or modifications, renewals and serious adverse event reports must be reported to the Athabasca University Research Ethics Board via the Research Portal.

To continue your proposed research beyond [September 23, 2015](#), you must submit an Interim Report before [August 15, 2015](#).

**When your research is concluded**, you must submit a Project Completion Report to close out REB approval monitoring efforts.

At any time, you can login to the Research Portal to monitor the workflow status of your application.

If you encounter any issues when working in the Research Portal, please contact the system administrator at [research\\_portal@athabascau.ca](mailto:research_portal@athabascau.ca).

If you have any questions about the REB review & approval process, please contact the AUREB Office at (780) 675-6718 or [rebsec@athabascau.ca](mailto:rebsec@athabascau.ca).

Sincerely,

Sherri Melrose  
Chair, Faculty of Health Disciplines Departmental Research Ethics Board

## Appendix B

### The Process of Critical Care Nursing Resilience in Workplace Adversity

**Are you a critical care nurse?  
Do you have at least 1 year of experience  
working in a critical care setting?  
Are you full-time or part time 1?**

You are being asked to participate in a research study to understand nursing resilience in critical care settings. This study is being conducted to fulfill the requirements of a masters degree.

The purpose of this study is to learn more about how nurses cope with adversity in their workplace.

As a participant, you will be asked to complete a 90-minute interview, on your own time. Participants will be reimbursed for parking or public transportation, and will receive a \$20 gift card for a coffee shop.

This study is being conducted in English only.

**To learn more about participating in this study, please contact:**

Jennifer Jackson, Registered Nurse  
(613) 447-1558

Or email: [nurseresstudy@gmail.com](mailto:nurseresstudy@gmail.com)

*This research study has been approved by Athabasca University*

## Appendix C



### **PARTICIPANT INFORMATION SHEET AND CONSENT FORM**

**Title of Study: The Process of Critical Care Nursing Resilience in Workplace Adversity**

**Principal Investigator (PI): Jennifer Jackson, BScN Hon., Registered Nurse  
613-447-1558**

**Supervisor: Dr. Sharon Moore, Professor, Faculty of Health Disciplines  
Athabasca University  
email: sharon.moore@athabascau.ca  
phone: 1-866-375-8570 (toll free)**

Participation in this study is voluntary. Please read this Participant Information carefully before you decide if you would like to participate. You may ask as many questions as you like.

#### **Why am I being given this form?**

You are being asked to participate in this research study because you are familiar with nursing in a critical care setting.

#### **Why is this study being done?**

The purpose of this study is to learn more about nurses' experiences of adversity at work, and how they manage it. This study is being conducted to fulfill the requirements of a masters degree. The principal researcher wants to learn more about how nurses work in high-stress environments. The goal of this study is to generate a theory that can be used to support nurses who work in critical care settings.

Approximately 8-12 participants will be enrolled in the study from [REDACTED].

#### **How is the study designed?**

You will be asked to complete a short questionnaire and participate in an audio-recorded one on one interview with the principal researcher. The questionnaire and interview will

take place in a mutually agreed upon location, outside of your regular work hours. You may be contacted for a follow up interview if clarification is needed.

**What is expected of me?**

You will complete a short questionnaire with the principal researcher before beginning the interview. The questionnaire is to document your age, gender, and how long you have been a nurse. It will take approximately 5 minutes to complete. You may skip any questions that make you uncomfortable or that you do not wish to answer.

You will then be asked a few questions about your experiences working as a nurse in a critical care setting. The interview will be approximately 60-90 minutes in length. Your interview will be audio-recorded so that it can later be transcribed verbatim.

**How long will I be involved in the study?**

The entire study will last approximately 1 year. Your total participation in the study will last up to 2 hours. You will be asked if you would be willing to participate in a follow up interview, if the researcher would like to ask additional questions.

**What are the potential risks I may experience?**

During the interview, you will be asked about difficult experiences, which may require you to recall work experiences that may have been difficult. You do not have to answer any questions that make you uncomfortable.

In the event that you wish to speak to someone after participating in the study, the confidential Employee and Family Assistance Program is available to all hospital employees, free of charge. You may call this service 24 hours a day at (toll free): [REDACTED] or for service in French (toll free): [REDACTED]. The researcher and the hospital are not affiliated with this program, and would never know if you called this service.

**Can I expect to benefit from participating in this research study?**

You may not receive direct benefit from your participation in this study. You may benefit from sharing your stories with the principal researcher. Your participation, along with others', will result in the development of a theory that could help nurses to deal with hardship in critical care settings. This may benefit other nurses and future patients.

**Do I have to participate? What alternatives do I have? If I agree now, can I change my mind and withdraw later?**

Your participation in this study is voluntary. You may decide not to be involved in this study, or to be in the study now, and then change your mind later. Your decision will not affect your current or future employment at [REDACTED].

If you withdraw your consent, the principal research will no longer collect your personal information for research purposes. The data collected up until the point of withdrawal will still be used by the researcher unless you request otherwise.

**Will I be paid for my participation or will there be any additional costs to me?**

A \$20 coffee card will be provided to thank you for participating in the study. If there is a parking fee at the place of the interview, or a public transportation cost to reach the interview, it will be reimbursed for any visits related to the study.

**How is my personal information being protected?**

- All your personal identifying information, such as your name, address, date of birth, etc. will be kept confidential.
- As a participant, you will be assigned a pseudonym that will be used throughout the study on all your study records.
- A Master List provides the link between your identifying information and your pseudonym. This list will only be available to Jennifer Jackson, and will not leave this site.
- The Master List and coded study records will be stored securely on a computer that is encrypted and password protected.
- For audit purposes only, your original study records may be reviewed under the supervision of Jennifer Jackson by:
  - Her research supervisor and supporting consultants
  - [REDACTED] Research Ethics Board ([REDACTED]), [REDACTED]
  - [REDACTED].
- You will not be identified in any publications or presentations resulting from this study.
- Research records will be kept for 10 years, as required by the [REDACTED]
- At the end of the storage time, all paper records will be shredded and all electronic records will be securely deleted.

Your information and participation will be kept confidential, except in the event that you disclose information that indicates your life or another person's life is at risk, and we will discuss this, should the situation warrant. The other limit to confidentiality in this research study is in the event of disclosure of child abuse. In these cases, the researcher is legally required to disclose this information to the police.

**Does the principal researcher have any conflicts of interest?**

There are no conflicts of interest to declare related to this study. The Principal Investigator is receiving financial support from the Social Science and Humanities Research Council of Canada, Athabasca University, and the Canadian Nurses Foundation to cover the cost of conducting this study.

**Who do I contact if I have any further questions?**

If you have any questions about this study, please contact Jennifer Jackson, Registered Nurse at 613-447-1558.

The [REDACTED] has reviewed this protocol. The Board considers the ethical aspects of all research studies involving human participants at [REDACTED]. If you have any questions about your rights as a study participant, you may contact the Chairperson at [REDACTED].

This study has been reviewed by the Athabasca University Research Ethics Board. Should you have any comments or concerns regarding your treatment as a participant in this study, please contact the Office of Research Ethics at [1-800-788-9041](tel:1-800-788-9041), ext. 6718 or by e-mail to [rebsec@athabascau.ca](mailto:rebsec@athabascau.ca)





**Title of Study: The Process of Critical Care Nursing Resilience in Workplace Adversity**

**Consent to Participate in Research**

- I understand that I am being asked to participate in a research study about critical care nursing resilience and workplace adversity.
- This study was explained to me by Jennifer Jackson, RN.
- I have read, or have had read to me, each page of this Participant Information.
- All of my questions have been answered to my satisfaction.
- If I decide later that I would like to withdraw my participation and/or consent from the study, I can do so at any time.
- I voluntarily agree to participate in this study.
- I will be given a copy of this signed Participant Informed Consent Form.

\_\_\_\_\_  
Participant's Printed Name

\_\_\_\_\_  
Participant's Signature

\_\_\_\_\_  
Date

Would you like to receive a copy of the findings of this study? If so, please provide an email address where the principal researcher may send you a copy: \_\_\_\_\_

**Investigator or Delegate Statement**

I have carefully explained the study to the study participant. To the best of my knowledge, the participant understands the nature, demands, risks and benefits involved in taking part in this study.

\_\_\_\_\_  
Investigator's Printed Name

\_\_\_\_\_  
Investigator's Signature

\_\_\_\_\_  
Date

## **Appendix D**

### **Initial Interview Questions**

- Tell me about a time when you experienced adversity in the workplace, and what it meant for you.
- How did you work through or learn to deal with this situation?
- What helped you deal with this adversity (or situation)
- How would you describe your feelings and your actions in these stressful situations?
- How would you describe your feelings and your actions after these stressful situations? When you have left your workplace? When you return to your workplace again?
- How do you become resilient? Has your resilience changed day-to-day, or during your career?

**Appendix E****Demographic Information Questionnaire****Date:** \_\_\_\_\_ **Pseudonym:** \_\_\_\_\_

The following questions will provide information to be used to describe the **group** of people in this study. None of this information will be used to identify you personally. Please check the box that best applies to you. If there are any questions you do not wish to answer, you may leave them blank.

1. How old are you? (Please check one)

- 20-29 years
- 30-39 years
- 40-49 years
- 50-59 years
- 60 or over

2. Are you:

- male
- female

3. Your race/ethnicity:

- White
- Asian
- Middle Eastern
- Black
- Latin-American
- Indigenous
- Other: Please specify \_\_\_\_\_

4. How many years of total nursing experience do you have?

- Less than 5 years
- 5-9 years
- 10-14 years
- 15-19 years
- Greater than 20 years

5. How many years of nursing experience do you have in critical care settings?

- Less than 5 years
- 5-9 years
- 10-14 years
- 15-19 years
- Greater than 20 years

6. What is your highest level of completed education in nursing?

- Diploma
- University Degree
- Masters
- PhD
- Other \_\_\_\_\_

7. What is your current work status?

- Full time permanent
- Full time temporary
- Part time 1 permanent
- Part time 1 temporary
- Other \_\_\_\_\_

8. What is your current family status?

- Married
- Divorced
- Single
- Common-law relationship
- Other \_\_\_\_\_

9. Do you have any children? If so, how many? \_\_\_\_\_

- Children live at my home
- Children have all left my home
- Some children live at home
- Children live at home part-time (i.e. shared custody)

10. What is your total family income before taxes? Please include income from all sources.

- \$15,000 to \$29,999
- \$30,000 to \$44,999
- \$45,000 to \$59,999
- \$60,000 to \$74,999
- \$75,000 to \$99,999
- More than \$100,000

**Appendix F**

**CONFIDENTIALITY PLEDGE**

**The Process of Critical Care Nursing Resilience in Workplace Adversity**

As a transcriptionist for the study “The Process of Critical Care Nursing Resilience in Workplace Adversity”, I understand that I will be involved with personal information related to study participants. I understand that all possible precautions have been taken to protect the identity of the research participants. Further, I pledge to keep all information strictly confidential and agree not to discuss the information with anyone other than with the researcher. My signature indicates that I understand the importance of and agree to maintain confidentiality.

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Transcriptionist

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Researcher

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Date

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Date