ESTABLISHING THE NEED FOR A CRITICAL INCIDENCE STRESS MANAGEMENT
AND DEBRIEFING PROTOCOL FOR PEDIATRIC OPERATING ROOM NURSES
EXPERIENCING CRITICAL INCIDENCES

by

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Establishing the Need for a Critical Incidence Stress Management and Debriefing Protocol for Pediatric Operating Room Nurses Experiencing Critical Incidences

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Abstract

Nurses caring for children in pediatric operating room (OR) settings often witness and experience pediatric life threatening situations, serious injury, tragedy, and death (Occupational Safety and Health Administration [OSHA], n.d.). Repeated exposure to these unexpected events, called critical incidents (CI), cause CI stressors that can negatively affect a health care provider’s physical, emotional, cognitive, and spiritual well-being, their ability to work and properly function through prolonged emergency responses, and their ability maintain professional quality of life (OSHA, n.d.; Maloney, 2012). The purpose of this Doctor of Nursing Practice (DNP) project was to explore the perception of CI, CI stress, and CI stress management needs among pediatric OR nurses working in a hospital setting located in Buffalo, New York to determine the need for developing a Critical Incidence Stress Debriefing (CISD) team protocol designed to manage CI stress and to increase professional quality of life, job satisfaction and retention. A mixed methods sequential explanatory design was implemented utilizing the ProQOL5 survey, a self-report professional quality of life questionnaire, followed by two focus group interview sessions. Project findings revealed that participants vocalized the need for a CI stress management and debriefing team protocol.

Keywords: critical incident, critical incidence stress, critical incidence stress debriefing, operating room, pediatric nurses, professional quality of life
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Emergency responders, workers, and nurses often witness and experience events such as serious injury, life-threatening situations, tragedy, and death that strain their ability to function both personally and professionally (OSHA, n.d.; de Boer et al., 2011). These unexpected events, called critical incidents (CI), cause CI stressors that can negatively affect a health professional’s physical, emotional, cognitive, and spiritual well-being as well as their ability to properly cope with and function through prolonged emergency responses (OSHA, n.d.; Maloney, 2012). According to OSHA (n.d.), CI stress occurs immediately after witnessing or experiencing a CI and can last between two and four weeks. Critical incidence stress overpowers a person’s usual coping response with physical, emotional, and behavioral signs and symptoms presenting differently among individuals. If not managed and resolved appropriately, CI stress reactions can lead to several psychological disorders including acute stress disorder, depression, anxiety, burnout, post-traumatic stress disorder (PTSD), or alcohol and drug abuse (Findik, 2015).

Establishing CI stress management and debriefing protocols for health care providers working in high stress environments with repeated CI exposure, including nurses working in hospital-based pediatric OR settings, is imperative to support their overall health, wellbeing, and professional quality of life. Critical incident stress debriefing (CISD), a trained facilitator-led group process for health care providers experiencing CI stress immediately following a CI, is an early healing and recovery intervention process through group support and referral to counseling and treatment services if needed (OSHA, n.d.).

**Background**

Although no uniform definition of CI exists, Manser (2011) defined a CI as “deviation from the expected course with the potential for an adverse outcome” (p. 170). Schluter, Seaton, and Chaboyer (2008) more broadly defined the term as “any event which is not part of the
standard operation of a service and which causes, or may cause, an interruption to, or a reduction in, the quality of that service” (p. 108). According to de Boer et al. (2011), although immediate stress reactions following a CI enable healthcare professionals to effectively deal with the traumatic events that they are facing, prolonged and repeated stress responses can eventually progress into significant psychological disorders and detrimental health problems. Exposure to prolonged and repeated high-stress increases health professional risk for development of burnout, compassion fatigue (CF), and secondary traumatic stress (Hinderer et al., 2014). Individuals cope with stress in different ways, therefore manifesting different stress reactions physically, emotionally, behaviorally, and cognitively (OSHA, n.d.). Among health care professionals, physical distress can present as fatigue, headaches, diarrhea, chills, chest pain, and dizziness; emotional distress can present as grief, irritability, intense anger, apprehension, chronic anxiety, depression, distress, fear, self-doubt, feelings of failure and inadequacy, shame, and guilt; behavioral distress can present as inability to rest, withdrawal, anti-social behavior, communication change, increased alcohol consumption, and lost or increased appetite; and cognitive distress can present as uncertainty, confusion, nightmares, poor concentration, memory, and attention, and poor decision making and problem solving ability (Manser, 2011; OSHA, n.d.).

The aforementioned physical, emotional, behavioral, and cognitive negative health consequences associated CI stress contribute to healthcare professional identification as becoming second victims (Manser, 2011). Second victims can have continued emotional distress which may further develop into burnout, compassion fatigue (CF), and secondary traumatic stress (Seys et al., 2013). According to Scott et al. (2011), a second victim is a “health care provider involved in an unanticipated adverse patient event, medical error and/or a patient-
related injury who becomes victimized in the sense that the provider is traumatized by the event” (p. 233). Second victims, according to Scott et al. (2011), “feel personally responsible for the unexpected patient outcomes and feel as though they have failed their patients, second-guessing their clinical skills and knowledge base” (p. 233). It is estimated that half of all health care professionals in the United States (U.S.) will experience the second victim phenomenon during their careers (Seys et al., 2013). The 2018 Patient Safety & Quality Healthcare Industry Outlook Survey found that “second victim is an emerging issue…one that many facilities have still not tackled (Patient Safety & Quality Healthcare [PSQH], 2018). A resounding 62% of survey respondents indicated that their organization does not have a second victim support program (PSQH, 2018, para. 2). The survey further revealed that of respondents having a second victim program in place, 46% said it was highly effective for nursing staff, physicians, and executive staff (PSQH, 2018, para. 4).

Significance

According to Chen, Lin, Wang, and Hou (2009), the OR is one of the most stimulating and challenging hospital units to work in due to high workplace stress and lower levels of job satisfaction. It has been well established that healthcare professions, including nursing, can be stressful because of the need for specialization, complexity, and requirements to handle emergent and unexpected situations (Zander, Hutton, & King, 2010; Chen et al., 2009). Pediatric nurses and other healthcare professionals caring for children are faced with unique care-giving challenges as they are confronted with overwhelming CI stressors that are related to grief, loss, bereavement, and moral and ethical dilemmas connected with caring for this specialized and vulnerable population (Vicente, Shadvar, Lepage, & Rennick, 2016; Zander et al., 2010).
Currently, OSHA has no standards that apply to the health and safety of workers associated with CI stress; suggesting reason as to why there is a gap in knowledge within this area (OSHA, n.d.). Manser (2011) maintained that healthcare organizations can take the following actions to alleviate the impact of CI stress on hospital staff: (1) create an effective stress management and coping skills protocol to decrease burnout, compassion fatigue (CF), and secondary traumatic stress; (2) design guidelines to develop and implement CI stress management protocols; and (3) create staff educational tools to inform staff of CI stress management support, services and resources.

Despite research findings indicating that caring for children with life-threatening conditions has a profound impact on the health and well-being of health professionals, research on CIs and CI stress management is limited (Vicente et al., 2016; Maloney, 2012). A review of current health related literature revealed that research exploring CI and CI stress management has been conducted with nurses in critical care units such as hematology, oncology and emergency room departments, with little research exploring CI and CI stress management needs among nurses working in pediatric OR settings (Vicente et al., 2016; Maloney, 2012). Furthermore, literature review findings revealed that the majority of research exploring CIs in OR settings have focused primarily on stress and resiliency among surgeons and anesthesia providers, omitting important knowledge and understanding regarding how CI stress is perceived and managed by OR nurses, particularly nurses working in pediatric OR settings (Hull, Arora, Kassab, Kneebone, & Sevdalis, 2011).

The student conducting this DNP project arranged two preliminary meetings with hospital stakeholders including surgical services managers, directors, staff, and pediatric OR nurses in a pediatric hospital in Buffalo, New York to establish the need to explore developing a
CI stress management and debriefing protocol for the pediatric OR nurses. These preliminary meetings and discussions revealed that a hospital CI stress management and debriefing program is currently non-existent. The hospital stakeholders expressed interest in exploring the experience of CI events as well as CI stress management needs and resources from the perspective of the pediatric OR nurses for developing a CI stress management and debriefing protocol based on the voiced needs of the nurses themselves.

**Expanded Purpose**

Based on the absence of current OSHA CI stress management standards and guidelines, the lack of research exploring CIs and CI stress management among nurses working in pediatric OR settings, and voiced local hospital stakeholder interest supporting the need to explore the perception and experience of CI events and CI stress management needs from the perspective of pediatric OR nurses, the purpose of this DNP project was to address the following question: how do OR nurses aged 21 years and older with at least 1 year experience working in a pediatric specialty hospital in Buffalo, New York, perceive and experience a CI event and needed CI stress management, coping, and support resources following a CI event? Project goals were as follows: (1) to explore the meaning of CIs and what constitutes a CI experience from the perspective of pediatric OR nurses; (2) to explore the meaning of burnout, CF, secondary traumatic stress, emotional distress, and second victim as they relate to a CI from the perspective of pediatric OR nurses; (3) to explore criteria needed for a CI stress management and debriefing program from the perspective of pediatric OR nurses; and (4) to develop a CI stress management and debriefing team protocol and guideline to promote CI stress management for nurses working in a pediatric OR setting as a means for increasing professional quality of life, increasing job
satisfaction and retention, and reducing risk for burnout, CF, and/or secondary traumatic stress disorder.

According to the American Association of Colleges of Nursing (AACN, 2006), to improve patient and health care outcomes, organizational and systems leadership skills are critical for DNP graduates who are expected to be “proficient in quality improvement strategies and in creating and sustaining changes at the organizational and policy levels (p. 10). One of the many roles of the DNP prepared advanced practice nurse (APN) is to provide leadership for evidence-based practice in nursing and to translate evidence-based research into practice. APN’s are integral team members within the healthcare community and are often at the frontline in high risk and/or high stress patient care environments. Because of this, APNs often witness and experience physical and psychological consequences associated with exposure to CI’s and CI stress related risks. APN’s can conduct nursing projects and research as well as disseminate and integrate new knowledge into clinical practice; thus, serving as a valuable resource to educate, manage, and improve the physical, emotional, behavioral, and cognitive stressors following a CI. The purpose of this DNP project was to explore the perception of CIs, CI stress, and CI stress management needs among pediatric OR nurse working in a hospital setting located in Buffalo, New York to determine the need for developing a CI stress management and debriefing team protocol designed to manage CI stress and increase professional quality of life, job satisfaction and retention.

**Theoretical Framework: The Transactional Model of Stress and Coping**

Based on Lazarus’ (1966) theory of stress, the Transactional Model of Stress and Coping was the theoretical framework utilized to guide this DNP project. The Transactional Model of Stress and Coping presents a framework for evaluating the processes of coping with
stressful events and was an excellent fit for the purpose of this DNP project which was to explore CIs, CI stress, and CI stress management needs and resources from the perspective of nurses working in a pediatric OR setting (Biggs, Brough, & Drummond, 2017). Lazarus’ theory of stress centered on the premise of two central concepts relevant to almost all physiological stress theories: cognitive appraisal and coping (Biggs et al., 2017). Cognitive appraisal and coping are two critical mediators of stressful person-environment relations. Positive long-term outcomes are based on cognitive appraisal utilized to evaluate harm, threats and challenges which then results in a process for coping with stressful events.

Cognitive appraisal is an individual’s evaluation of whether or not a particular encounter with the environment is relevant to his or her well-being, and if so, in what ways (Biggs et al., 2017). When faced with a stressor, a person evaluates the potential threat or encounter. In primary appraisal, evaluation of the significance of a stressor or threatening event occurs (Biggs et al., 2017). The person evaluates whether he or she has anything at stake in this encounter. The perception of the event as stressful, positive, controllable, challenging or irrelevant occurs. For instance, a personal perception or judgement will decide if there is potential for harm or benefit with respect to commitment, values, or goals (Biggs et al., 2017). In secondary appraisal, the person evaluates what, if anything, can be done to overcome or prevent harm or improve the potential for benefit (Biggs et al., 2017). The combination of primary and secondary appraisals determines whether the person-environment transaction is believed to be significant to the person’s well-being, and if so, whether it is perceived as threatening (as related to the likelihood of harm or loss), or challenging (Biggs et al., 2017).

Coping is an individuals' efforts in thought and action to manage specific demands that are perceived as taxing or exceeding personal resources (Biggs et al., 2017). According to the
Transactional Model of Stress and Coping, a person can either adopt *problem focused* or *emotion focused* coping styles (Folkman, & Nathan, 2011). Problem focused approaches are directed at changing a stressful situation. Emotion focused approaches are aimed at changing the way a person thinks or feels about a stressful situation; thus, reducing the stress it causes. This can include denial, escape-avoidance, accepting responsibility or blame, exercising self-control, and engaging in positive reappraisals (University of Twente, n.d.).

Lazarus and Folkman approached coping in terms of thoughts and actions that people used in stressful situations. CI’s in a pediatric OR setting create stressful situations; thus, eliciting stress reactions ranging from emotional, physical, behavioral, or cognitive responses (OSHA, n.d). According to OSHA (n.d), the physical and psychological well-being of those experiencing CI stress, as well as their future ability to function through a prolonged response, will depend on how they manage (cope) with this stress. Based on the Transactional Model of Stress and Coping, creating a CI stress management and debriefing program protocol for nurses working in a pediatric OR setting would teach nurses emotion focused coping skills to change the way they think or feel regarding experiencing a CI as well as offering resources for those nurses who may need further guidance to reduce CI stress. Furthermore, the Transactional Model of Stress and Coping, based on Lazarus’ stress theory, addresses cognitive appraisal as the foundation to evaluating the processes of coping with stressful events.

**Literature Review**

A review of the literature was conducted to explore CIs, CI stress, and CI stress management and debriefing programs for nurses working in pediatric OR settings as a means for reducing risk for emotional distress, CF, burnout, and/or secondary post-traumatic stress disorder and as a means to increase professional quality of life, job satisfaction, and job retention.
Databases searched were limited to the English language and the years 2008 through 2018. The search was limited from the years 2008 to 2018 to ensure inclusion of early studies due to current research gaps with regard to the DNP project topic of interest. Databases searched included CINAHL, PubMed, and MEDLINE. The search was performed using the following terms and keywords both singularly and in various combinations: stress management, critical incident, CI, CI stress, debriefing, coping skills, nurse, multidisciplinary care team, healthcare, operating room, OR, pediatric, burnout, secondary traumatic stress, post-traumatic stress disorder, PTSD, compassion fatigue, compassion satisfaction, emotional distress, second victim, ProQOL, professional quality of life, CISM, and Schwartz Rounds. The following presents a summary of the literature review findings.

**Negative Consequences of Critical Incident Stress**

**Burnout.**

Approximately 10% of all hospital admissions involve a CI translating in poor patient outcomes and unnecessary costs (Fetherston, 2015). Due to the complex coordinated care required in OR settings, CI’s in the OR are responsible for approximately 50% of occurring adverse events (Catchpole, Mishra, Handa, & McCulloch, 2008). Major health issues can result from these CIs including increased risk for heart disease, cancers, immunocompromised states, and ulcers (Thoits, 2010). Furthermore, exposure to stress lasting several months increases risk for developing symptoms of burnout, CF, and post-traumatic stress (Findik, 2015).

According to the Mayo Clinic (2018), burnout (job burnout) “is a special type of stress – a state of physical, emotional or mental exhaustion combined with doubts about your competence and value of your work” (para. 1). Job burnout can result in feelings hopelessness, wasted efforts, despair and lack of support (Stamm, 2010). Burnout can cause a wide range of
symptoms and consequences including excess stress, fatigue, depression, frustration, anger, fear, anxiety, unhappiness, unprofessionalism, hopelessness, exhaustion, heart disease, high cholesterol, insomnia, muscle tension, headaches, GI problems such as irritable bowel syndrome (IBS) or gastritis, Type 2 diabetes, obesity, vulnerability to illness, alcohol or substance abuse, insufficiency at work, and negative personal relationships or home life (Moss, Good, Gozal, Kleinpell, & Sessler, 2016; Mayo Clinic, 2018). Pradas-Hernández et al. (2018) reviewed burnout in pediatric nurses and concluded that three common themes existed in nurses who were experiencing burnout: emotional exhaustion, depersonalization and low personal accomplishment. These were present in 31%, 21%, and 39% of subjects respectively. Risk factors for burnout not only included sociodemographic factors (marital status and age) and occupational factors (length of working day and staffing), but also included psychological factors including stress and anxiety which played an important role in the aftermath of CI’s (Pradas-Hernández et al., 2018). On an organizational level, Moss, Good, Gozal, Kleinpell, and Sessler, (2016) published a call for action regarding burnout in the critical care community given its high prevalence of 25-33% (Moss et al., 2016). The authors described risk factors including personal traits such as poor coping strategies, self-critical attitudes, work-life imbalance; organizational factors such as workload, staffing, and lack of environmental control; and quality of working relationships. Of more significance to CI stress, it was found that higher first-hand experience with mortality increased risk for burnout syndrome (Moss et al., 2016).

**Compassion fatigue**

According to the American Institute of Stress (AIS, 2018), CF is also called vicarious traumatization or secondary traumatization and occurs as a result of “emotional residue or strain of exposure to working with those suffering the consequences of traumatic events. It differs from
burnout, but can co-exist” and can occur from exposure to one trauma case or as a result of multiple or cumulative exposure to trauma (para. 2). A study conducted by Nolte, Downing, Temane, and Hastings-Tolsma (2017) found that the work environment was a predictor to the development of CF and anxiety. Health consequences as a result of CF included sleep disturbances, hypervigilance, fear, anxiety, difficulty concentrating, physical symptoms such as fatigue, hopelessness, and decreased sense of fulfillment. Nolte et al. (2017) additionally found that nurses described “feeling so fatigued that they felt empty” (p. 4369). Given the multiple challenges and stressful events which nurses face in everyday practice, it is believed that CF is a far more common issue than might be acknowledged (Nolte et al., 2017).

Emergency nurses are often faced with hectic work conditions and work conditions related to traumatic events or CIs (Adriaenssens, De Gucht, & Maes, 2012). A literature review conducted by Flarity, Gentry, and Mesnikoff (2013) identified that 86% of emergency nurses exhibited moderate to high levels of CF related to their work. Hinderer et al. (2014) found that among the 262 trauma nurses participating in their study, CF was higher for those who worked more hours per shift (12 hours versus 8 hours). Additionally, the trauma nurses who experienced higher CF levels reported weaker coworker relationships and fewer hobbies (Hinderer et al., 2014).

Hinderer et al. (2014) defined compassion satisfaction as “feeling a sense of accomplishment and reward as a result of caring for trauma patients” (p. 161). According to Meaders et al. (2010), CF can be greatly attributed to low compassion satisfaction. The authors discovered that the lowest levels of compassion satisfaction existed among pediatric, neonatal intensive care unit, and pediatric intensive care unit nurses, suggesting that nurses working with pediatric populations have the highest levels of CF (Meaders et al., 2010). Nolte et al. (2017)
found that witnessing children “unable to have a normal life” with “too much sadness, and too much death” were stressors that triggered CF among nurses and that as result of witnessing the suffering, grief, or despair of patients and families, nurses reported feelings of powerlessness to help and loss of hope (p. 4373).

Post-traumatic stress

The U.S. Department of Veterans Affairs (USDVA, 2017) defined PTSD as “a mental health problem that some people develop after experiencing or witnessing a life-threatening event” (para. 1). Symptoms of PTSD include reliving or re-experiencing the traumatic event through nightmares and/or flashbacks, purposely avoiding situations or people that trigger the memory of the traumatic event, having negative beliefs and feelings such as guilt and shame, and having hyperarousal with trouble sleeping or concentrating (USDVA, 2017). PTSD symptoms can start soon after a traumatic event or not until months later with symptoms lasting longer than four weeks (USDVA, 2017).

According to a meta-analysis by de Boer et al., (2011), 30% of emergency room personnel (predominantly nurses) reported post-traumatic stress (PTS) symptoms and 37% reported that CIs caused clinically significant distress including social and professional function impairments. Furthermore, the authors found that stigmatizing perceptions existed with respect to PTS symptoms among healthcare professionals which resulted in reluctance and hesitation to seek help (de Boer et al., 2011).

The risk of developing PTSD depends on several factors: the perception of the CI, the individual’s personality and life experiences, and events that may proceed the CI (Skogstad et al., 2013). According to Skogstad et al. (2013), social support, specifically emotional support, has been shown to be protective against the development of PTSD (Skogstad et al., 2013).
Furthermore, although the number of exposures to traumatic events or CIs increased with years of nursing experience, nurses with more years of experience reported fewer PTS symptoms than nurses with less experience (Hinderer et al., 2014; Skogstad et al., 2013).

Research by Adriaenssens, De Gucht, and Maes (2012) on emergency nurses found that death or serious injury of a child/adolescent was perceived as the most traumatizing CI. Furthermore, results showed one out of three nurses met sub-clinical levels of anxiety, depression and somatic symptoms and that 8.5% met clinical levels of PTSD (Adriaenssens et al., 2012). Moreover, social support from both colleagues and supervisors of the unit was found to lessen the incident of PTSD symptoms (Adriaenssens et al., 2012).

**Critical Incident Stress Debriefing**

Manser (2011) discussed the lack of organizational level support in healthcare for CI stress management and presented strategies for organizations to implement to promote adequate prevention and treatment of negative consequences related to CIs such as dedicated support systems with open communication, educational training, clear resources, and personalization of systems to support individual needs. The author found that only 10% of over 3000 physicians felt they were supported by their healthcare organization after a CI (Manser, 2011). Stress debriefing represents an important intervention that can be undertaken to prevent and treat emotional distress and burnout in staff related to CIs. Cho (2015) described debriefing as a reflection facilitated by an open-ended discussion about experiences that occur with the goal of learning and improving on an experience or event. Debriefing can be done after real clinical scenarios and/or simulation. Advanced Trauma Life Support, Advanced Cardiac Life Support, Pediatric Advanced Life Support, and Basic Life Support represent examples of how simulation with debriefing can be an important tool for learning. In clinical practice, obstetrics, pediatrics,
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and critical care have adopted debriefing interventions after stressful events such as cardiac arrest (Cho, 2015). These stress debriefing sessions had positive effects on knowledge, performance, and confidence (Cho, 2015).

Currently in the literature there is no strong evidence evaluating the efficacy of a stress management and debriefing program immediately following a CI in a pediatric OR setting. Keene, Hutton, Hall, and Rushton (2010) described use of CI debriefing sessions for pediatric healthcare professionals including child life specialists, physicians, nurses, and social workers following patient death. Those who participated in debriefing sessions scored twice as high on their ability to handle grief on a 5-point Likert scale post intervention compared to those who did not attend the CI debriefing sessions. Furthermore, self-reported professional integrity was twice as high on a similar 5 point Likert scale (Keene et al., 2010).

Critical incident stress management (CISM) is an established program utilized in a variety of disciplines including healthcare, emergency workers, firefighters and police officers (Müller-Leonhardt, Mitchell, Vogt, & Schürmann, 2014). The United Nations recognized CISM as a standard program worldwide for peer based support (Mitchell, 2008). The CISM program utilizes peers trained by mental health professionals who specialize in stress management after CIs to conduct debriefing sessions (CISD) and to provide educational materials focusing on immediate and short crisis management after a CI. Müller-Leonhardt et al. (2014) examined use of CISM programs in a hospital setting. This study surveyed all hospital staff including nurses, midwives, secretaries, physiotherapists, administrators, clerical officers and chaplains. Study findings revealed that only 58.8% of staff knew about the CISM program despite its implementation several years prior to the survey. When comparing coping strategies of those subjects who had not undergone CISM training and those who did, a significantly greater
number of CISM subjects had more coping mechanisms. These included “asks somebody’s advice on how to behave” (46.9% vs. 75.8%); “tells self that everything will be ok” (44% vs. 66.2%); “tries to keep his/her composure” (40.1% vs. 61.7%); “talks to somebody about problems” (35.7% vs. 61.8%); and “keeps daily routine as normal as possible” (40.3% vs. 72.9%) (Müller-Leonhardt et al., 2014). Furthermore, 36.5% of subjects rated CISM peers as the most common source of support after hospital related CIs followed by colleagues at 20.5% (Müller-Leonhardt et al., 2014).

Another CI stress debriefing program of interest, Schwartz Rounds, was created to prevent and treat negative consequences of CI’s (Adamson, Sengsavang, Myers-Halbig, & Searl, 2018). These rounds consist of an interdisciplinary forum with clinical and nonclinical staff to discuss social and emotional impacts in providing compassionate care directly from patient experiences. Schwartz Rounds are typically one hour in duration and occur at varying frequencies (Adamson et al., 2018). The first 20 minutes involve staff led discussions on topics/themes from the event or incident that occurred and the sharing of feelings and experiences (Adamson et al., 2018). The remaining time is spent in open discussion with the rest of the participants, run by a facilitator to include the emotional reactions from the audience (Adamson et al., 2018). Currently 450 hospitals worldwide are implementing these rounds resulting in decreasing compassion fatigue, work-related stress, and lack of empathy (Adamson et al., 2018). Through thematic analysis focusing on pediatric clinical and nonclinical rehabilitation staff, Adamson et al. (2018) identified the most valuable benefits of Schwartz Rounds as having an open communal discussion, validating and normalizing staff emotions and experiences, offering reassurance, and fulfilling a basic human need from peer support. Secondly, Schwartz Rounds allowed participants to be humanized and to appear authentic by
promoting positive vulnerability throughout all staff (Adamson et al., 2018). Lastly, the Rounds helped to build sense of family and community through promoting an understanding that other people support and feel what others were feeling (Adamson et al., 2018).

**Professional Quality of Life (ProQOL) Scale**

Several measures currently exist for the evaluation of quality of life, depression, CF, and burnout. The Professional Quality of Life Scale (ProQOL5) is a validated tool which measures the negative and positive effects of helping others who experience suffering and trauma (ProQOL.org, 2018). Hunsaker, Chen, Maughan, and Heaston (2015) used the ProQOL5 scale to measure the prevalence of compassion satisfaction, CF, and burnout among emergency room nurses. Results showed that with increased age of the nurse, the level of compassion satisfaction was higher ($r=.260$, $p=.001$) and with younger aged nurses, the burnout score was higher ($r=-.191$, $p=.002$) (Hunsaker, et al., 2015). Slocum-Gori, Hemsworth, Chan, Carson, and Kazanjian (2013) used the ProQOL Scale to examine correlations between compassion satisfaction, CF, and burnout. Findings revealed compassion satisfaction is negatively correlated with both CF and burnout and that a positive association existed between burnout and compassion fatigue (Slocum-Gori et al., 2013).

**Human Subject and Ethical Consideration**

Ethical considerations were identified within this project and addressed to protect participants from unethical practices. Prior to participant engagement, this project was submitted to the University at Buffalo (UB), Institutional Review Board (IRB) for approval (Appendix M). Participants were made aware that participation in this project was voluntary, did not affect their employment at the pediatric hospital, and that they could withdraw from project participation at any time. The primary ethical considerations in this project were confidentiality and privacy. All
handwritten field notes and surveys collected were numbered with no use of participant identifiers. Furthermore, confidentiality was upheld and all information including handwritten field notes, electronic notes, and de-identified transcripts were kept in a locked file cabinet drawer located in the DNP project student’s home office with data access only to the DNP project student. As per UB IRB protocol, this secure information will be kept for three years after the completion of the project, at which time all data will be destroyed. Interviews were conducted behind closed doors and all participants were explicitly asked to keep all information discussed private and confidential before commencement of the focus group session. Participants were made aware that they were free to share as much or as little information as they felt comfortable in the interview sessions and that they had the right to refuse answering any verbal or written questions at any point during the project.

**Project Design and Methods**

To collect data exploring CI, CI stress, and CI stress needs among pediatric nurses working in an OR setting at a local children’s hospital located in Buffalo, New York, a mixed methods sequential explanatory design was implemented for the purpose of this project utilizing the ProQOL5 Questionnaire and semi-structured focus group interview sessions. All pediatric OR nurses employed at the hospital (N =31) were invited to participate in the project. Project inclusion criteria included being 21 years of age and older, having at least one year experience with direct patient care in the pediatric OR setting at the hospital, and speaking the English language. Non-patient care-oriented OR personnel, anesthesia providers, surgeons, and medical residents were excluded from project participation. Of the 31 potential participants, 17 nurses completed the demographic and ProQOL5 surveys and all 17 took part in the focus group interviews. Recruitment strategies included approaching the pediatric OR nurses in person on an
individual basis for potential participation in the ProQOL5 survey and focus group interview sessions. In addition, after IRB approval was granted, 8x10 inch recruitment posters were hung in employee lounges and on locker room doors with information about the project as well as contact information for the DNP project student (Appendix A). Quantitative and qualitative study findings were utilized to guide the development of a CI stress management and debriefing program protocol for the OR nurses working in the pediatric hospital setting.

**Quantitative Data**

Quantitative data was collected through administration of the ProQOL5 survey, a rigorous, validated and reliable method for determining quality of life as described in three main categories: compassion satisfaction, burnout, and secondary traumatic stress (Hemsworth, Baregheh, Aoun, & Kazanjian, 2018) (Appendix B). Questions asked on the ProQOL5 pertained to each of the three categories and were scored on an interval Likert scale. In multiple studies, the ProQOL5 had a reliability of >.70 on Cronbach’s alpha (Hemsworth et al., 2018). Construct validity for the ProQOL5 has been shown with moderate correlation when measured against other depression, anxiety, and stress scales with coefficients of >.40-.50 (Hemsworth et al., 2018). A standardized verbal consent was obtained prior to survey administration (Appendix C). Each participant was given the ProQOL5 survey, a self-reporting questionnaire, at the beginning of enrollment into the project at one weekly scheduled Thursday morning meeting held at the hospital. In addition, demographic data was collected including age, gender, ethnicity, religion, years of work experience, marital status, and number of children (Appendix D).

**Qualitative Data**

Qualitative data was collected through two semi-structured focus group interview sessions held in a quiet hospital conference room during two weekly scheduled Thursday
morning meetings for pediatric OR nurses. Focus group session dates were self-selected by the participants. Guided by findings resulting from the ProQOL5 survey, a semi-structured interview questionnaire was developed to further explore participant’s definitions, thoughts and feelings regarding CI’s, the emotional and physical consequences of CI’s, and the needs and resources to cope and manage CI’s (Appendix E). Again, a standardized verbal consent was reviewed and obtained by participants prior to implementing the focus groups sessions (Appendix F). Each focus group was 30-45 minutes in time and audio recorded using a standard recording microphone connected to a laptop computer. To ensure accuracy in transcription, audio recordings were transcribed by the DNP project student utilizing oTranscribe, a free transcription web application. Field notes were taken during both focus group sessions. Copies of de-identified transcriptions from both focus group interviews were given to the DNP project advisor who is an expert in qualitative research. Thematic analysis was conducted by both the DNP project student and the DNP project advisor first independently and then in collaboration using the Braun and Clarke (2006) thematic analysis method.

**Statistical Analysis**

**Quantitative Data Analysis**

Demographic and ProQOL5 surveys were completed by participants and entered into a data base using Microsoft Excel. The data was then transferred to SPSS for basic descriptive statistical analysis and analyzed using IBM SPSS Statistics version 25. Average scores with respective ranges were compiled for compassion satisfaction, burnout, and secondary traumatic stress. Scores were considered interval data and averages included mean, median and mode for comparison. Demographic data were considered categorical and percentages were calculated for each variable. There was no missing data. Findings from the ProQOL5 questionnaire were
utilized to develop questions for the semi-structured interview questionnaire for the two focus group interview sessions.

**Qualitative Data Analysis**

Qualitative data was analyzed using Braun and Clarke’s (2006) thematic analysis method which consisted of the following 6 phases. The first phase was the immersion phase which began with the DNP project student gaining verbal consent for participant project participation prior to the implementation of each interview session. Once verbal consent was obtained, the DNP project student then conducted the interview sessions using the semi-structured interview questionnaire created for the purpose of the project while recording the sessions and taking field notes to account for all nonverbal participant ques. Following each interview session, interviews were transcribed verbatim onto paper. Transcribed data and field notes were then read and re-read thoroughly by the DNP project student to ensure transcription accuracy. While reading and re-reading the interview transcripts, the DNP project student noted potential themes and patterns that began to emerge from the data.

Phase two of Braun and Clarke’s (2006) thematic analysis method involved coding the data along the margins of each transcript as a means for generating initial codes. Statements were coded into cohesive short phrases containing about 4-6 words. Phrases essentially summarized a few lines from the transcript or notes that corresponded to definitions of CIs, experiences with CI’s, physical and emotional consequences of CI’s, and management of CI’s.

The third phase involved further searching for themes by collating codes into potential themes and then drafting a logical visual thematic map. Using mind-mapping, codes were categorized under themes that fell into main headings. This required looking at the codes in a broader sense to obtain meaningful themes applicable to the project purpose. At this stage, codes
were combined, discarded, or broadened to form a logical thematic map. Each candidate theme consisted of subthemes that further characterized the theme in question.

The fourth phase involved refining the themes so that they met internal homogeneity and external heterogeneity. Each coded data aligned with one of the candidate themes generated. It was important for each theme to be distinct and fit the overall purpose of the project. New themes emerged and concurrent themes were combined. Candidate themes were reviewed in relationship to each other and the data as a whole to make sure they were concordant with the questions being asked and the overall purpose of the project.

Phase five consisted of defining final themes. This included a short description of each theme and how it fit in the overall purpose of the project as well as how it was supported by examples in the data. Narrative accounts were selected to provide support to themes. Furthermore, theme names were reviewed to give a concise and immediate representation of the theme.

Finally, phase six, writing the final project paper, entailed describing and reporting data analysis results and findings by providing the reader with a “concise, coherent, logical, non-repetitive, and interesting account of the story the data tell” (Braun & Clarke, 2006, p. 23). This included how the data provided a conclusion to questions asked within the project (Braun & Clarke, 2006). The themes are described in the results section with a table (Appendix K) and a thematic map (Appendix J) providing a visual representation of the data analysis (Braun & Clarke, 2006).

Results and Findings

Quantitative Data: Demographics and ProQOL5 Results

Seventeen participants were enrolled in the project. All participants completed the initial
demographic survey and ProQOL5 survey. The majority of participants were white females (88%), age 51 years and older (64%). Seventy one percent of subjects were married and had children. Nearly 47% had work experience extending beyond 25 years. Demographic data is presented in Table G1. The mean scores for compassion satisfaction, burnout and secondary traumatic stress were 42, 22, and 22 respectively with ranges of 26-50, 13-32, 15-35. The same median scores were 41, 22, and 21. Participant scores on the ProQOL5 survey are presented in Table 2. The difference for the values accounted for by outliers in compassion satisfaction and secondary traumatic stress are presented in Figure 1. According to the ProQOL5 survey, scores of 22 or less indicated “low levels” of that category, scores of 23-41 indicated “average” levels, and scores of 42 and greater indicated “high” levels. Despite the difference in the means and medians, the average values indicated that subjects had low levels of burnout and secondary traumatic stress with high levels of compassion satisfaction.

**Qualitative Data**

The same seventeen participants who partook in the ProQOL5 survey took part in the two focus group sessions. The main theme emerging from the focus group interview sessions was Experiencing CI. Experiencing CI captured and unified the “nature or basis of the experience into a meaningful whole” (Nowell, Norris, White & Moules, 2017, p. 8). Five additional themes with supporting subthemes also emerged and included the following: Interpreting CI, Post-Event Traumatic Stress, In the Moment, Coping Skills, and Needed Support. A visual thematic map is found in Appendix J.

**Interpreting CI.**

The focus group participants were asked to describe what a CI was. Interpreting CI emerged as theme and was supported by subthemes including life and death, various medical
events, and extraordinary events. Numerous participants described a CI with phrases such as an “unexpected incident”, a “very bad thing”, “out of the ordinary”, and as “some kind of thing that you can’t just streamline a normal flow” which aided in the overall development of the subthemes for this section. The subtheme ‘life and death’ was developed due to participant explanations of CIs as, “doesn’t have to be complete mortality but the possibility” and “life’s in danger”. One participant explained a CI as “a trauma or a case that goes bad… It all becomes, ya know, life and death. And sometimes its death. And… its…its hard for us to deal with it afterwards”. Another participant expressed a CI as “needs more attention than we can give them right now”. Participants described CIs as hemorrhage, head injury, cardiac issue, trauma, codes, and compromised airways; thus, creating the code ‘medical events’. Lastly, participants revealed that CIs don’t “… have to be (about) patient health…. We have had issues where the families have caused a bigger issue and confrontational that way”. The subtheme ‘extraordinary events’ was created and described as “out of the ordinary, that you’re not expecting…” and included events such as “families throwing punches and throwing equipment” to “a robber… off the street (hiding) in a linen cart”.

**Post-Event Traumatic Stress**

Post-Event Traumatic Stress emerged as a theme. The focus group participants were asked to describe stress or stressors following a CI. One participant expressed “Could we of done something better, something else that could of improved it?” and another explained “you’re trying to go to bed and thinking- why didn’t I do something different today?”. Another participant stated, “was there anything that we thought ummm… we could of anticipated better…” and that participant’s response was supported by another participant’s response “going through it in your mind over and over”. These statements along with the phrase “recall” were
voiced by participants in both focus groups and were used to create the subtheme of ‘emotional recall’. A participant expressed that CIs are “so infrequent you kind of feel inadequate after it”. Another stated “sometimes I think as a nursing standpoint, we kind of lose ourselves because we’re... we’re so attentive to what everybody else needs...”. These quotes supported the subtheme of ‘loss of self’.

A third and fourth subtheme expressed as a result of Post-Event Traumatic Stress was ‘patient worry’ and ‘family worry’. Several participants in both focus groups expressed the worry they felt following a CI related to the patient and family unit: “how the family was not prepared for that at all. And it still sticks with me after many years. It didn’t go as planned. And … that, just those kind of things just stick with you” and “I still carry those kids and those moms and stuff with me. I mean everyday I think about that girl… How she doing? Is she home? Because I knew her family unit really wasn’t solid. So you worry.”. Another participant expressed the Post-Event Traumatic Stress of “remembering certain cases or certain patients and what they’re doing now, or what they could be doing now because it didn’t turn out well”.

A fifth subtheme, ‘feeling alone’ emerged as Post-Event Traumatic Stress subtheme. Many participants revealed a feeling of loneliness following a CI. One participant voiced, “I think we do so much for everybody else and there isn’t anyone to do as much for us… there’s sympathy for the family who has the patient, but there’s no sympathy for the caregivers who also had a really bad day because they lost a patient. Or their patient… turned out to be somewhat, ya know, less of an outcome than we had hoped for”. Furthermore, a participant shared “It’s like the parent is saying- this was my child. Okay… But this was my patient. It was also someone to me.”. Another participant expressed “we have an emotional attachment to our work, and people outside the healthcare setting don’t”. Another participant supported this idea with “…I can’t
begin to describe to anybody what I do for a living, and what I go through in a day, and what might have happened at work. No matter what they say, they just can’t help me.”. This idea of feeling alone was supported by another participant’s statement, “I do think nurses, are to some extent are supposed to be super heroes… We are huge emotional support for our patients. But then we don’t have anybody to go to. And we’re not supposed to because we are strong nurses. So its really hard for our nursing community.”

A sixth subtheme supporting Post-Event Traumatic Stress was ‘unsung hero’ which emerged from participant statements such as “The family doesn’t know what we did. They just know the patient came to the operating room. But they don’t know it was HIM taking care of, or HER taking care of… We’re the unsung people. We’re the people behind the door”. Another participant agreed: “They don’t know who we are. And so we kind of get left behind… that this has all kind of fallen on us. That we got this responsibility, this life sent to us and to save. And if we didn’t…you didn’t… You take all that on. That… that child didn’t live, because did I do something wrong?”

The last subtheme supporting Post-Event Traumatic Stress was ‘negative conditioning’. When one participant stated, “every time I hear a helicopter… my hair stands up… I get really nervous”, several participants passionately chimed in “Yes!” in agreeance. Additionally, several participants stated, “when the trauma beeper goes off!” and “every time the phone would ring…” a feeling of “…oh I don’t want to…pick it up… I don’t want to look at the screen. I don’t want to know what’s going on” and “…that you have like a heart attack over” to describe feelings and thoughts associated with being on-call. Another participant added, “well the thing of it is we never know what’s coming in through the door. We don’t know if it’s a head, if it’s a belly…the anticipation of it…” to explain the feelings associated with waiting for the CI to arrive.
In the Moment

The theme In the Moment was described by participants as encompassing both physical and psychological stressors experienced during a CI. Participants described psychological stressors during a CI as being “pulled in a million directions” and “it’s difficult… to find resources”. The psychological subtheme ‘push-pull’ emerged as a result of the discussion between participants involving the challenges of treating both the patient and family during a CI:

Participant A: “you feel very alone…There was nobody to talk to the family…Then I’m trying to find resources. Okay, somebody needs to go out there. We need a social worker. Or somebody.”

Participant B: (interrupts patient A) “…But at the same time you’re taking care of the patient. Which was- how can you do both?” Another participant expressed the push-pull effect as stemming from surgeons stating, “We lost a patient on the table… so they called it. I had a doctor push me and goes, “Okay well that patients gone. So, when’s the next case?”

Furthermore, participants expressed the push-pull effect experienced during the CI as “…everybody else is asking for things. Anesthesia is yelling for you to get something else. And the surgeon might be…asking ya for something. And you might be running…you’re just trying to get things for that person so that they can do the best… if they have to re-intubate, or turn, or position, or cover a wound or whatever. And so your just following through…”

Support for the psychological subtheme ‘second-guessing’ included statements such as “if your worrying about what they’re doing, and maybe you need to get the attending in the room. Or. You know. It can be like a whole extra added baggage that adds more stress” and “Like what should I do? Should I make a phone call? Should I call the attending back in. Do I need some extra help… like I don’t want to ring the buzzard because then if I ring the buzzard then their like crazy, “like OMG…I had it under control!” Another participant stated, “You’re
second-guessing every move because you don’t want to piss someone off, or call the wrong call, or do the wrong thing. And make a mountain out of a mole hill. But at the same time, we are the patient advocate. We’re there to make sure the patient is safe”.

Physical stressors were supported by the subthemes Adrenaline Rush, Increased Heart Rate, and Anxiety. These subthemes emerged from participant statements such as, “I know for me. My heart rate goes up.”, “…your adrenaline… you’re hyper…”, and being “a little anxious. Like… where is this going?” All focus group participants voiced agreement with these statements describing the physical stressors resulting from experiencing a CI.

**Coping Skills**

A fourth theme, Coping Skills, was described by participants as encompassing both positive and negative approaches. Participants were asked to explain how they managed or coped with stressors resulting from experiencing a CI. Positive coping skills were described by participants as “talking about it”, “communication”, and “debriefing”. When the topic of debriefing and co-worker support after experiencing CI was introduced, participants responded, “but that doesn’t happen…hardly ever”. This belief was supported with “No… It was nice” and “…It was nice. I liked it a lot.” Participant discussion revealed communication occurred “to each other” and “with our coworkers”. A participant stated, “…we communicate with each other a lot after the fact, we talk and support each other that way…”. As the conversation continued, the significance of coworker support versus family support emerged. One participant expressed not “want(ing) to put it on them either” when explaining difficulties with family support. Another participant followed with, it’s “not their problem. They have no idea where you’re coming from. A lot of times my family— they’ll tune me out.” Positive coping skills also included ‘yoga’ and ‘positive thinking’ and emerged from statements that included “yoga”,
“think of all the positive things you have in your life”, and “I also go home and thankful for what I have and say— appreciate what you have more.”

Negative coping skills were described by participants as, “lash out”, “wine!”, and “sleep”. One participant stated, “in the immediate, I’ll admit- I lash out… you’ll yell at anybody” when expressing her coping skills following a CI. It should be mentioned that the subtheme ‘compartmentalization’ was deemed a representation of both positive and negative copings skills. Compartmentalization emerged as a result of many participant responses that described the experience of being placed in another case following a CI event. Participant phrases supporting this subtheme included “you have to compartmentalize” and “… for me it’s hard in the same day. But when I go home that night. I decompress totally and I don’t bring it work with me the next day”; “I try to get more sleep…Think of all the positive thinks you have in your life”; and “I think you always carry it with you…” These responses show the differences in participant coping strategies following a CI and their ability or inability to separate work from home.

Needed Support

The last theme that emerged was Needed Support. Focus group participants were asked to describe important characteristics of a CI stress management and debriefing team protocol if the hospital were to create one. The subtheme ‘interdisciplinary team inclusion’ was described by participants as including “anesthesia and OR (staff) maybe together. Then like PICU/ER do their own thing if they came to help. They’re a separate entity”. Another participant stated, “And all the services were there… so it was good… So you learned. But we learned for the next time…”.

A second subtheme, ‘ensured confidentiality’, was described by the participants as “I don’t think I would want management involved in these sessions”; “…things are supposed
to be unbiased, and you know—they’re biased”; “It’s easy to slip up to someone else what you’re going through”; and “I don’t want it going around the OR how unstable I am.” The subtheme, ‘trusted/ familiar faces’ emerged from quotes such as “…the standard of care so you don’t have a constant influx of people. It should be the same people… You need something concrete and consistent.” Further support included the following participant responses: “…what would be nice if specific people involved… would be trained in like trauma situations, post-traumatic stress and all that… they need to be trauma oriented. It would be nice to have one or two assigned… so your familiar with this person’s face. They know who you are…They have some idea who you are. You recognize them. Make it more comfortable in the end…You know, hey- this is someone you can go to” and confirmation that “Your more apt to talk to somebody that you know is present and not just coming through the cracks…”.

The subtheme, ‘immediate care’ was created by participant responses that included: “I think if they showed up they might be used more, as opposed to people calling them.” and “Because nobody…very few people will break down and call and say: “Hey, can we have a counselor come and talk to us?”’. Additionally, a participant felt the need to “address it sooner. The sooner the better. Better to get it out in the open because like you said, you can push it behind”. ‘Immediate care’ was further supported with participant’s belief that it “would be nice… if we had the staff available to give us a little bit of time immediately so you don’t have to jump right into the next case…if you just had a few minutes, even just an extra 15-20minute break before you have to come back and start something else”. Participant support for this subtheme additionally included statements such as, “Ya know, it’s just- “yeah, okay, time to go. (sound of hands clapping). Time to get the next one done.” and “Why’s your turnover so long?” One participant stated, “Ya know, the cop who has to fire his gun during the day should be taken
off the beat… ya know. Ya have to. You should get the chance to debrief and vent before you go on with the next patients care. Cause you got unresolved issues here”. This statement was supported by all focus group participants with one participant stating, “And you shouldn’t have to wait for it” showing the unanimous belief of the importance of ‘immediate care’.

The last subtheme that emerged was ‘follow-up’. This subtheme was supported by participant statements such as “We are like an assembly line here… A lot of times we might do a case and we may not know the outcome. The patient goes to the floor…to the ICU. What happened to that patient?”, “Was it a good outcome? Was it not a good outcome? I have to go up to the doctor sometimes and say, “what happened. How did that patient do… or whatever.”, and “it would be nice if we got feedback…how did the patient do afterwards…That feedback is kinda important.”

**Discussion**

The data collected from the ProQOL5 survey and focus group interviews revealed an inconsistency in data; and, consequently, mixed results. According to the ProQOL5 survey, participants revealed low levels of burnout and secondary traumatic stress with high levels of compassion satisfaction. These results suggest that participants felt as though there is a supportive work environment (low burnout); overall satisfaction with their ability to be an effective caregiver in their job (high compassion satisfaction); and experience low levels of secondary traumatic distress such as symptoms of fear, difficulty sleeping, having images of the event pop into your mind, and avoiding things that remind you of the event (ProQOL.org, 2018).

However, according to focus group interviews, participants revealed high levels of burnout and secondary traumatic distress with lower levels of compassion satisfaction. Uniformed statements such as “it’s hard to go and put my mind… I can’t get my mind on another
case. Because my mind is still on that one”; “your caring, but you’re not as focused and you should be”; and “you’re so preoccupied” revealed participant feelings regarding their effectiveness as a caregiver in their job following a CI; thus, suggesting that the nursing staff is experiencing lower levels of compassion satisfaction then the ProQOL5 results indicated.

High levels of burnout following a CI is explained by participants when discussing support of management and other surgeons as “Why’s your turnover so long?”; “Yea, Okay time to go. (Sound of hands clapping). Time to get the next one done”; “The pushing…” and “so if it’s another doctor in the room, he’s standing there going “when can I do my case?” Participants expressed the feeling of being under-valued, under-appreciated, and being an unsung hero expressing “there’s no sympathy for the caregivers” … “because someone is saying, “okay, clean the room and bring the next patient in”. These statements reiterated participant belief that “we are like an assembly line” and supported the need for time to cope between cases with managerial and surgeon support related to CI and CI-like events when they occur.

Lastly, contrary to ProQOL5 survey results, qualitative data suggested high levels of secondary traumatic stress. Participants revealed feelings of anxiety and self-doubt, changes in sleep, event and emotional recall, avoiding things that remind individuals of the event and negative conditioning associated with a CI or CI event. During the focus group interview sessions, participant stories were shared and discussion of these memories provoked emotional recall. Tears were shed and attempts to suppress feelings of sadness expressed as CI events and the patient and families that were affected by them were discussed by the participants. These feelings were supported with statements that included “you’re looking back at what you did” and “…wondering if you made the right decision, the wrong decision, if you should of done something differently”. Participants reported high levels of secondary traumatic stress with
statements like “it’s hard for us to deal with it afterwards”; “reliving those bad moments”; “carrying around the baggage or your still feeling bad”; and “it sticks in your brain”.

Overall, participants vocalized the need and want for a CI stress management and debriefing team protocol. An executive summary for creating a CI debriefing team for pediatric OR nurses is outlined in Appendix L. While recalling a past experience of CISD following a CI, participants revealed “it was nice. I liked it a lot”— “But that doesn’t happen…hardly ever”. The importance of a “support system” and having the opportunity to communicate with co-workers was voiced by participants. Support services voiced by the participants included immediate removal from the OR following the CI and having an opportunity to vent, or debrief. Participants suggested, “if we could get those people out of the OR and they don’t have to do their next case” and “you could get (a) chance to debrief and vent before you go on with next patients care. Cause you got unresolved issues here” that “… you shouldn’t have to wait for…” as an ideal case scenario.

Participants stressed that debriefing support service personnel should be unbiased, trained in trauma or post-traumatic stress, “familiar” with the department and staff members, and easily recognizable to cultivate a sense of trust and security. Furthermore, “having counseling staff available that is visible… who wants to come and meet with me” who are non-denominational and implemented by management were heavily emphasized characteristics for constituting a CISD team. Participants described an ideal counseling staff as “concrete and consistent” and comprise of an “official” CISD team with one or two assigned individuals to the unit; thus, creating a “standard so you don’t have a constant influx of people”. Support obstacles voiced by the participants were associated with difficulty seeking support services currently offered by the hospital such as employee assistance program (EAP) due to lack of awareness of the program,
the “red tape” of “sorry we can’t let you out of the rooms, we’re too busy” by management, and “very few people will break down and call” on their own time.

Additionally, many participants voiced interest in a CISD that included an interdisciplinary approach that would allow for the development of “strategies to make something better for next time” that would foster an opportunity to learn. Participants wanted a debriefing team that would include an interdisciplinary approach including all OR members involved in the CI: surgeons, anesthesia, surgical technicians, and nursing staff. Participants agreed that a CISD needs to include opportunity for feedback because it “felt better being able to talk about it then” and to discuss what “we did right or what we did wrong”. This immediate feedback would allow staff the opportunity to develop or improve on current action plans and strategies and potentially decrease stressors experienced during future CIs. Moreover, participants reported that finding out patient outcomes “really helps with the closure” and suggested that the CISD protocol should include two sessions. Participants additionally suggested that the first debriefing session be held immediately following the CI or CI event, “that day… the next day, very close to the incident to decompress” and that the second debriefing session be held approximately 1 week later for follow-up. It was conveyed by participants that with CIs, by “address(ing) it sooner” the “fresher it is in your mind”, the less likely “you can push it behind.” These voiced participant strategies supported the development of positive CI coping skills by decreasing the likelihood for burnout and secondary traumatic stress and increasing compassion satisfaction. The desire to talk about the importance of CI debriefing, needed support, and the implementation of a CI stress management protocol and team were demonstrated by the following participant responses: “We could probably talk for another hour” and “It’s therapy for us!”
Lazarus’ Theory of Stress as a Project Theoretical Framework

According to Lazarus’ theory of stress, cognitive appraisal and coping are two critical mediators of stressful person-environment relations. Terms of “life’s in danger”, unexpected incident”, and “very bad thing” that may result in “the last care someone receives just before they die” were used to explain participant’s primary appraisals of CIs. Overall, primary appraisals of CIs were expressed as “care that we give that is outside of the normal routine” and patients that “need(s) more attention than we can give them right now”. In this theory, secondary appraisals occur when the person evaluates if anything can be done to overcome harm or improve the potential for benefit of the patient. Participants expressed interest in hearing from the surgeon and having direct communication with the OR team. One participant stated, “you’re worried about what they’re doing… it can be like a whole extra added baggage that adds more stress… I’m just like thinking. Okay, what do I do next? Who do I call? Where do I need to be? What do I need to order? And it’s like, everything at once”. The combination of primary and secondary appraisals—not knowing the criticality of the patient, self-doubt and uncertainty pertaining to the role of the circulating nurse, anticipation of the unknown, and availability of resources were themes that resulted in an appraisal of the CI event as stressful, challenging and/or threatening.

The second component of Lazarus’ theory is coping. Coping strategies can either be problem focused or emotion focused. Participants highlighted both coping styles when explaining their thoughts and actions to manage specific demands of CIs. Problem focused approaches included talking about the event with co-workers as the number one management or coping strategy following a CI. Participants stressed the need and desire to have a debriefing team to discuss, learn, and grow from experiencing CI events. Emotionally focused coping
strategies performed by the participants included escape-avoidance such as “push(ing) it behind” with oversleeping and compartmentalizing, or thinking of “all the positive things in life” and that “things will be better tomorrow”. Compartmentalization can function as both negative and positive coping skills and is dependent on the situation and the views of the mental health expert. Participants expressed compartmentalization to exhibit both positive and negative coping skill properties during the focus groups interviews. Additionally, participants expressed the self-blame experienced after a CI: “for me, I beat myself up. Like ugh. I get like angry… like why didn’t I do that? Why didn’t I know where that was? Why didn’t I act faster?” and “when you can’t…. you’re trying to go to bed and thinking “why didn’t I do something different today?”.

**Strengths and Limitations**

This DNP project has several strengths as well as limitations. Considering this is the first attempt at establishing evidence for CISM at a pediatric OR in Buffalo, NY, stakeholder buy-in was favorable and supportive for further research and development within this area. Additionally, a heterogeneous group of nurses of all ages and work experiences were included making generalizability more reliable to other pediatric OR nurse populations. Thus, making the procedural design including surveys and interviews easily replicable for future DNP projects and studies.

Several project limitations were noted. Convenience sample and specific population at one institution yields smaller sample sizes and makes generalizability difficult. A sample size of only 17 nurses contributes to the inability to make reliable conclusions. In addition, not all pediatric OR nurses that were recruited, participated in the project potentially creating a self-selection bias. Certain nurses with severe traumatic and emotional distress from a CI may have felt embarrassed or apprehensive about participating in group interviews or answering surveys.
In addition, only one interview was conducted, and recall bias could exist in participants not remembering certain events that could affect thematic analysis and ProQOL5 survey results. With regard to the qualitative data, the thematic analysis relied on the subjective nature of the project student and the project advisor. The quantitative data is primarily descriptive and does not allow comparisons of pre-and post-test outcomes of an intervention. Lastly, the ProQOL5 survey reflected the participant’s feelings related to experiences within the last 30 days. CIs are generally infrequent in nature, as supported by participant statements during the focus group interviews, and not every participant has been involved in a CI event within the last 30 days of the administration of the ProQOL5 survey; consequently, eliminating feelings and issues related to the long-term implications of CI and CI-like events.

Future Implications

The purpose of this DNP project was to explore the perception of CI, CI stress, and CI stress management needs among pediatric OR nurses working in a hospital setting to determine the need for developing a CISD team protocol designed to manage CI stress and increase professional quality of life, job satisfaction, and retention. The results of the project showed discordant results on quantitative and qualitative data regarding the need for developing a CI stress management and debriefing team protocol following a CI. However, qualitative research revealed an overwhelming need for the implementation of such a protocol with participants expressing high levels of CI stress.

By supporting that pediatric OR nurses could benefit from implementing a CI stress management and debriefing protocol team to increase professional quality of life and job satisfaction and retention and reduce risk for burnout, CF, and/or secondary traumatic stress disorder, an argument can be made that the implementation of a CISD team protocol is not only
beneficial to the pediatric OR in Buffalo NY, but that the implementation of this protocol can be of interest and made applicable to any unit experiencing CI and CI events within a pediatric hospital setting.

Further research is needed to determine what debriefing team is most suitable for pediatric OR nurses experiencing a CI. CISM and Schwartz rounds are two debriefing programs that, when used correctly, can increase job satisfaction and retention, reduce risk for burnout, CF, and/or secondary traumatic stress disorder, and enhance healthcare worker professional quality of life, especially among those experiencing CIs. However, differences of the two programs should be noted to further guide future research within this area, particularly related to the timing of the debriefing session. The pediatric OR nurses participating in this project voiced a clear need for immediate debriefing following a specific CI. Additionally, the pediatric OR nurse participants described characteristics of a debriefing team as including the opportunity to learn from the rights and wrongs of the CI event, as receiving patient follow-up, and as fostering an unbiased and trusting environment created by the sense of unity formulated through an interdisciplinary team approach. CISD is a program that allows for the immediate debriefing of a specific CI. Moreover, CISM allows for the discussion of prevention and management of negative consequences related to CIs while facilitating open communication and offering educational training and clear resources for referral if requested following debriefing. Conversely, Schwartz Rounds is a case-based, multi-disciplinary panel presentation that allows sharing of stories, but goes far beyond that of the interdisciplinary team involvement in a single CI event. Furthermore, Schwartz Rounds is a pre-planned event that is held six to twelve times a year. These determinants should guide future research and projects that focus on CISM and its effectiveness for staff within a pediatric OR setting. Future research and projects focusing on
use of Schwartz Rounds should also be considered for its effectiveness related to hospital wide implementation regarding CI stress management needs, teamwork, and bonding amongst hospital departments and staff especially in for those who are exposed to the vulnerability of treating a pediatric population.

Future research and projects should also address additional factors such as focusing on a larger sample size, using a quantitative survey that extends beyond thirty days to make a more accurate depiction of burnout, CF, and secondary traumatic stress considering the infrequent nature of CIs, and extending the research and projects to various units within a pediatric hospital such as labor and delivery and critical care units. Additionally, research and projects should focus on the coping strategies and demographic determinants in predictors of CI stress and CI stress management to further explore trends and strategies to reduce burnout, CF, and/or secondary traumatic stress for those particular determinants. When participants were asked if they felt symptoms such as burnout were related to one CI or multiple exposures, it was unanimously stated that it “develops over time” and from “carry(ing) all these things with you”. Furthermore, participants suggested years’ experience in an OR setting decreased burnout tendencies; therefore, supporting the need for management to provide educational resources earlier in one’s career, specifically for new hires. This is interesting considering the ProQOL5 survey results showed that the majority of participants were over sixty-five years of age and had twenty-five or more years of experience. These results demonstrate the need for management to be proactive rather than reactive when considering approaches to increase job satisfaction and retention and in the development of educational tools to aide in the reduction of the risk for burnout, CF, and/or secondary traumatic stress should also be explored. A more in-depth analysis
of these recommendations will help create a CI stress management and debriefing team protocol that meets the specific needs of the population addressed.
References


Center for Innovation in Research and Teaching. (2018). *Choosing a mixed methods design.*

Retrieved from https://cirt.gcu.edu/research/developmentresources/research_ready/mixed_methods/choosing_design


Appendices
Appendix A

Project Recruitment Poster

ATTENTION ALL PEDIATRIC OPERATING ROOM NURSES

Establishing the Need for a Critical Incidence Stress Management and Debriefing Protocol for Pediatric Operating Room Nurses.

If you are an operating room nurse aged 21 years or older with at least 1 year experience working in a pediatric specialty hospital, you are asked to participate in a research study that will be conducted to explore the perception and experience of Critical Incident (CI) events and CI stress management needs from the perspective of pediatric OR nurses.

This is a two-part study consisting of a 30 minute survey and participation in one of two focus-groups that will take approximately 1 hour. Your decision to participate in the study is completely voluntary and will in no way affect your employment at Oishei Children’s Hospital. Withdrawal from the project is permitted at any time throughout the duration of the study. The survey is designed to prevent any identifying information regarding your participation. If results are published or presented in a public forum, your identity will not be disclosed.

Any questions and concerns that you may have about this study can be answered by Amanda Kosior at (716)803-9329 or by email at alkosior@buffalo.edu

Topics of Consideration:
• Critical Incident
• Burnout
• Compassion Fatigue
• Secondary Post-Traumatic Stress
• Emotional Distress
• Second Victim

When: Tuesday or Thursday morning conference, 7:05am

- November 6th, 2018: Demographic & ProQol Survey
- November 8th, 2018: Focus-Group #1
- November 15th, 2018: Focus-Group #2

Refreshments will be provided during focus-group sessions
Appendix B

Professional Quality of Life Scale (ProQOL5)

### PROFESSIONAL QUALITY OF LIFE SCALE (PROQOL)

**COMPASSION SATISFACTION AND COMPASSION FATIGUE**

(PROQOL) VERSION 5 (2009)

When you [help] people you have direct contact with their lives. As you may have found, your compassion for those you [help] can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a [helper]. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the last 30 days.

<table>
<thead>
<tr>
<th>1=Never</th>
<th>2=Rarely</th>
<th>3=Sometimes</th>
<th>4=Often</th>
<th>5=Very Often</th>
</tr>
</thead>
</table>

1. I am happy.
2. I am preoccupied with more than one person I [help].
3. I get satisfaction from being able to [help] people.
4. I feel connected to others.
5. I jump or am startled by unexpected sounds.
6. I feel invigorated after working with those I [help].
7. I find it difficult to separate my personal life from my life as a [helper].
8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I [help].
9. I think that I might have been affected by the traumatic stress of those I [help].
10. I feel trapped by my job as a [helper].
11. Because of my [helping], I have felt "on edge" about various things.
12. I like my work as a [helper].
13. I feel depressed because of the traumatic experiences of the people I [help].
14. I feel as though I am experiencing the trauma of someone I have [helped].
15. I have beliefs that sustain me.
16. I am pleased with how I am able to keep up with [helping] techniques and protocols.
17. I am the person I always wanted to be.
18. My work makes me feel satisfied.
19. I feel worn out because of my work as a [helper].
20. I have happy thoughts and feelings about those I [help] and how I could help them.
22. I believe I can make a difference through my work.
23. I avoid certain activities or situations because they remind me of frightening experiences of the people I [help].
24. I am proud of what I can do to [help].
25. As a result of my [helping], I have intrusive, frightening thoughts.
26. I feel "bogged down" by the system.
27. I have thoughts that I am a "success" as a [helper].
28. I can't recall important parts of my work with trauma victims.
29. I am a very caring person.
30. I am happy that I chose to do this work.

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YOUR SCORES ON THE PROQOL: PROFESSIONAL QUALITY OF LIFE SCREENING

Based on your responses, place your personal scores below. If you have any concerns, you should discuss them with a physical or mental health care professional.

Compassion Satisfaction

Compassion satisfaction is about the pleasure you derive from being able to do your work well. For example, you may feel like it is a pleasure to help others through your work. You may feel positively about your colleagues or your ability to contribute to the work setting or even the greater good of society. Higher scores on this scale represent a greater satisfaction related to your ability to be an effective caregiver in your job.

The average score is 50 (SD 10; alpha scale reliability .88). About 25% of people score higher than 57 and about 25% of people score below 43. If you are in the higher range, you probably derive a good deal of professional satisfaction from your position. If your scores are below 40, you may either find problems with your job, or there may be some other reason—for example, you might derive your satisfaction from activities other than your job.

Burnout

Most people have an intuitive idea of what burnout is. From the research perspective, burnout is one of the elements of Compassion Fatigue (CF). It is associated with feelings of hopelessness and difficulties in dealing with work or in doing your job effectively. These negative feelings usually have a gradual onset. They can reflect the feeling that your efforts make no difference, or they can be associated with a very high workload or a non-supportive work environment. Higher scores on this scale mean that you are at higher risk for burnout.

The average score on the burnout scale is 50 (SD 10; alpha scale reliability .75). About 25% of people score above 57 and about 25% of people score below 43. If your score is below 43, this probably reflects positive feelings about your ability to be effective in your work. If you score above 57 you may wish to think about what at work makes you feel like you are not effective in your position. Your score may reflect your mood; perhaps you were having a “bad day” or are in need of some time off. If the high score persists or if it is reflective of other worries, it may be a cause for concern.

Secondary Traumatic Stress

The second component of Compassion Fatigue (CF) is secondary traumatic stress (STS). It is about your work related, secondary exposure to extremely or traumatically stressful events. Developing problems due to exposure to other’s trauma is somewhat rare but does happen to many people who care for those who have experienced extremely or traumatically stressful events. For example, you may repeatedly hear stories about the traumatic things that happen to other people, commonly called Vicarious Traumatization. If your work puts you directly in the path of danger, for example, field work in a war or area of civil violence, this is not secondary exposure; your exposure is primary. However, if you are exposed to others’ traumatic events as a result of your work, for example, as a therapist or an emergency worker, this is secondary exposure. The symptoms of STS are usually rapid in onset and associated with a particular event. They may include being afraid, having difficulty sleeping, having images of the upsetting event pop into your mind, or avoiding things that remind you of the event.

The average score on this scale is 50 (SD 10; alpha scale reliability .81). About 25% of people score below 43 and about 25% of people score above 57. If your score is above 57, you may want to take some time to think about what at work may be frightening to you or if there is some other reason for the elevated score. While higher scores do not mean that you do have a problem, they are an indication that you may want to examine how you feel about your work and your work environment. You may wish to discuss this with your supervisor, a colleague, or a health care professional.

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### WHAT IS MY SCORE AND WHAT DOES IT MEAN?

In this section, you will score your test so you understand the interpretation for you. To find your score on each section, total the questions listed on the left and then find your score in the table on the right of the section.

**Compassion Satisfaction Scale**

Copy your rating on each of these questions on to this table and add them up. When you have added them up, you can find your score on the table to the right.

<table>
<thead>
<tr>
<th>3.</th>
<th>6.</th>
<th>12.</th>
<th>16.</th>
<th>18.</th>
<th>20.</th>
<th>22.</th>
<th>24.</th>
<th>27.</th>
<th>30.</th>
<th><strong>Total:</strong></th>
</tr>
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</table>

<table>
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<tr>
<th>The sum of my Compassion Satisfaction questions is</th>
<th>So My Score Equals</th>
<th>And my Compassion Satisfaction level is</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 or less</td>
<td>43 or less</td>
<td>Low</td>
</tr>
<tr>
<td>Between 23 and 41</td>
<td>Around 50</td>
<td>Average</td>
</tr>
<tr>
<td>42 or more</td>
<td>57 or more</td>
<td>High</td>
</tr>
</tbody>
</table>

**Burnout Scale**

On the burnout scale, you will need to take an extra step. Starred items are “reverse scored.” If you scored the item 1, write a 5 beside it. The reason we ask you to reverse the scores is because scientifically the measure works better when these questions are asked in a positive way though they can tell us more about their negative form. For example, question 1. “I am happy” tells us more about the effects of helping when you are not happy so you reverse the score.

<table>
<thead>
<tr>
<th>You Wrote</th>
<th>Change to</th>
</tr>
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<tbody>
<tr>
<td>2</td>
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<td>3</td>
</tr>
<tr>
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</tr>
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<td>1</td>
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</table>

|-----|-----|----|-----|------|------|----|-----|-----|------|-----------|

<table>
<thead>
<tr>
<th>The sum of my Burnout Questions is</th>
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<th>And my Burnout level is</th>
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</thead>
<tbody>
<tr>
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<td>43 or less</td>
<td>Low</td>
</tr>
<tr>
<td>Between 23 and 41</td>
<td>Around 50</td>
<td>Average</td>
</tr>
<tr>
<td>42 or more</td>
<td>57 or more</td>
<td>High</td>
</tr>
</tbody>
</table>

**Secondary Traumatic Stress Scale**

Just like you did on Compassion Satisfaction, copy your rating on each of these questions on to this table and add them up. When you have added them up, you can find your score on the table to the right.

<table>
<thead>
<tr>
<th>2.</th>
<th>5.</th>
<th>7.</th>
<th>9.</th>
<th>11.</th>
<th>13.</th>
<th>14.</th>
<th>23.</th>
<th>25.</th>
<th>28.</th>
<th><strong>Total:</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>The sum of my Secondary Trauma questions is</th>
<th>So My Score Equals</th>
<th>And my Secondary Traumatic Stress level is</th>
</tr>
</thead>
<tbody>
<tr>
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<td>43 or less</td>
<td>Low</td>
</tr>
<tr>
<td>Between 23 and 41</td>
<td>Around 50</td>
<td>Average</td>
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<tr>
<td>42 or more</td>
<td>57 or more</td>
<td>High</td>
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</table>

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Appendix C

Survey Standardized Introduction with Verbal Consent

Thank you for agreeing to voluntarily complete the ProQOL5 survey. My name is Amanda Kosior and I am a senior nursing student currently enrolled in the University at Buffalo’s Doctor of Nursing Practice (DNP) Family Nurse Practitioner program. I am asking you to complete this survey as part of a scholarly DNP capstone project required for the UB DNP program. Before you fill out the survey, one of the ethics requirements for the project is that I obtain verbal informed consent from you to participate. I am going to read a brief description of the project and survey to you and when I am done, you can ask me any questions you may have before completing the survey.

The ProQOL5 survey is a free self-scoring survey commonly used to measure the negative and positive effects of helping others who are exposed to and experience suffering and trauma. The ProQOL5 survey assesses compassion satisfaction, burnout and compassion fatigue. The purpose of having you complete the survey is to help me gain insight about compassion satisfaction, burnout and compassion fatigue among nurses working in a pediatric OR setting. Findings resulting from the survey will help provide information for developing a CI stress management and debriefing team protocol and guideline to promote CI stress management for pediatric OR nurses working in this hospital as a means for increasing professional quality of life, increasing job satisfaction and retention, and reducing risk for burnout, CF, and/or secondary traumatic stress disorder.

Your decision to participate in completing this survey is completely voluntary and will in no way affect your employment at the hospital. The survey will take approximately 30 minutes of your time to complete. There are no right or wrong answers to the survey questions. You have the right to refuse to answer any survey question. You are free to stop taking the survey and to withdraw from survey participation at any point. If you decide to withdraw from survey participation prior to survey completion, your survey will be destroyed. You will not be penalized in any way for choosing to stop survey participation or for refusing to answer a question. There is no cost to you to participate in the survey. If results are published and/or presented in a public forum, your identity will not be disclosed as it will not be recorded in any way that associates your name with participation in completing the survey. To further respect privacy and confidentiality, you are asked not to disclose who participated in completing the survey.

You can contact me at any time at 716-803-9329 or alkosior@buffalo.edu if you have any questions about participating in this survey. If you have questions about your rights as a participant or concerns or complaints about the project and wish to speak with someone who is not directly associated with the project, you can contact the University at Buffalo research participant advocate at 716-888-4845 or researchadvocate@buffalo.edu

Are there any questions about participating in this survey?

Do you agree to participate in completing the survey?

Administer survey.
Appendix D

Demographic Survey

Participant Number: ____________

What is your gender?
   o Female
   o Male
   o Self-identify

How old are you?
   o 21-30 years
   o 31-40 years
   o 41-50 years
   o 51-60 years
   o 61 and older

What is your race/ethnicity?
   o Asian or Pacific Islander
   o Hispanic/Latino
   o White/Caucasian
   o Black/ African American
   o American Indian/Native American
   o Other _______________________

Do you have a Spiritual or Religious belief system?
   o Yes
   o No

What is your relationship status?
   o Married
   o Divorced
   o Widowed
   o Separated
   o Single

How many years experience do you have as an operating room nurse?
   o 1-5 years
   o 6-15 years
   o 16-24 years
   o 25 years or greater

Do you have children?
   o Yes
   o No
Appendix E

Focus Group Interview Questions

1. Describe for me what a Critical Incident (CI) is.

2. Describe for me the stress/stressors you feel after experiencing a CI.
   - Describe emotional distress
   - Describe burnout
   - Describe compassion fatigue (CF)
   - Describe secondary traumatic stress
   - Describe second victim

3. Tell me how you manage or cope with stressors resulting from experiencing a CI.

4. Tell me about any training or education you have had about CI’s and managing CI related stress.
   - Did you have any coursework in school?
   - Did you receive in-services?
   - Did you have any continuing education opportunities?

5. Describe for me what support resources are available to you for coping or managing a CI.
   - Family
   - Work support/resources:
     - Pastoral care

6. Describe for me support services and/or resources important for pediatric OR nurses to cope and manage CI’s.

7. If the hospital were to create a CI stress management and debriefing team protocol, what type of support strategies would be important to help pediatric OR nurses cope with CI stress?
Appendix F

Focus Group Standardized Introduction

Thank you for agreeing to voluntarily participate in this focus group interview session. My name is Amanda Kosior and I am a graduate nursing student currently enrolled in the University at Buffalo’s Doctor of Nursing Practice (DNP) Family Nurse Practitioner program. This focus group interview session is part of a scholarly DNP capstone project required for the UB DNP FNP program. Before we get started with the interview, one of the ethics requirements for the project is that I obtain verbal informed consent from you to participate. I am going to read a brief description of the project and interview session to you and when I am done, you can ask me any questions you may have before the interview session will begin.

The purpose of this focus group interview session is to explore the meaning of CIs and what constitutes a CI experience from the perspective of pediatric OR nurses, to explore the meaning of burnout, compassion fatigue, secondary traumatic stress, emotional distress, and second victim as they relate to a CI from the perspective of pediatric OR nurses, and to explore criteria needed for a CI stress management and debriefing program at the hospital from the perspective of pediatric OR nurses. Findings resulting from this focus group interview session will help provide information for developing a CI stress management and debriefing team protocol and guideline to promote CI stress management for pediatric OR nurses working in this hospital as a means for increasing professional quality of life, increasing job satisfaction and retention, and reducing risk for burnout, CF, and/or secondary traumatic stress disorder.

Your decision to participate in this focus group interview session is completely voluntary and will in no way affect your employment at the hospital. The interview session will take approximately 1 hour of your time and will be audio recorded using a tape recorder. The audio recordings will be transcribed verbatim onto paper for data analysis purposes using no identifiers so that your identity will remain confidential. The audio recordings will be listened to and transcribed only by me, the DNP capstone project student. There are no right or wrong answers to the questions I will be asking you. You have the right to refuse to answer any question I ask you. You will not be penalized in any way for choosing to stop participating in the interview before we are finished or for refusing to answer a question. There is no cost to you to participate in the interview. If results are published and/or presented in a public forum, your identity will not be disclosed as it will not be recorded in any way that associates your name with participation in this interview session. To further respect privacy and confidentiality, you are asked not to disclose who participated in this focus group interview session and anything said within the context of the discussion.

You can contact me at any time at 716-813-9321 or alkosior@buffalo.edu if you have any questions about participating in this interview session. If you have questions about your rights as a participant or concerns or complaints about the project and wish to speak with someone who is not directly associated with the project, you can contact the University at Buffalo research participant advocate at 716-888-4845 or researchadvocate@buffalo.edu

Are there any questions about participating in this focus group interview session?

Do you agree to participate in the focus group session? May we begin the interview?
## Appendix G

### Table 1

Demographic Data

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Gender</th>
<th>88</th>
</tr>
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<td></td>
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<td>31-40</td>
<td>18</td>
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<tr>
<td></td>
<td>41-50</td>
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Table 2

*PROQOL Survey Results*

<table>
<thead>
<tr>
<th></th>
<th>Compassion Satisfaction</th>
<th>Burnout</th>
<th>Secondary Traumatic Stress</th>
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<tr>
<td><strong>Mean</strong></td>
<td>42</td>
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<td><strong>Max</strong></td>
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Appendix I

Figure 1. Box Plot of ProQOL5 Scores
Appendix J

Figure 2. Thematic Map
Appendix K

Table 3

Main themes, subthemes, and supporting quotes

<table>
<thead>
<tr>
<th>Theme</th>
<th>Quote</th>
</tr>
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</table>
| **Main Theme: Experiencing CI** | “I do think nurses, are to some extent… supposed to be super heroes. We have to keep our house running at home. We work extremely hard… we are huge emotional support for our patients. But then we don’t have anybody to go to. And we’re not supposed to because we are strong nurses. So, it’s really hard for our nursing community” … “It’s a stereotype”.

<table>
<thead>
<tr>
<th>Interpreting CI Subthemes:</th>
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<tbody>
<tr>
<td>Life and death</td>
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<tr>
<td>Various medical events</td>
</tr>
<tr>
<td>Extraordinary events</td>
</tr>
<tr>
<td>“A trauma or a case that goes bad… It all becomes, ya know, life and death. And sometimes its death.”</td>
</tr>
<tr>
<td>“(doesn’t)… have to be (about) patient health…. We have had issues where the families have caused a bigger issue and confrontational that way.”</td>
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<table>
<thead>
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<th>Post-Event Traumatic Stress Subthemes:</th>
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<tbody>
<tr>
<td>Emotional recall</td>
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<tr>
<td>Loss of self</td>
</tr>
<tr>
<td>Patient worry</td>
</tr>
<tr>
<td>Family worry</td>
</tr>
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<td>Unsung hero</td>
</tr>
<tr>
<td>Feeling alone</td>
</tr>
<tr>
<td>Negative conditioning</td>
</tr>
<tr>
<td>“You’re trying to go to bed and thinking- why didn’t I do something different today?”</td>
</tr>
<tr>
<td>“…so infrequent you kind of feel inadequate after it”.</td>
</tr>
<tr>
<td>“I still carry those kids and those moms and stuff with me. I mean every day I think about that girl...”</td>
</tr>
<tr>
<td>“I think we do so much for everybody else and there isn’t anyone to do as much for us...”</td>
</tr>
<tr>
<td>“…but they don’t know it was HIM taking care of, or HER taking care of... We’re the unsung people. We’re the people behind the door.”</td>
</tr>
<tr>
<td>“every time I hear a helicopter… my hair stands up… I get really nervous.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In the Moment Physical: Subthemes:</th>
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<tr>
<td>Adrenaline rush</td>
</tr>
<tr>
<td>Increased HR</td>
</tr>
<tr>
<td>Anxiety</td>
</tr>
<tr>
<td>“…your adrenaline… your hyper…”</td>
</tr>
<tr>
<td>“…everybody else is asking for things. Anesthesia is yelling for you to get something else. And the surgeon might be…asking ya for something. And you might be running…you’re just trying to get things for that person so that they can do the best…”</td>
</tr>
<tr>
<td><strong>Coping Skills</strong></td>
</tr>
<tr>
<td>------------------</td>
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<tr>
<td><strong>Positive</strong></td>
</tr>
<tr>
<td><strong>Subthemes:</strong></td>
</tr>
<tr>
<td>• Talking with co-workers</td>
</tr>
<tr>
<td>• Positive thinking</td>
</tr>
<tr>
<td>• Yoga</td>
</tr>
<tr>
<td>• Compartmentalization</td>
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<tr>
<td><strong>Negative:</strong></td>
</tr>
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<td><strong>Subthemes:</strong></td>
</tr>
<tr>
<td>• Wine</td>
</tr>
<tr>
<td>• Oversleeping</td>
</tr>
<tr>
<td>• Lashing out</td>
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<td>• Compartmentalization</td>
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<table>
<thead>
<tr>
<th><strong>Needed Support</strong></th>
<th>“Anesthesia and OR (staff) maybe together. Then like PICU/ER do their own thing if they came to help. They’re a separate entity.”</th>
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</thead>
<tbody>
<tr>
<td><strong>Subthemes:</strong></td>
<td>“I don’t want it going around the OR how unstable I am.”</td>
</tr>
<tr>
<td>• Interdisciplinary team inclusion</td>
<td>“It would be nice to have one or two assigned… so your familiar with this person’s face. They know who you are…They have some idea who you are. You recognize them. Make it more comfortable in the end…”</td>
</tr>
<tr>
<td>• Immediate care</td>
<td></td>
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<tr>
<td>• Follow-up</td>
<td></td>
</tr>
<tr>
<td>• Trusted/Familiar faces</td>
<td></td>
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<tr>
<td>• Ensured confidentiality</td>
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</table>

“Ya know, the cop who has to fire his gun during the day should be taken off the beat… ya know. Ya have to. You should get the chance to debrief and vent before you go on with the next patients care. Cause you got unresolved issues here.”

“And you shouldn’t have to wait for it.”

“It would be nice if we got feedback…how did the patient do afterwards…That feedback is kinda important.”
Appendix L

Executive Summary: Creating a CI Debriefing Team for Pediatric OR Nurses

- Interdisciplinary approach to include surgeons, anesthesia, nursing staff, and surgical technicians involved in the CI.
- Officially set up and implemented following every CI
  - not regulated by management, charge nurse or staffing numbers
- Two sessions:
  - 1st - immediately to 48 hours after the CI *
  - 2nd - approximately 1 week after the first session.
- Session 1 - Two team approach:
  - Technical debrief huddle:
    - Management involved
    - Review of what happened during the case
      - right and wrong
    - Improvement strategies
  - Emotional support team:
    - Management not involved
    - Confidential
    - Includes debriefing support services personnel trained in trauma or post-traumatic stress
      - Familiar with department
      - Recognized by staff
      - Cultivates trust and security
      - Unbiased
      - Non-denominational
    - Exploration of current feelings and stressors
    - Identification and exploration of coping strategies
- Session 2:
  - Follow-up: patient outcome and staff coping
  - Staff educated on available resources in the hospital and community and referral for further counseling and support services if needed.

*If a CI Debriefing Team is not available immediately following the CI, an immediate break and removal from the next scheduled case for staff members involved in the CI is encouraged.
Appendix M

University at Buffalo IRB Approval

October 31, 2018

Dear Amanda Kosior:

On 10/31/2018, the IRB reviewed the following submission:

<table>
<thead>
<tr>
<th>Type of Review:</th>
<th>Initial Study</th>
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<tr>
<td>Title of Study:</td>
<td>Establishing the Need for a Critical Incidence Stress Management and Debriefing Protocol for Pediatric Operating Room Nurses Experiencing Critical Incidences</td>
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<tr>
<td>Investigator:</td>
<td>Amanda Kosior</td>
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<tr>
<td>IRB ID:</td>
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<tr>
<td>Funding:</td>
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<td>IND, IDE, or HDE:</td>
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| Documents Reviewed: | • Rev4_IRB, Category: IRB Protocol;  
• Professional Quality of Life Survey, Category: Surveys/Questionnaires;  
• Recruitment Scripts, Category: Recruitment Materials;  
• Recruitment Poster, Category: Recruitment Materials;  
• Interview Questions, Category: Surveys/Questionnaires;  
• Demographic Survey, Category: Surveys/Questionnaires;  
• Consent_Kosior, Category: Consent Form; |

The IRB approved the study from 10/31/2018 to 10/30/2019 inclusive. Before 10/30/2019 or within 30 days of study closure, whichever is earlier, you are to submit a continuing review with required explanations. You can submit a continuing review by navigating to the active study and clicking Create Modification / CR.

If continuing review approval is not granted before the expiration date of 10/30/2019, approval of this study expires on that date. The Initial Study materials for the project referenced above were reviewed and approved by the SUNY University at Buffalo IRB (UBIRB) by Initial Study Review. Before to 10/30/2019 inclusive. Before 10/30/2019 or within 30 days of study closure, whichever is earlier, you are to submit a continuing review with required explanations. You can submit a continuing review by navigating to the active study and clicking Create Modification / CR.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system.
UB IRB approval is given with the understanding that the most recently approved procedures will be followed and the most recently approved consenting documents will be used. If modifications are needed, those changes may not be initiated until such modifications have been submitted to the UBIRB for review and have been granted approval.

Prior to the expiration of this approval, you will receive notification that it is time for the UBIRB to conduct its periodic review of your study. Studies cannot be conducted beyond expiration date without re-approval by the UBIRB.

As principal investigator for this study involving human participants, you have responsibilities to the SUNY University at Buffalo IRB (UBIRB) as follows:

1. Ensuring that no subjects are enrolled prior to the IRB approval date.
2. Ensuring that the study is not conducted beyond the expiration date without re-approval by the UBIRB.
3. Ensuring that the UBIRB is notified of:
   - All Reportable Information in accordance with the Reportable New Information Form Smart Form.
   - Project closure/completion by the Continuing Review/Modification/Study Closure smart form.
4. Ensuring that the protocol is followed as approved by UBIRB unless a protocol amendment is prospectively approved.
5. Ensuring that changes in research procedures, recruitment or consent processes are not initiated without prior UBIRB review and approval, except where necessary to eliminate apparent immediate hazards to subjects.
6. Ensuring that the study is conducted in compliance with all UBIRB decisions, conditions, and requirements.
7. Bearing responsibility for all actions of the staff and sub-investigators with regard to the protocol.
8. Bearing responsibility for securing any other required approvals before research begins.

If you have any questions, please contact the UBIRB at 716-888-4888 or ub-irb@buffalo.edu.
CRITICAL INCIDENT STRESS MANAGEMENT PROTOCOL

ESTABLISHING THE NEED FOR A CRITICAL INCIDENT STRESS MANAGEMENT AND DEBRIEFING PROTOCOL FOR PEDIATRIC OPERATING ROOM NURSES EXPERIENCING CRITICAL INCIDENCES

Amanda L. Kosior, RN, BSN

Background

- Emergency responders and workers witness and experience events such as serious injury, life-threatening situations, tragedy, and death that strain their ability to function both personally and professionally (Occupational Safety and Health Administration [OSHA], n.d.; de Boer et al., 2011).
- These unexpected events are called critical incidents (CIs).
- CIs cause CIs stressors.

Findik (2015) reported that CI stress reactions can lead to several psychological disorders including:
- Acute stress disorder
- Depression
- Anxiety
- Burnout
- Post-traumatic stress disorder (PTSD)
- Alcohol and drug abuse

Establishing CIs stress management and debriefing protocols for health care providers working in high-stress environments such as those working in pediatric operating rooms (OR) settings with repeated CI exposure is imperative to support their mental health, wellbeing, and professional quality of life.

Critical Incident Stress Debriefing (CISD)

Defining a CI

- A “deviation from the expected route with the potential for an adverse outcome” (Manser, 2011, p. 172).
- “Any event which is not part of the standard operation of a service and which causes, or may cause, an interruption to, or a reduction in, the quality of that service” (Schluter, Seaton, & Chaboyer, 2008, p. 108).
Background

- Protracted and repeated stress responses can eventually progress into significant psychological disorders and health problems.
- According to Hinderer et al. (2014), exposure to prolonged and repeated high-stress scenarios increases professional risk for development of:
  - burnout
  - compassion fatigue (CF)
  - secondary traumatic stress

Consequences of CI Stress

- Individuals cope with stress in different ways, therefore manifesting different stress reactions physically, emotionally, behaviorally, and cognitively (OSHA, n.d.).

- Second victim (Manser, 2011)
  - A second victim is a “health care provider involved in an unanticipated adverse patient event, medical error and/or a patient-related injury who becomes victimized in the sense that the provider is traumatized by the event” (Scott et al., 2011).
  - It is estimated that half of all health care professionals in the United States (US) will experience the second victim phenomenon during their careers (Seys et al., 2013).

Justification and Significance

- Why pediatric OR nurses?
  - HIGH STRESS (Chen, Lin, Wang, & Hou, 2009)
  - OR - high workplace stress and lower job satisfaction
  - Nursing - complexity of job requirements and ability to handle emergent and unexpected situations
  - Pediatrics - specialized and vulnerable population

- OSHA has no standards that apply to the health and safety of workers associated with CI stress.
- Limited research on CI and CI stress management (Stachler et al., 2010; Febelmayr, 2012).
- Further research needed on stress and resiliency among nurses and patient populations, including nursing staff.
Purpose

- To explore the perception and experiences of CI stress, and CI stress management needs among pediatric OR nurse working in a hospital setting located in Buffalo, New York to determine the need for developing a CI stress management and debriefing program designed to manage CI stress and increase professional quality of life, job satisfaction and retention.

Project Question

- How do OR nurses aged 21 years and older with at least 1 year experience working in pediatric specialty hospital in Buffalo, New York, perceive and experience a CI event and needed CI stress management, coping, and support resources following a CI event?

Project Goals

1. To explore the meaning of CIs and what constitutes a CI experience from the perspective of pediatric OR nurses.
2. To explore the meaning of burnout, CF, secondary traumatic stress, emotional distress, and second victim as they relate to CI stress from the perspective of pediatric OR nurses.
3. To develop criteria needed for a CI stress management and debriefing program from the perspective of pediatric OR nurses.
4. To develop a CI stress management and debriefing team protocol and guideline to promote CI stress management for nurses working in a pediatric OR setting as a means for increasing professional quality of life, job satisfaction and retention, and reducing risk for burnout, CF, and second victim traumatic stress disorder.

Theoretical Framework

The Transactional Model of Stress and Coping
- Based on Lazarus' (1976) theory of stress
- A framework for evaluating the processes of coping with stressful events
- Two central concepts:
  - cognitive appraisal and coping
- Positive long-term outcomes are based on cognitive appraisal utilized to evaluate harm, threats and challenges which then results in a process for coping with stressful events.
The Transactional Model of Stress and Coping

According to Biggs et al. (2017):

• Cognitive Appraisal: an individual's evaluation of whether or not a particular encounter with the environment is relevant to his or her well-being, and if so, in what ways.
• Primary appraisal: the person evaluates whether or not a particular encounter is relevant to his or her well-being, and if so, in what ways.
• Secondary appraisal: the person evaluates whether or not the encounter can be eliminated or whether or not the potential for harm can be reduced.

Coping: an individual's effort to bring about a change in the nature of the problem or stressor or to change the emotional, psychological, or behavioral reactions to the stressor.

Coping Styles:

• Problem-focused coping: attempts to reduce the stressor itself.
• Emotion-focused coping: attempts to reduce distress/strain by changing one's cognitive or behavioral reactions to the stressor.

• Primary appraisal + secondary appraisal = significance of the event to the person's well-being

According to Biggs et al. (2017):

The physical and psychological well-being of those experiencing CI stress, as well as their ability to function through a prolonged response, will depend on how they manage (cope) with the stressors they experience.

Relevant: Creating a CISM protocol for nurses working in a pediatric OR setting could teach nurses emotion-focused coping skills to change the way they think about their experience and how they respond to it as well as offering resources to nurses who may need further support in resolving CI stress.

Summary of Literature Review

• Databases searched included CINAHL, PubMed, and MEDLINE
• Limitations: English language and the years 2008 through 2018
• Keywords searched: stress management, critical incident, CI, CI stress, debriefing, coping skills, healthcare, operating room, OR, pediatric, burnout, secondary traumatic stress, PTSD, compassion fatigue, professional quality of life, ProQOL, Schwartz Rounds

Negative Consequences of CI Stress

A) Burnout

As defined by the Mayo Clinic (2018), burnout is “a special type of stress – a state of physical, emotional, or mental exhaustion combined with doubts about your competence and the value of your work.”

- Risk factors:
  - First-hand experience with mortality
  - Personal characteristics:
    - Age
    - Staffing
  - Work environment:
    - Lack of environmental support

- Proven experience with nesting
- Risk for burnout (Biggs et al., 2018)
### Negative Consequences of CI Stress

**B) Compassion Fatigue (CF)**

- Occurs as a result of “emotional residue or strain of exposure to working with those suffering the consequences of traumatic events” (American Institute of Stress [AIS], 2018, para. 2).
- Study of 262 acute care nurses by Hinderer et al. (2014) found:
  - CF higher for those who worked more hours per shift.
  - Higher level for those with weaker coworker relationships and fewer hobbies.
- Compassion Satisfaction (CS)
  - CF is greatly attributed to low CS (Meaders et al., 2010).
  - Lowest levels of CS existed among pediatric nurses.
- Nolte et al. (2017): witnessing children “unable to have a normal life” triggered CF.

**C) Post-traumatic stress (PTS)**

- “A mental health problem that some people develop after experiencing or witnessing a life-threatening event” (U.S. Department of Veterans Affairs [USDVA], 2017, para. 1).
- Symptoms:
  - Re-living the event
  - Avoiding situations or people
  - Difficulty concentrating
  - Hyperarousal
  - Stigmatizing perception amongst healthcare professionals (de Boer et al., 2011).
- Risk factors: the perception of the CI, the individual’s personality and life experiences, and events that may precede the CI (Skogstad et al., 2013).
- Reliving the event
- Avoiding situations or people
- Guilt
- Trouble sleeping
- Shame
- Difficulty concentrating

### CI Stress Debriefing

- 10% of over 3,000 physicians felt they were supported by their healthcare organization after a CI (Manser, 2011).
- Stress debriefing: an intervention to prevent and treat emotional distress and burnout related to CIs.
  - Cho (2015) – a reflection facilitated by an open-ended discussion about experiences that cause the greatest emotional distress or stress.
  - Has positive effects on knowledge, performance, and confidence.
  - No strong evidence in the literature evaluating the efficacy of a CISD in a pediatric CP setting.
  - Two programs associated with CISM: CISM and Schwartz Rounds.
CRITICAL INCIDENT STRESS MANAGEMENT PROTOCOL

Comparing CI Stress Debriefing Programs

<table>
<thead>
<tr>
<th>Critical Incident Stress Management (CISM)</th>
<th>Extracts Standards</th>
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<tbody>
<tr>
<td>enschurbers: emergency workers, firsttimers and</td>
<td>Healthcare</td>
</tr>
<tr>
<td>knowns (H)</td>
<td></td>
</tr>
<tr>
<td>Unilaterally following a CI</td>
<td>Regularly scheduled</td>
</tr>
<tr>
<td>Offers stress training by mental health professionals</td>
<td>In coordination with clinical and nonclinical staff</td>
</tr>
<tr>
<td>Helps workers to develop their skills in stress management</td>
<td>Led by a facilitator</td>
</tr>
<tr>
<td>Allows time to process and reflect on what has happened</td>
<td>Topical overview</td>
</tr>
<tr>
<td>Provides educational materials focusing on</td>
<td>Enhanced a local practice management of the CI</td>
</tr>
<tr>
<td>Immediate and short-term consequences of CI</td>
<td></td>
</tr>
</tbody>
</table>

Professional Quality of Life Scale (ProQOL)

- A validated tool used to measure negative and positive effects of helping others who experience suffering and trauma
- Measures compassion satisfaction (CS), EF, and burnout
- Results of a study by Hunsaker, Chen, Maughan, and Heaston (2015) of ER nurses showed:
  - with increased age of the nurse, the level of compassion satisfaction was higher (r = .260, p = .001)
  - younger aged nurses, the burnout score was higher (r = .191, p = .002)
- Results of a study by Slocum-Gori, Hemsworth, Chan, Carson, and Kazanjian (2013) of nurses showed:
  - CS negatively correlated with both EF and burnout
  - Positive association between compassion and CS

Project Design and Methods

- Sequential Exploratory Mixed Methods Design
- ProQOL 5 Questionnaire and semi-structured focus group interview sessions
- All pediatric OR nurses employed at the hospital (N = 31)
- Inclusion criteria:
  - 17 nurses participated
  - Recruitment strategies:
    - approaching pediatric nurses in person
    - 8 x 10 inch recruitment posters
- 21 years of age and older
- At least 1 year experience with direct patient care in a pediatric OR setting
- English speaking

Quantitative Data

1) ProQOL Questionnaire
   - Covers: Quality of Life (QL), burnout, and compassion satisfaction, and burnout
   - Self-scored on an interval Likert scale
2) Demographic Data
   - Age
   - Gender
   - Ethnicity
   - Religion
   - Years of work experience
   - Marital Status
   - Number of children

[Tables and figures as shown in the document]
CRITICAL INCIDENT STRESS MANAGEMENT PROTOCOL

**Professional Quality of Life**

- Compassion Fatigue
- Burnout
- Secondary Trauma

**Diagnosis**

- Two semi-structured focus group interview sessions
  - Group 1 = 10 participants
  - Group 2 = 7 participants
  - Sessions lasted 30-45 minutes and were self-selected by participants
  - Field notes taken by DNP project student

**Data Collection**

- Interviews audio-recorded and transcribed onto paper by DNP project student
- Transcriptions read and re-read while listening to audio recordings to ensure transcription accuracy

**Analysis**

- Braun and Clarke’s (2006) thematic analysis methodology used
- Thematic analysis performed by DNP project student and DNP project advisor independently
- Completed in collaboration to ensure credibility/confidence of data analysis findings

**Qualitative Data Analysis**

- Phase 1: Focus group interviews, recording the sessions, and taking field notes
- Phase 2: Coding the data
- Phase 3: Organizing the codes into a logical visual map
- Phase 4: Refining the themes so that they meet internal homogeneity and external heterogeneity
- Phase 5: Defining the final themes
- Phase 6: Creating the final manuscript describing the data analysis

**Quantitative Data Analysis**

- Demographic and ProQOL5 surveys completed by participants
- Data entered into a data base using Microsoft Excel then transferred to SPSS
- Averages included mean, median, and mode for comparison
- Percentages calculated for each variable
- Findings utilized to develop the semi-structured interview questionnaire for the focus group interviews

- Open-ended questions with use of probes
Quantitative Data Results and Findings

A) Demographic Results

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female</th>
<th>Male</th>
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<tr>
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B) ProQOL5 Survey Results

Quantitative Data Results and Findings

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<tr>
<th>Compassion</th>
<th>Satisfaction</th>
<th>Burnout</th>
<th>Secondary Traumatic Stress</th>
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Thematic Map Analysis

Main Theme: Experiencing CI

"I do think nurses are to some extent... supposed to be super heroes. We have to keep our house running at home. We work extremely hard... we are huge emotional support for our patients. But then we don't have anybody to go to. And we're not supposed to because we are strong nurses. So, it's really hard for our nursing community" ... "It's a stereotype".

Subthemes:
- Life and death
- Various medical events
- Extraordinary events

"A trauma or a case that goes bad... It all becomes, you know, life and death. And sometimes it's death." (doesn't)... have to be (about) patient health.... We have had issues where the families have caused a bigger issue and confrontational that way.

Post-Event Traumatic Stress

Subthemes:
- Emotional recall
- Loss of self
- Patient worry
- Family worry
- Unsung hero
- Feeling alone
- Negative conditioning

"You're trying to go to bed and thinking - why didn't I do something different today?" ... so infrequent you kind of feel inadequate after it. "I still carry those kids and those moms and stuff with me. I mean every day I think about that girl..." "I think we do so much for everybody else and there isn't anyone to do as much for us..." "...but they don't know it was HIM taking care of, or HER taking care of... We're the unsung people. We're the people behind the door." "every time I hear a helicopter... my hair stands up... I get really nervous."
Executive Summary: Creating a CI Debriefing Team for Pediatric OR Nurses

Session 1: Two sessions:
- Officially set up and implemented following interdisciplinary approach to include surgeons, anesthesia, nursing staff, and surgical technicians involved in the immediate care.
- Technical debrief huddle: not regulated by management, charge nurse or staffing numbers.
- Two team approach: anesthesia and OR (staff) maybe together. Then like PICU/ER do their own thing if they came to help. They're a separate entity.

Session 2: Approximately 48 hours after the first CI with an immediate (immediately) opportunity for staff to debrief and vent before you go on with the next patient's care. Cause you got unresolved issues here."

Participants vocalized the need and want for a CI stress management and debriefing team protocol.

Some idea who you are. You recognize them. Make it more comfortable in the end…"

It would be nice to have one or two assigned… so your familiar with this person's face. They know who you are…They have a positive relationship with you. It's more like a team environment. You can trust them. They trust you."

Some people had no idea anyone that worked where they worked."

"Anesthesia and OR (staff) maybe together. Then like PICU/ER do their own thing if they came to help. They're a separate entity."

"You're second-guessing every move because you don't want to piss someone off, or call the wrong call, or do the wrong thing. And make a mountain out of a mole hill…""

"I also go home and thankful for what I have and say appreciate what you have more.""

"…we communicate with each other a lot after the fact, we talk and support each other that way…"

"Increased HR—your adrenaline… your hyper…"

"…everybody else is asking for things. Anesthesia is yelling for you to get something else. And the surgeon might be…asking you to do something. And you might be running…you're just trying to get things for that person so that they can do the best…"

"…I lash out… you'll yell at anybody."

"I don't want it going around the OR how unstable I am."

"We need to have the chance to debrief and vent before you go on with the next patient's care. Cause you got unresolved issues here."

"It would be nice to have one or two assigned… so your familiar with this person's face. They know who you are…They have a positive relationship with you. It's more like a team environment. You can trust them. They trust you."

"Push second-guessing every move because you don't want to piss someone off, or call the wrong call, or do the wrong thing."

"I also go home and thankful for what I have and say appreciate what you have more."

"…for me it's hard in the same day. But when I go home that night. I decompress totally and I don't bring it work with me the next day."

"We need to have the chance to debrief and vent before you go on with the next patient's care. Cause you got unresolved issues here."

"It would be nice to have one or two assigned… so your familiar with this person's face. They know who you are…They have a positive relationship with you. It's more like a team environment. You can trust them. They trust you."

"Push second-guessing every move because you don't want to piss someone off, or call the wrong call, or do the wrong thing."

"I also go home and thankful for what I have and say appreciate what you have more."

"…for me it's hard in the same day. But when I go home that night. I decompress totally and I don't bring it work with me the next day."

Lazarus's Theory of Stress as a Project Theoretical Framework

ProQOL5:
- High levels of burnout and secondary traumatic stress
- High levels of compassion satisfaction
- Low levels of burnout and secondary traumatic stress
- Low levels of compassion satisfaction

Discussion

Critical Incident Stress Management Protocol

• Identification in data and mixed results.
• ProQOL5:
  - High levels of burnout and secondary traumatic stress
  - High levels of compassion satisfaction
  - Low levels of burnout and secondary traumatic stress
  - Low levels of compassion satisfaction

Participants vocalized the need and want for a CI stress management and debriefing team protocol.
Contribution to Clinical and Professional Practice

- According to the American Association of Colleges of Nursing (AACN, 2006), to improve patient and health care outcomes, organizational and systems leadership skills are critical for Doctor of Nursing Practice (DNP) graduates who are expected to lead initiatives to improve patient care outcomes and influence change at the organizational and policy levels (p. 12).

Role of the APN:

- Often at the frontline in high-risk and high-stress patient care environments.
- APNs often witness and experience physical and psychological consequences associated with exposure to critical incidents (CI) stress-related risks.
- Conduct nursing research and disseminate and integrate new knowledge into clinical practice.
- Serve as a valuable resource to educate, manage, and improve the physical, emotional, behavioral, and cognitive stressors following a CI.

Strengths

- Stakeholder buy-in was favorable and supportive.
- Heterogeneous group of nurses.
- Easily replicable.
- Sample size: One institution.
- Self-selection bias.
- Recall bias.
- ProQOL-5 experiences within the last 30 days.

Limitations

- Sample size.
- Data limitations.
- Self-selection bias.
- Recall bias.
- Data collected within the last 30 days.

Future Implications

- May be of interest and applicable to any unit experiencing CI and CI-like events within a pediatric hospital.
- Further research is needed to determine what debriefing team is most suitable for pediatric OR nurses experiencing a CI.
- CISM vs Schwartz Rounds.
- Research projects should also address larger sample size, a quantitative survey extending beyond 30 days, and include other units within the pediatric hospital such as Labor and Delivery and critical care units.
- Evaluate coping strategies and demographic differences in predicting CI and CI stress management.
- Development of a mixed-methods educational tool, especially for new hires.

References

CRITICAL INCIDENT STRESS MANAGEMENT PROTOCOL


