Using Emotional Empathy to Reduce Workplace Stress & Horizontal Workplace Violence in Healthcare Professionals

Exegesis submitted to

Charles Sturt University

In Partial Fulfilment

of the Requirements for the Degree

Doctor of Health Science

by

Patricia Littlejohn

September 2018
ABSTRACT

Growing evidence from the social sciences suggests that focusing on the empathic self could assist in reducing the workplace stress of health professionals; and in decreasing levels of horizontal violence in health-related workplace settings. The purpose of this research was to test the possibility of, firstly, increasing awareness of emotional empathy in a healthcare setting; secondly, increasing levels of emotion empathy in health professionals, with a view to reducing instances of workplace violence; and thirdly, increasing emotional empathy, with a view to decreasing levels of workplace stress.

The ethics approved study was conducted utilizing a mixed-methods design that incorporated both quantitative (‘Survey’) and qualitative (‘Qualitative Description’) approaches to collecting data. Participants were recruited from inpatient surgical staff and ambulatory surgical staff located within a perioperative health setting located in the United States of America. Participants located in the inpatient surgical setting received interventions that included education, focus group discussions, and one-to-one interviews. Participants located in the ambulatory surgical setting received no interventions and thereby formed a ‘control’ group. Data were collected using both quantitative and qualitative approaches, with the participants in the control group participating in the quantitative data collection alone.

Quantitative data were obtained through three validated instruments: Balanced Emotional Empathy Scale, Perceived Workplace Stress Scale and Horizontal Workplace Violence Survey. These questionnaires were tested at three individual time intervals (beginning, middle and end of the data collection period). Analyses of data generated by the three questionnaires included time (survey event) and group influences, both of which were tested for statistical significance. The initial quantitative results (beginning of data collection period) revealed real time knowledge of the actual workplace violence, stress and empathy levels of staff, across the three survey times. These results were collated, at the three different intervals, and used by the researcher to guide the development of the educational and focus group intervention sessions.

The qualitative approach used questions adapted from the three survey instruments, and preliminary findings, to guide focus group discussions and one-to-one interviews. This permitted a deeper understanding of the issues being studied and also provided a means by which participants could reflect upon their learning and support development of empathy awareness.
and/or emotional empathy in staff.

Results from the statistical analysis of the surveys were not definitive. For example, despite the use of an educational intervention to raise awareness of develop emotional empathy, the empathy and perceived horizontal workplace violence raw scores were different for the two groups. Interestingly, perceived workplace stress, overall, was not statistically different – although the control group demonstrated higher levels of empathy. Also, there was a significant difference in conflict scores – with the intervention group scoring higher. Likewise, the intervention group showed no statistically significant changes in levels or emotional empathy nor perceived workplace stress, despite the interventions received.

The study revealed significant differences in the groups themselves. For example, the control group – that is, those who worked in the ambulatory surgical setting – demonstrated higher levels of empathy. Though the study did not attempt to understand this result in and of itself, the results did suggest two things. Firstly, awareness raising and education alone is not the answer to the challenges of workplace violence nor in increasing levels of emotional empathy. Secondly, there is a need for further study on how to increase empathy levels and reduce WPV for staff working in a highly stressful inpatient surgery area with more critically ill patients.

Findings from the qualitative findings were valuable as they provided additional insights into the factors that generate high levels of empathy in perioperative staff. Participants were provided with an opportunity to consider the issues involved and suggest how changes could be made, in the future.

The exegesis concludes with a discussion of the possible causative factors for the results. It also identifies the practice change that was effected by the study. For example, many researchers suggest ‘more education’ as the answer to a range of issues. This study found that education did not make a different – and suggests a different way forward, for managers of the future. Also of note was the cultural change that was effected for participants by virtue of their involvement. Many clinicians see research as an activity that ‘someone else’ undertakes or participates in. Involvement in this research enabled the research participants to see how they can be part of an evidence-based practice solution.

Following this discussion, recommendations are provided for practice change. Additional recommendations are also made in relation to the future research that is needed, to more closely
consider the difference in these conflict and empathy scores between the intervention and control groups located in the perioperative settings.

**Keywords**

perioperative, empathy, stress, horizontal workplace violence, conflict
ACKNOWLEDGEMENTS

I am forever grateful for my endlessly supportive, patient and loving husband, Edward Littlejohn, MD, who helped me to maintain lower stress levels and provided me with much quiet time throughout my doctoral quest. I would also like to thank my three sons, Adam, Eric and Alex Littlejohn. They too supported and encouraged the time I could not spend with them. In addition, I would like to give considerable thanks to my supervisors, Associate Professor Andrew Crowther, and Dr. Michael Kemp, for their guidance, support, suggestions and calm humour throughout this long process. Additional thanks must also go to Professor Catherine Hungerford, who supported me to revise the exegesis. No less do I thank the perioperative staff who actually participated in this study, though also the larger worldwide perioperative staff who have worked with me throughout my career. Final thanks are to the nursing leadership team, especially Tina Bray, Chief Nursing Officer, at my current place of healthcare employment for their support and encouragement as I completed this study. This project could not have been completed without encouragement from each and every one of you.
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CHAPTER 1:
INTRODUCTION

Background

A shadow that continues to hang over healthcare facilities worldwide and presents ongoing challenges for nursing leaders across the globe, is workplace violence (WPV), also known as lateral violence, horizontal violence, and bullying (Johnson & Rea, 2009; Sheridan-Leos, 2008). In the healthcare sector, the socially and professionally inappropriate behaviors associated with WPV include the covert and overt acts of aggression of one healthcare professional towards another (Woelfle & McCaffrey, 2007). Manifestations of WPV can be the physical, psychological, emotional, sexual – verbal and / or nonverbal (Bigony et al. 2009). WPV behaviors are evident across the health professions, including nursing, (Laskowski-Jones, 2010), with reports of WPV in healthcare settings evident for some decades (Woelfle & McCaffrey, 2007).

In this chapter, I introduce the notion of WPV in healthcare settings, with a particular focus on the perioperative healthcare setting. My discussion includes the impact of WPV upon the healthcare workforce, and the issues that WPV presents to nursing leaders, other health professionals, patients and the community. Following this, I provide an overview of my research study, which aims to reduce levels of WPV in a perioperative setting. This overview includes the research questions and a definition of key terms used throughout my exegesis. I then explain the term ‘exegesis’ as the particular genre of writing that shapes this document, and outline the particular requirements of the exegesis. I conclude with a summary of the introductory chapter, and look forward to Chapter 2.

WPV and Its Impact

As noted above, WPV comprises both overt and coverts acts of lateral violence, horizontal violence, and bullying; and can be be physical, verbal, and/or nonverbal. WPV in the healthcare sector can occur between patients, patients and staff, and also between staff. For the purposes of this study, WPV relates to behaviors that occur between health professionals.
Many health service managers, including nurse managers, together with researchers, have pondered the reason why WPV exists in healthcare settings. One possible reason is that many health settings are often high stress environments (e.g. Hutchinson, 2009; Jackson & Haigh, 2010; Vessey, DeMarco, Gaffney & Budin, 2009). Indeed, a large national US-based survey, completed and published by the Vickie Milazzo Institute (2014), revealed that nurses in the United States of America (US) experience extreme levels of stress. This included nurses who work in perioperative settings – that is, settings that support patients before (pre-operative), during (intraoperative), and after (postoperative) they experience surgical procedures (Mosby's Medical Dictionary, 2016).

The impacts of WPV are well documented. For example, rude and disruptive behavior among perioperative professionals poses a serious threat to patient safety and overall quality of care (Fudge, 2006; Girard, 2004). Rosenstein and O’Daniels (2005, 2008) and Rosenstein (2009) also identified a strong link between WPV, disruptive, emotionally un-intelligent behavior, and poor patient outcomes. Likewise, Clark, Olender, Cardoni, and Kenski (2011) and the American Nurses Association (ANA) (2015) reported that incivility in healthcare leads to unsafe working conditions, poor patient care, errors, increased medical costs, preventable injury and the potential of death. Another effect is lower levels of retention (Vickie Milazzo Institute, 2014).

Despite the years of ongoing discussion, interventions and studies undertaken on WPV in healthcare settings, associated behaviors continue to be an ongoing issue for practitioners and managers alike (Farrell, Bobrowski, & Bobrowski, 2006; Johnston, Phanhtharath, & Jackson, 2010; Sheridan-Leos, 2008). To date, however, much of the WPV research in healthcare has focused predominantly on how such behaviors affect individual nurses and impact workforce, particularly in relation to the staff members’ levels of burnout and/or intention to leave the profession (Clark & Cheung, 2008; Dellasaga, 2009).

**The Role of Education and Communication in Reducing WPV**

To respond to the challenges related to WPV in health settings, the American Association of Colleges of Nursing (AACN) and the Robert Wood Johnson Foundation (RWJF), in the US, together established the Quality and Safety Education for Nurses (QSEN) program in 2015. The
The main function of QSEN within nursing and interprofessional teams (such as perioperative departments) is to effectively foster open communication, mutual respect, and shared decision-making (Littlejohn, 2012). Likewise, Deao (2013) shared the areas where perioperative relationships can improve, and why improving these skills is so critical in the delivery of healthcare today, by pointing out that effective communication is directly linked to safe and reliable patient care.

Even so, Claudia et al. (2012) found that perioperative leaders either do not have the time or fail to realise that such collaborative communication skills are underdeveloped traits in many perioperative clinicians (Claudia et al., 2012). It is therefore important to highlight, to perioperative leaders, that transformational, emotionally empathic leaders have an opportunity to influence and embrace the quality of patient care and encourage safe patient outcomes by encouraging collaborative communication in the context of WPV. The study described in this exegesis was part of the solution, to develop emotionally empathic leaders.

**Future Workforce Needs and Perioperative Settings**

High stress environments that are characterised by WPV lead to higher levels of staff attrition (Department of Health and Human Services, 2015). Low levels of retention are a particular concern in light of ongoing workforce issues that continue to challenge planning for the future. Such challenges include the ageing health workforce in the US, with the upcoming retirement of health professionals, in particular nurses, presenting difficulties for health service managers, organizations and governments, worldwide (Department of Health and Human Services, 2015).

Having said that, the 2008 recession in the US delayed the retirement of many Registered Nurses (RN). Indeed, and according to the US Bureau of Labor Statistics (BLS) (2017), hospital employment rose 0.15% in May of 2017 to seasonally adjusted 5,104,400 workers; reported as 7,400 more employees than in April, 2017 and 95,500 more than in June of 2016. Table 1 shows the increase in the number of hospital employees in the US, across 2 years, with the BLS also reporting that the employment of RNs is projected to grow 16% between 2014 and 2024. By 2025, the Health Resources and Services Administration (HRSA) report says there will actually
be a national excess of 340,000 RNs and 59,900 Licensed Practical Nurses. Subsequent to 2025, however, the future is less certain.

Table 1: Employees on Nonfarm Payrolls by Industry Sector and Selected Industry Detail

<table>
<thead>
<tr>
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<th>Not seasonally adjusted</th>
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<th>Seasonally adjusted</th>
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<tr>
<td>Hospitals</td>
<td>5,019.5</td>
<td>5,084.8</td>
<td>5,085.6</td>
<td>5,109.2</td>
<td>5,020.1</td>
<td>5,096.4</td>
<td>5,099.3</td>
<td>5,111.0</td>
<td>11.7</td>
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While these overall numbers in relation to hospital employees are encouraging for the health workforce generally, the situation is less positive for perioperative settings. For example, according to Wood (2017), 22% of respondents to questionnaire circulated about salaries and careers within the perioperative settings, said that they planned to retire between 2017 and 2020. Those who responded also noted they were highly concerned about the dearth of experienced new operating room (OR) employees, resulting in a lack of employee engagement among current OR staff. This suggests one possible reason why Sherman, Patterson, Avitable, and Dahle (2014), who also reviewed the imminent ageing out and replacement of perioperative staff, concluded that the security of future perioperative care should cause apprehension to all nursing leaders.

Specifically, and according to an American Association of periOperative Room Nurses (AORN) (2015), by 2020 the current shortage of RNs working in this setting will definitely escalate. It is anticipated that this escalation will, in turn, produce a grave reduction in perioperative nursing’ knowledge, challenging safe patient care and achievement of optimal outcomes (Roche, Diers, Duffield & Catling-Paull, 2010). For this reason, the AORN (2015) strongly supported a trifold plan of immediate action, consisting of an integration of
perioperative content into pre-licensure education for nurses, using ORs for real time clinical learning and the establishment of perioperative nurse residencies. The AORN (2015) also recommended an immediate implementation of this plan to address this impending perioperative staffing shortage in the US.

**Statement of the Problem**

There are ongoing challenges for organizations, leaders and managers who are committed to reducing WPV in healthcare settings (Brooks, Thomas, & Dropplemann, 1996; Dunn, 2003; Hamlin & Gilmour, 2005; Hughes, 2003; Thomas, 2012). As already noted, in the US, such behaviors were more formally recognised as a patient safety issue, as described by the Joint Commission (JC) (JC, 2010), when it instituted National Patient Safety Goals (NPSGs) around bullying and harassment to address WPV in hospitals. A particular focus was more acute or high-stakes, pressure-packed environments, such as perioperative departments.

**Issues and Experiences Reported**

I have had many years of working with perioperative staff (1975-2018) as an RN (circulating and scrub roles, perioperative educator, trauma and vascular programs lead, director and administrator), in Australia, the Middle East and the US. This includes first-hand knowledge of the conflict and incivility experienced in perioperative environments, as an experienced perioperative RN. My experience has given rise to my interest in studying conflict and incivility in the perioperative setting and a determination to ‘make a difference’. Although perioperative staff are generally compassionate caregivers, I noted that they were also faced with a variety of workplace stressors (Littlejohn, 2012). I saw that this led to perioperative staff demonstrating less-than-effective emotional responses at any given time. For example, perioperative staff can be tired and stressed from working long shifts, including factors such as overtime hours; being on-call for the OR; and being responsible for heavy patient loads that can consist of critical care patients. Perhaps as a consequence, all too often, I had sometimes directly observed perioperative staff being in conflict with and inflicting stress on one another.

My experience with the capacity of perioperative staff to exhibit both compassionate care and WPV behaviors, suggested to me, strongly, the need for a deeper understanding of personal
emotional empathy, via education. I wanted to see if education could be effectively used as a tool to alleviate workplace stress. Such an investigation would ideally lead to a clearer understanding of the related trigger points for WPV. I also wondered if this clearer understanding could lead to reductions in individual instances of WPV, and conflict in perioperative settings. My curiosity eventually gave rise to the research described in this document.

**Study Aims and Purpose**

There have been numerous studies on perioperative bullying, WPV and abuse (Beyea, 2004 & 2008; Chipps, Stelmaschuk, Alberrt, Bernhard & Holloman, 2013; Frederick, 2014; McNamara, 2012; Plonien, 2016). Research has also been conducted to identify how to decrease WPV behaviors (Ançel, 2006; Cvetic, 2011; Kaplan, Mestel & Feldman, 2010; Morath, 1989; Morath, Filipp & Cull, 2014; Smith, 2010). When my research was initially planned, however, no research findings could be located that focused on the role of emotional empathy in reducing levels of perceived workplace stress and WPV; likewise, it was not known to what extent empathy could mediate the effects of WPV and stress in the perioperative workplace.

Suggestions from Chen *et al.*’s (2009) study of job stress, stress-coping strategies, and job satisfaction for nurses conducted in Taiwan, included recommendations for “hospitals to increase the quantity and the quality of stress relief courses and to offer self-esteem-related training programs to assist nursing staff to adopt constructive stress-coping strategies” (p.199). Cherniss, Goleman, Emmerling, Cowan, and Adler (1998) and Cherniss, (2009, 2010) all concur with this recommendation, and report that there now is a considerable body of research suggesting the majority of people possess an aptitude to sense, recognise, and manage emotion. Further, these studies provided the foundation for the kinds of social and emotional competencies that are important to succeed in life.

In this context, I conjectured that by raising awareness of WPV in a perioperative setting, and using interventions to raise awareness and educate staff on emotional empathy, study participants would be supported to increase their capacity to manage workplace stress and WPV. At the end of the study, I imagined that participants would have the ability to begin to collaborate as a more cohesive unified department and to care for each other. I therefore decided to focus my study on increasing awareness of emotional empathy, in the perioperative workplace; and
gauging if this increased awareness would reduce levels of perceived stress and WPV in perioperative workplace settings.

Based on my reading, I knew my proposed study was both unique and significant because it would address areas that have not been extensively studied in the perioperative area; and that it would provide substantive data and materials for all perioperative healthcare staff, human resources leadership, and hospital administrators. I also hoped that the study outcomes would provide a knowledge base and toolset to directly guide, not only healthcare leaders but also health and social workers, policymakers, academics and institutions of higher education and industry senior management, to achieve authentic changes in practice.

**Research Questions**

Research questions serve to narrow the research focus (Grinnell & Unrau, 2008). In addition, research questions are derived from the literature review (see Chapter 2), with a view to addressing ‘gaps’ or areas in need of more research that are identified in the research literature. For will be explained in Chapter 2, my research questions are:

**Quantitative:**

1. To what extent is it possible to increase awareness of emotional empathy in the perioperative workplace?

2. To what extent does increasing emotional empathy, reduce instances of perioperative workplace violence?

3. To what extent does increasing in emotional empathy over time, lead to a decrease in perioperative workplace stress?

**Qualitative**

1. What is the relationship between empathy and stress for perioperative staff?

2. What is the relationship between perioperative staffs’ levels of stress and their perceptions of using empathy to reduce WPV?

3. What is the difference in perceived workplace stress and empathy levels between Inpatient perioperative staff (D1) and Ambulatory perioperative staff (D2)?
I have provided the questions now, to enable a great focus for the examiners and other readers.

**Definitions of Terms**

A number of key or commonly used terms were utilized throughout the study. There was a need to define these terms to minimize confusion or misunderstanding and ensure that all those involved in the study had a common understanding of the following terms:

**Bullying** was defined as one or more of the following: (a) a personal attack, including isolation, intimidation, and degradation; (b) erosion of professional competence and reputation; and (c) attack through work roles and tasks that included interference with getting the work done (Hutchinson *et al.*, 2010).

**Emotional Empathy (EE)** was defined as a person’s vicarious experience of another person’s emotional experiences -- feeling what the other person feels. In the context of personality measurement, EE describes individual differences in the tendency to have emotional empathy with others (Mehrabian, 1997a).

**Emotional Intelligence (EI)** was defined as the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional meanings, and to reflectively regulate emotions so as to promote both better emotion and thought (Mayer & Salovey, 1997).

**Horizontal (lateral) Violence (HV)** was defined in accordance with the work of Griffin (2004), who described HV in the nursing profession as “nurses covertly or overtly directing their dissatisfaction inward towards each other, towards themselves, and towards those less powerful than themselves” (p. 257).

**Operating Room (OR)** was defined as a room within the surgical suite that meets the requirements of a restricted environment and is designated and equipped for performing operative and other invasive procedures (AORN, 2014).

**Perioperative** was defined as the time before (pre-operative), during (intraoperative), and after (postoperative) surgery (Mosby's Medical Dictionary, 2016).
RN was defined as the designation given to an individual who is licensed to practice professional nursing at the level of ‘Registered Nurse’, holds ultimate responsibility for direct and indirect nursing care, is a graduate of an approved school for professional nursing, and is currently licensed as an RN pursuant to state requirements (Rules and Regulations, n.d.).

Stress was defined as a state of mental or emotional strain or tension resulting from adverse or demanding circumstances (Oxford Dictionary, 2017).

WPV in health settings was defined as the socially and professionally inappropriate physical, emotional, psychological, sexual – verbal and/or nonverbal, overt and/or covert – behaviors perpetrated by one or more health professional towards one or more other health professionals, while at work (Bigony et al., 2009; National Institute of Occupational Safety and Health (NIOSH), 2014; Woelfle & McCaffrey, 2007).

Work (Place) Stress: the psychological or physiological responses to work stressors or events that create demands that tax or exceed an individual's adaptive resources (Morgan, Semchuk, Stewart & D'Arcy, 2002).

The Exegesis as a ‘Point of Difference’

The study is reported using the ‘exegesis’ form of writing. This genre of writing is used in line with the requirements of the doctoral course that guided the study. The exegesis differs from the traditional thesis in a range of ways. Of particular note is that the fact that the exegesis is a critical explanation or interpretation – in this instance, a critical and interpretative explanation of the study that includes the research journey and reflections of the researcher. In addition, the exegesis should be read alongside the exegetical portfolio.

This ‘point of difference’ suggests why the document is written in the first person and uses a reflective and reflective voice (Kroll, 2004). The original contribution expected in doctoral study relates to contribution to practice or changes in practice that occur as part of the investigation, rather than the more theoretical focus of the doctoral thesis. Finally, the exegesis must be read alongside the comprehensive portfolio, which is also provided to meet the requirements of course.
Structure of Exegesis

My exegesis is structured as follows, with the outline below suggesting some ‘sign posts’ for readers. Such signposts enable readers to understand the explanation and interpretation of my study using the exegetical form:

Chapter 1 includes introduction, background, statement of the problem, overview of the study, aims and objectives, significance, structure of the thesis, and a very brief summary of the study.

Chapter 2 comprises a discussion of the literature reviewed, providing the background and rational for the, supporting by research reported in peer-reviewed journals, government policy documents, reports from professional associations, and so on. This includes discussion of research regarding EE and its impact on perioperative workplace stress and WPV.

Chapter 3 introduces the research design, study setting and sample, analytical approaches, and ethical considerations. The chapter also includes conceptual and operational definitions, and a rationale as to why a mixed-method research design was chosen, including an explanation of the ‘Survey’ and ‘Qualitative Description’ methods utilized. In addition, an overview is provided of the key variables being studied, including an outline of survey instruments utilized – that is, the Balanced EE Scale (BEES), Perceived Workplace Stress Scale (PWSSI) and Horizontal WPV Survey (HWPVS).

Chapter 4 provides a description of study activities, previous perioperative teamwork findings, further detail of the study setting and sample, the survey instrument administration and data collection processes; an explanation of the interventions, which included focus group sessions and interview process and educational sessions; methods of data analysis; and results’ validation.

Chapter 5 presents the results and findings – both quantitative and qualitative – that were generated through the data collection and analysis. A section is also provided where the results and findings are triangulated.

Chapter 6 discussed the findings, with a particular focus on critical and interpretative explanation of the findings. In addition, I outline the study’s strengths and limitations.

Chapter 7 provides conclusions in relation to the concepts measured, recommendations for future practice, recommendations for future education, linkages to other research,
recommendations for further research. The chapter also outlines the contributions from this study to the development of practice.

**Summary and Conclusion**

WPV and high levels of workplace stress are evident in many health settings, worldwide, including perioperative settings. This has the potential to affect the retention of staff in acute health environments and also affect patient outcomes.

There is a lack of research that focuses on the role of EE in reducing levels of WPV and perceived stress in the workplace. With a view to bringing about much needed change in the workplace, I proposed a research study that aimed to increased levels of EE in perioperative staff, and thereby reduced levels of WPV and workplace stress. In addition, I hoped to improve understanding of how each of these factors affected the other in the perioperative health setting.

The next chapter, Chapter 2, provides a more detailed discussion of the literature related to this topic. The discussion includes consideration of WPV, EE and also the preoperative settings for RNs.
CHAPTER 2:
LITERATURE REVIEW

The previous chapter introduced the current state of WPV (i.e., incivility, bullying, and conflict) in the general areas of healthcare and nursing and, more specifically, in perioperative areas. This chapter reviews what is known about WPV, relationships between stress and WPV, and introduces the mitigating effects of empathy on WPV and stress. Although there is a substantial amount of research regarding perioperative workplace conflict and stress, there is a limited number of studies regarding empathy and even fewer incorporating perioperative empathy as an effective tool to minimise perioperative stress or perioperative conflict.

This literature review ascertained the current understanding of the research topic, pinpointed gaps in existing knowledge, and identified needs for future research (Robinson, Saldanha, & Mckoy, 2011). An additional objective of this literature review was to examine studies on workplace stress and empathy as a possible framework for understanding the environment in which WPV occurs. This framework addresses factors such as workplace stress and empathy as responsive behaviors, organizational and regulatory mandates and nurse-nurse, plus nurse-physician relationships.

**Integrative Research Process**

An integrative review method was chosen as the research process for this study, as it allows for the combination of diverse methodologies, and has the potential to play a greater role in evidence-based practice for nursing and healthcare in general (Whittemore & Knafl, 2005).

**Data Sources**

A database search of the Charles Sturt University Primo Search engine provided access to scholarly journal databases. From that platform MEDLINE, SCOPUS, CINAHL, EBSCO HOST, SAGE and PROQUEST databases were accessed. This database search was followed by a search of leading perioperative journals: *AORN Journal* (American Journal of periOperative
Nursing, (USA), Journal of Perioperative Nursing (Australian College of Perioperative Nurses), and Collegian (UK). Duplicate studies were identified throughout the database search for full text studies.

During the preparation and planning for this study, all care was taken to ensure the relevance of assessment items to professional practice and its context. A critical assessment was done of current published research relating to EE, perceived WPV, and stress among perioperative teams. This was achieved by completing a detailed literature review of proposed methodology tools concerning how the most effective teams keep dysfunctional conflicts to a minimum, in part by engaging in healthy conflict and sustaining emotionally empathic behavior.

Because of the complexity of this model, multiple concepts were used in the search process. The review of the literature was guided by the following keywords: nurse stressors, workplace stress, bullying, workplace conflict, perioperative, OR, horizontal (lateral) WPV, EI, and empathy.

Data Extraction Results

The following healthcare related professional organizations’ websites were also searched for pertinent information related to the concepts of this project:

- ANA
- American Association of Critical Care Nurses
- AACN
- American Organization of Nurse Executive
- Association of Perioperative RNs
- Australian College of OR Nurses
- Agency for Healthcare Research and Quality
- Institute for Healthcare Improvement
- Robert Woods Johnson Foundation
- The JC
Institute of Medicine

These organizations were included in the search because of their current initiatives to provide resources and toolkits pertinent to reducing specifically WPV and increasing civility in healthcare. Moreover, they are reputable sources that rely on current research and studies.

Healthcare WPV

Because WPV, in all its iterations including physical violence, verbal abuse, bullying/mobbing, sexual harassment, and racial harassment, has continued seemingly unabated, the NIOSH, commencing in 2002, vigorously promoted the hope that people around the world would take note of increasing WPV (Chen, Hwu, & Wang, 2009). According to a report from the BLS (2014), 15,980 workers in private industry experienced trauma from nonfatal WPV in 2014. Alarming, “Of those victims who experienced trauma from WPV: 67% were female, 69% worked in the healthcare and social assistance industry, [and of these], 23% required 31 or more days away from work to recover, and 20% involved 3 to 5 days away from work” (BLS, 2014, p. 41-42).

WPV or bullying has been defined as:

offensive, abusive, intimidating, malicious or insulting behavior or abuse of power conducted by an individual or group against others, which makes the recipient feel upset, threatened, humiliated, or vulnerable [and] which undermines their self-confidence and may cause them to suffer stress (Health and Safety Authority, Ireland, 2008, p. 10)

Three major themes emerged from the healthcare related studies of WPV. These include denial or blindly ignoring that WPV is occurring; intrapersonal and individual issues, such as lack of education or perceived lack of competence; and interpersonal collaborations. Oppressive type behaviors either from peers or leadership, thread through all the themes. Each of these themes is delved into below.

While there is a propensity to use WPV terms interchangeably, bullying is different from horizontal [peer] violence; in bullying a real or perceived power differential between the instigator and recipient must be present (Gaffney, DeMarco, Hofmeyer, Vessey, & Budin, 2012).
Walrath, Dang, and Nyberg (2010) further defined WPV as more substantial, active, and direct forms of hostile behavior. WPV includes often manipulative behaviors and predominantly non-violent bullying. Regardless of its name, disruptive behavior among healthcare professionals continues to pose a serious threat to both staff and patient safety and the overall quality of care (Chen et al., 2009).

Of those that studied the denial that WPV is occurring at all, thus failing to take ownership, Porto and Lauve (2006) observed that it is common to hear people making statements such as this “Doesn't happen in our organization, where did you get that idea from?” or “We have a code of conduct for this.” (p. 5). This was verified by Gaffney et al.’s (2012) study which validated the perceptions of frequency and patterns of bullying behavior experienced by RNs across the US. This study assisted with identifying the frequency, type, perpetrators, and personal and professional consequences of bullying. Their study was hospital wide and indicated that around 9 per cent of this bullying occurred in the OR and post anesthesia care unit.

Perpetrators included senior nurses (24 per cent), charge nurses (17 per cent), nurse managers (14 per cent), and physicians (8 per cent), all of whom publicly humiliated, isolated, excluded, or excessively criticised the staff nurses. The staff nurses reported they experienced moderate to severe stress levels resulting from this bullying and WPV behavior. An important finding to come out of Gaffney et al.’s (2012) study was that after such WPV was identified, solace and support was not available through workplace infrastructure nor were any solutions offered by their organization. Gaffney et al. (2012, p. 1) reported rich details of the WPV including instances that may not be apparent to a non-involved onlooker and more elusively defined. For instance, staff can be sarcastic, verbally deriding a fellow staff member’s work. Constant belittling erodes a sense of self belief and can evolve into a staff member unsure of themselves. Encouraging though, is the fact that nurses participating in their study, a mix of new and more seasoned nurses, appeared to recognise that WPV was actually occurring.

Gaffney et al. (2012, p. 9) stated “it is reasonable to conclude that bullying is related in some way to the intersection of professional engagement and the risk for breeches in patient safety, quality of care rendered, and patient outcomes.” They pointed out that one seemingly innocuous example of WPV is to assign the more complicated, sicker patients to new nurses on
staff. While these staff are not necessarily new graduates, they can be seasoned nurses, though perhaps new to a unit, facility, or shift, being tested by their new peers. “I was a 2-year nurse who went from the evening shift to the day shift. They [nurse managers] would assign me to the heavier patient workload. After being assigned to the stroke unit by the manager, both assistant nurse manager (ANM) and the senior nurse stated that I should take 13 patients on the floor instead of the usual four patients to one nurse ratio (4:1) in the stroke unit that day” (Gaffney et al., 2012, p. 6). Even if all these patients are not stroke patients, a 13:1 ratio is excessive and could devolve in a patient safety risk situation or lesser quality of care rendered. This is not a usual staffing assignment load. On a stroke unit, nurse to patient ratio is 4:1; the nurse states that is the expected ratio on the unit where she is assigned. Such staffing assignments are made when a manager or charge nurse is endeavouring to show the more junior nurse, just who is the boss. Both the senior nurse and the ANM were engaging in non-violent bullying behavior. A self-observed limitation of Gaffney et al.’s (2012) study was that any individual, nurse or any other healthcare professional could view an instance of WPV differently from another peer. They recognised that perceptions are based on that particular individual’s experiences.

Walrath, Dang, and Nyberg (2010) categorised WPV catalysts into “three themes; intrapersonal, interpersonal and organizational” (p. 109). Intrapersonal factors prompting WPV are those traits or conditions occurring within any individual, such as personal characteristics, lack of competency, or fatigue that could lead to a disruptive behavior event. These intrapersonal qualms can descend rapidly into interpersonal (between staff) WPV. As evidenced by the junior nurse’s account of the staffing assignment (organizational) on the stroke unit (Gaffney et al., 2012), participants in Walrath et al.’s (2010) study identified the actual or perceived lack of competency in a new RN as a trigger for disruptive, interpersonal behavior, between two or more persons. Generally, it is not the new nurse displaying disruptive behavior, as they want to fit in with their new job or new team (organizational). More experienced staff instead of welcoming and supporting newly graduated staff can belittle or question actions of newer staff. This is non-violent bullying from the more seasoned staff (interpersonal) and can create much self-doubt for the newer individual (intrapersonal). Another example of interpersonal bullying, can be described as an individual being controlling, aggressive intimidating and obstructing effective communication; this is affected by demanding that a less experienced nurse should provide care
exactly as the more belligerent more senior nurse is demanding. Their way is the only right way. Another commented that in the interpersonal behaviors, a more “experienced nurse justifies ‘being harsh and critical’ towards the new nurse because she is ‘concerned about patient safety’...if [she] hasn't worked with the new nurse in enough critical situations to trust her competency” (p. 109). Fatigue was identified as another intrapersonal trigger, when, for example, one RN described how fatigue triggered disruptive behavior in her, causing her to react antagonistically and belligerently, to an oncoming peer after having worked three or four 12-hour shifts in a row.

Farrell, Hutchinson, Vickers, Jackson, and Wilkes have long studied WPV in the Australian nursing work environment (Hutchinson, 2007, 2009b, 2013; Hutchinson et al., 2005, 2006, 2006a, 2006b, 2006c, 2008, 2009, 2010b). Hutchinson (2009b, 2013) contended that for “more than a decade a common explanation for the occurrence of hostile behaviors between nurses has been the theory of oppressed group behavior and horizontal violence” (Hutchinson, 2009b, p. 563). Hutchinson and Jackson (2013) and Hutchinson (2013) studied hostile clinician behaviors in the nursing work environment to quantify the relationships between these behaviors and patient care. Hutchinson and Jackson (2013) concluded that “the paucity of robustly designed studies indicates the problem is a comparatively under researched area warranting further examination” (p. 15).

Corroborating the work of Hutchinson (2007, 2009b, 2013), and Hutchinson et al. (2005, 2006, 2006a, 2006b, 2006c, 2008, 2009, 2010b), Chapman, Styles, Perry and Combs (2009) reported that in a West Australian nonteaching hospital nurses generally accepted that WPV was part of the job. They included the idea of organizational priorities increasing stressors and engendering WPV. “Similar to other research findings, the participants considered that incidents of WPV directed at the nurses had both a direct and indirect cost for the organization” Chapman et al., 2009, p. 1260).

Farrell (2001), as one of the leading researchers of nurses and conflict in Australia, supports that organizations and their leaders must be accountable for the pressures placed on nursing staff. This is echoed by Hutchinson et al. (2008), who adapted research models to include organizational regulations and financial principles as having some culpability in WPV.
Such organizational pressures can include “misuse of legitimate authority, processes and procedures” (Chipps et al., 2013, p. 481). These studies move some of the emphasis from physician and peer clinicians as being the main antagonists of WPV. This will be explored further in the sections below.

**Perioperative WPV**

Four overlapping themes emerged from the perioperative studies relating to WPV. These were almost identical to those from the general healthcare related studies of WPV and comprised surgeons’ behaviors and oppression theories; intrapersonal and individual issues, such as lack of education or competence; interpersonal collaborations, including those of different professions; and lastly, the impacts of emerging technologies.

These themes are impacted by the fact that perioperative departments are ‘close d’ environments, meaning that physicians and staff are in close confines with nowhere to go. Nurses and physicians are expected to work together in the social and the physical aspects of their jobs in the OR more closely than in any other area of the hospital (Coe & Gould, 2008). Therefore, OR teams really should function effectively and synergistically during surgical procedures (Coe & Gould, 2008), with each person having an individual place and a unique value within the group. RNs and STs pride themselves on knowing what each surgery entails as well as what each individual surgeon may use. Surgeons, likewise, expect the OR staff to know and have available exactly what instruments they want and need every time.

The perioperative team in the US usually consists of a surgeon, nurse, surgical technologist and an anesthesiologist. Depending on the country this does have variations. Australia, for example, traditionally does not use STs as operating theatre nurses (OTN) fulfil both the circulating and the scrub roles. The fact that surgery has become increasingly technologically advanced, has resulted in an altered professional function for OTNs. Subsequently, a new professional group has evolved, that of the OR technologist. This role assumed the more technical non-nursing related tasks in the operating suites, while the OTN remains responsible for the patient’s pre, intra and postoperative care (Blomberg, Bisholt, Nilsson, & Lindwall, 2014).
Blomberg et al. (2014) reported the movement to train STs finally resulted in predominantly replacing the scrub nurse with STs. For some of the more critically ill patients having surgery, for example cardiac bypass and heart valve replacement surgeries, nurses often still fill both roles, as they can swap out for lunch and meal breaks during the more extended surgeries. While a nurse with the technical skills can provide relief break to a surgical technologist, there is, for the most part, no reciprocity for a surgical technologist to provide to the nurse caring for the patient intra-operatively. These different tasks have led to some role confusion in perioperative departments, where functioning effectively and synergistically is critical, especially during life threatening and trauma related surgeries when every action or minute can literally be lifesaving.

Coe and Gould (2008) took this more broadly and the national spread of incidents of disagreement within and between professional groups in perioperative departments and the frequency of perceived aggressive behavior demonstrated within perioperative department personnel in the UK. “Such aggression between professional groups has been shown to be detrimental to safe and efficient working practices and can hinder the effective resolution of disagreements” (Coe & Gould, 2008, p. 616). Their study aimed to identify the national spread of incidents of disagreement within and between professional groups in operating departments and the frequency of perceived aggressive behavior demonstrated by operating department personnel. International concern was being expressed over the level of reported perioperative interprofessional conflict and aggression (Coe & Gould, 2008). It was determined that such reports did not sit well with notions of excellence in teamwork as conceptualized by theorists. Feedback (both anecdotal and empirical) supported the idea that a perioperative team should be the ultimate example of what it means to work as a team within the greater healthcare community. According to Coe and Gould (2008), half of the respondents reported experiencing aggressive behavior from consultant surgeons including daily disagreements about list management. This echoes that of earlier studies, (Dunn, 2003; Michael & Jenkins, 2001). Perceptions of lack of understanding of roles and shared goals for patient care between the professional groups were also reported. Similar reports were received from all geographical locations in the sample. Of particular interest were key findings from this study. The resulting conflicts predominantly focused on the operating theatre lists (of surgeries scheduled), though
also included staffing levels and availability of equipment for the surgeries. Increased levels of stress were also described often. “Of importance, participants reported [the] preferred way of coping with aggression was reported to be confrontation” (Coe & Gould, 2008, p. 616).

In alignment with Richardson-Tench (2007) and Gillespie and Pearson (2013), Coe and Gould (2008) reported role confusion was highlighted between the nurses and the non-nurse operating department professionals. Current systems of working are associated with aggression and disagreement within and between these two professional groups. Their study revealed that while “aggression and disagreement were consistently reported [it was further] stressed [that] optimal team working and multi-professional collaboration does not appear to take place in these operating departments” (Coe & Gould, 2008, p. 611).

Their overall recommendations were that future studies focus on “conceptualizing the complex nature of interprofessional working in operating theatres to develop a less stressful and more efficient working environment.” (p. 611) Coe and Gould, (2008) believe that the concepts of teamwork currently applied to the work of the operating theatre are taken mainly from industrial models and that these concepts fail to capture the complexity of multi-professional working in operating theatres. Though WPV has occurred through the perioperative time continuum, (Coe & Gould, 2008; Dunn, 2003; Johnstone, 2000; Kingdon & Halvorsen, 2006; Michael & Jenkins, 2001; Santamaria, 1998), the increasingly complexity of precision technology in the OR, the need to work quickly, ever changing patient loads especially when traumas and emergencies are incoming, and constantly facing medical differences of opinions can escalate rapidly into aggressive or conflict -causing behaviors, becoming widespread in this environment (Higgins & MacIntosh, 2010).

Michael and Jenkins (2001) revealed that for nurses working in operating theatres, 70 per cent of study participants were exposed to traumatic events. Study respondents from 30 hospitals throughout the state of Western Australia were advised that work-related traumatic events were defined as those that: (1) resulted in the individuals experiencing unpleasant or disturbed feelings unlike those that they normally experience from their work, and (2) resulted in them experiencing feelings of being unable to perform to the level that they would have expected. These respondents reported verbal abuse, sexual harassment and intimidation, and physical abuse
inflicted added up to 77.77 percent of the abuse events involving a doctor, colleagues, and the supervisor or senior nurse. Traumatic events reported by the perioperative nurses have resulted elevated psychological distress in across the board.

In related perioperative studies Rosenstein and O’Daniels (2006) reported that both nurses and physicians engaged in verbal abuse of other nurses in front of patients. These actions were perceived by nurse observers to lessen patient confidence in the capability of those staff who were being verbally attacked and derided. Further, these frequently encountered traumatic events led to “crushing blows to their beliefs of what they thought constitutes the provision of total quality care by them or members of the surgical team.” (Michael & Jenkins, 2001, p. 23). The fact that these acts were perpetrated by a close colleague or trusted professional, and long after traumatic and bullying events have occurred, “individuals' beliefs about the world and their own place in it may remain damaged” (p. 23). The events, oftentimes, increase the risk of experiencing later stress and trauma reactions and place perioperative nurses at risk of both significant distress and impaired functioning. They proffered that “a paradigm shift in thinking from the pathogenic or medical model, to a salutogenic or wellness model to [both] achieve healing, and to facilitate understanding of the relationships between traumatic experiences and traumatic stress” (Michael & Jenkins, 2001 p. 25), is really necessary.

Elucidating, salutogenesis is the process of healing, recovery, and repair. (Michael & Jenkins, 2001) This is in direct contrast to pathogenesis, which is the study of disease and ill health. Further, “these strategies should be designed to facilitate understanding the relationships between traumatic experiences and traumatic stress reactions and to assist the individual to develop strategies of recovery and adjustment” (Michael & Jenkins, 2001, p. 25). They concluded that “the findings have implications for the formulation of trauma management strategies, both at individual and organizational levels and suggest new directions for education and research in promoting a recovery environment in which perioperative nurses can work” (Michael & Jenkins, 2001, p. 19). Even though this study is older, these themes of using wellness, via self-awareness, to recover from a stressful workplace, will add to my current study of incorporating empathy to decrease workplace stressors and WPV.
Similar concepts of lack of professional integrity and behaviors, such as continual humiliation, exclusion, or excessively criticising the staff nurses offered “further evidence that disruptive behavior has been observed or experienced throughout all levels of RNs” (Walrath et al., 2010, p. 113). Important to this current study is that “[disruptive behavior has been observed or experienced] between and among major professional groups. Findings also validate that support personnel critical to nursing, such as OR technicians, were also instigators or targets of disruptive behavior” (Walrath et al., 2010, p. 113).

The findings that OR technicians could either be ringleaders or recipients of WPV behaviors provided justification for my current study. Suggested as the key outcome of Walrath et al.’s study, identified that disruptive, WPV behaviors negatively affected nurse retention (Walrath et al., 2010, p. 114). Strong conclusions from their study included that the conceptual framework effected a valid structure for studying WPV resulted in the variables of interest as having a linear relationship, thereby demonstrating a strong link between the variables. A limitation to this study included only a convenience sample of RNs, when there are many other members [OR Technologists] on a healthcare team. The researchers admitted that the RNs who participated were more experienced than the overall staff mix of their facility and may have participated as they had a convenient delivery method to voice their years of exposure to WPV. They observed that this could have discouraged more junior staff from participating in the study, due to feelings of intimidation by the overwhelming involvement of the more experienced staff and that their feedback would not be heeded.

Comparable theories were tested by Dunn (2003) study regarding oppression theories and physician -nurse abuse in an eastern US hospital OR. Dunn was describing the effects of oppression with subsequent displays of horizontal violence. Dunn (2003, p. 977) posed that “members of oppressed groups demonstrate certain common behavioral characteristics (e.g., low self-esteem, self-hatred) that can create” cliques and separation among the various staffing entities in the perioperative area. Dunn (2003) informs that oppressive behaviors, such as angry attacks and sabotage, are common among members of oppressed groups. He describes these behaviors as horizontal violence, such as blaming someone else, talking about someone behind their back and generally being mean, destructive interpersonal communications (Dunn, 2003).
Perceiving that such oppression-based behaviors are intrinsic to the perioperative workplace, Dunn (2003) concurrently considered the relationship between the presence of sabotage in the OR and job satisfaction levels reported by perioperative nurses. Findings revealed that although sabotage is reported as common in the OR, the presence of sabotage was not significantly associated with reported job satisfaction. Oppressive non-violent and bullying behaviors, such as anger and sabotage, were substantiated by Dunn’s study. Sabotage can include hiding a surgeon’s favourite instrument only to be found later by the saboteur who comes to the rescue of the surgeon by ‘finding’ it.

Dunn (2003) posited that:

Theory of Cognitive Dissonance provides a possible explanation, as this theory is based on the concept of cognition, which is ‘any knowledge, opinion, or belief about the environment, about oneself, or about one’s behavior.’ The premise is that individuals strive towards consistency between cognitions by changing their opinions or beliefs to make them more consistent with each other. When two cognitions are incongruent, the outcome is psychological stress or discomfort (Dunn, 2003, p. 985).

Dunn (2003) determined that though the OR nurses are reporting deliberate sabotage in their workplace, they are remaining in that same workplace. To decrease their workplace stress, they are internally editing their reactions or emotions to mitigate their stress. Additionally, staff, at any time, can act as either saboteur or be the recipient of such sabotage. Dunn added that while “acknowledging sabotage as both victim and saboteur, is uncomfortable at best, the presence of sabotage is an indicator that horizontal violence and oppression exist in the workplace” (p. 987). Dunn suggested that future studies such as mine, might address issues such as the relationship between stress in the OR, and how nurses can care for themselves, as well as for their patient.

In speaking to the effect of organizations on WPV and adding to the earlier work of Australian researchers Hutchinson et al. (Hutchinson et al., 2005, 2006, 2006a, 2006b, 2006c, 2008, 2009; Hutchinson, 2007, 2009), Chipps et al. (2013) added that “organizational antecedents” must be present for bullying to exist in the work environment” (p. 481). By using this adapted model, they found that close to 59 per cent of all perioperative workers witnessed
bullying weekly and 34 per cent witnessed it two or more times per week; being ignored was the most common form of bullying. Correlations were made between bullying incidents and hospital affiliations, ethnicities, and emotional exhaustion.

Although bullying behavior is not necessarily perceived by participants as having an effect on patient safety, this behavior can be associated with emotional exhaustion and potentially affecting patient outcomes. The reality is if a perioperative nurse is exhausted, their attention to detail can be compromised, leading to potential errors in patient charting, medication mistakes, and even a wrong site surgery. Such events can be both personally devastating and detrimental to the facility’s reputation in their community. The effect of WPV and bullying extends well beyond those who are affected and can have serious consequences for an organizational culture.

There are numerous organizational pressures in the perioperative area including on time first case starts, room turn overs between cases, and overall room utilization. Costs of surgery are high due to increasing expenses of technology, thereby making the time spent in the OR very expensive. Moving fast can include cutting corners, such as not ensuring pre-operative checklists are all reviewed so that appropriate equipment and materials are ready and available. Safety measures actually start before the patient enters the operative suite and includes attention to all applicable types of preventable medical errors (including ensuring that the appropriate surgical consent has been completed).

To further mitigate surgical errors, unique to this perioperative environment, structured communication between the patient, the surgeon(s), and all members of the healthcare team is vital. Remaining passive in the perioperative workplace is not a neutral or harmless behavior (Hutchinson, 2013, p. 567). Walrath et al.’s (2010) study provides a link to my current study as findings from their study included that “technology, intended to enhance communication, at times escalated ineffective communication between team members” (p. 113).

Perioperative personnel may not even recognise that inappropriate behaviors are considered bullying, however in Walrath et al.’s (2010) study, more than one-third of the participants could have been considered the targets of bullying, experiencing an average of 2.1 bullying acts on a weekly or daily basis. Fewer than one-tenth of respondents identified
themselves as having been bullied, and nearly two-thirds reported witnessing other staff members being bullied. This denial or lack of realization of bullying is supported by the earlier work of Dunn (2003).

Perioperative Oppression Theory

Taking this idea further, Higgins and MacIntosh, (2010) explored OR nurses’ perceptions of physician-perpetrated abuse on their health and ability to provide patient care. The majority of abuse reported by OR nurses was perceived as psychological, including being belittled, ridiculed, yelled and sworn at. Some nurses’ experienced physical abuse, including being kicked, pushed and having objects thrown at them” (Higgins & MacIntosh, 2010, p. 322). The key findings from their research were the identification of two possible time frames that the nurses received the majority of verbal abuse. These two times were when they were brand new to the OR and when they were acting in the charge role of the department (Higgins & MacIntosh, 2010). When nurses are in the charge nurse role at the control desk, surgeons call or come in person to add on surgical cases. When they cannot get the exact time or date they want for a particular surgery, the situation often devolves into a verbally abusive situation. The researchers felt that a key strength of this study resulted as study participants were not recruited through their workplaces, therefore may have had a sense of “anonymity that allowed them to speak freely” (Higgins & MacIntosh, 2010, p. 327).

One well-known scenario in the OR is that of a surgeon holding out a hand, silently and expecting that the necessary instrument will be provided automatically. When that does not occur, surgeons will occasionally stomp away from the surgical field and pick up what they want from the ‘back field table’, swearing out loud or under their breath at the nurse or surgical technologist. Who is to say that such actions are not ‘disruptive’ or non-violent bullying? They are, as they create tension, anxiety and undue stress for the OR staff involved (Higgins & MacIntosh, 2010). As much as the OR staff want to excel and be one step ahead of what the surgeon may need, nurses lose confidence when they are the recipient of these disruptive behaviors, “reported as psychological, including being belittled, ridiculed, yelled and sworn at. Some nurses experienced physical abuse, including being kicked, pushed and having objects thrown at them” (Higgins & MacIntosh, 2010, p. 322-323).
Goettler, Butler, Shackleford, and Rotondo’s (2011) study complemented Higgins and MacIntosh’s (2010) study and was undertaken in a 751-bed hospital in North Carolina (USA). Physician behavior reports were reviewed and categorised around the common perception of surgeons’ disruptive behaviors. Their study was commenced to determine the prevalence and type of such reported behavioral issues. These behaviors include insulting statements, yelling or screaming, blaming others, intimidation, bullying, hostility, verbal abuse, and avoidance. This study indicated that the rate of disruptive physician behavior was relatively low, that although all reports should be taken seriously, fewer than 1 per cent of reported incidents were found to be definably disruptive and valid. Specialty groups with higher incidence of reported behaviors included anesthesia, orthopaedics, trauma, and obstetrics/gynaecology.

Rosenstein’s (2002) study of staff found that 92.5 per cent of respondents had witnessed disruptive behavior, usually a raised voice, yelling, disrespect, berating, and/or condescension in 1 to 5 per cent of staff and that this behavior ranked seven out of ten in seriousness, resulting in an estimated 2.4 nurses leaving each year and others changing work assignments as a result of these behaviors.

In a follow-up study, Rosenstein and O'Daniel (2006) found that nurses and physicians had equal rates of disruptive behavior (1 to 3%) that gender was not specific to disruption, and that male physicians and female nurses were most commonly disruptive, likely as a result of their high respective percentages in the workforce. That gender was not specific to disruptive behaviors in Rosenstein and O'Daniel’s follow-up study (2006) lessens the impact of the earlier male-female oppression theories proffered by Dunn (2003).

Complementing the earlier male-female oppression theories (Dunn, 2003), Timmons and Tanner’s (2005) research regarding OTN suggested that OR nurses strive to keep surgeons happy. Further, Timmons and Tanner (2005) suggested that keeping surgeons happy is the domain of the OR nurse, not necessarily that of the Operating Department Practitioners. “The (predominantly female) nurses perceived that one of their responsibilities was ‘looking after the surgeons’” (p. 85). Timmons and Tanner (2005) described this as the ‘hostess’ role, which “consisted of two major areas of activity: ‘keeping the surgeons happy’ and ‘not upsetting the surgeons’” (Timmons & Tanner, 2005, p. 85). Similar to nurses in other departments of a
hospital, “theatre nurses are performing emotional labor, though due to the circumstances, it takes a slightly different form from that found in wards. This ‘hostess’ role might go some way in explaining why operating theatre nursing is so stressful, which presumably plays a part in the continued (though long-standing) difficulties that operating theatres have in recruiting and retaining nursing staff” (Timmons & Tanner, 2005, p. 90).

The continuing inability to effectively reduce conflict in healthcare workplaces was reinforced in January of 2009, when the JC instituted formal guidelines regarding expectations around bullying and harassment in hospitals and healthcare in general. More recently, in 2010 and updated in 2016, the JC instituted specific NPSG to address WPV, particularly as it relates to patients and staff safety. Healthcare in high-stakes, pressure-packed environment can test the limits of civility in the workplace. Rude, disruptive behavior among healthcare professionals can pose a serious threat to patient safety and overall quality of care. (The J.C., 2010, 2016) All accredited healthcare organizations are required to create behavioral codes of conduct, establish formal processes for both managing unacceptable behaviors, and to address disruptive behavior and conflict. (The J.C., 2010, 2016). The expectation is that healthcare professionals focus on the effects that disruptive behavior has on a culture of safety for both patients and staff.

With the additional National Patient Safety mandate, healthcare leaders are on notice that disruptive behavior in healthcare has been identified as a major factor in disruption of quality of care and undermining the culture of safety. Growing evidence supports that disruptive behavior contributes directly to treatment errors and thus poor patient care (The J.C., 2010, 2016).

Transformational, empathic perioperative leaders have an opportunity to influence and embrace the quality of patient care, encouraging safe patient outcomes. Because of analyses and report cards, such as those published by the JC (2016) and the Leapfrog Group (2010), a definitive correlation can be traced between disruptive behavior and its negative influence on patient safety and healthcare costs.

The JC continues to review (2016) and recognise that perioperative staff face a multitude of challenges during their workdays. One of these challenges is the WPV and conflict with which they deal. What leads to such perioperative WPV and conflict has been attributed to a variety of reasons. These range from healthcare regulatory (JC, 2016) and organizational mandates and
pressures, perceived and actual heavy workloads (Kasprak, 2004), insufficient or inadequately trained or oriented staff (Glazer & Alexandre, 2009), and new procedures with increasingly challenging technological updates (Cammarata & Thomas, 2014).

As is reflected by the fact that this study is occurring, such perioperative WPV and sabotage continue; staff are still not aware of what WPV looks like or that they can be both the provocateur and the recipient of sabotage. Perioperative leaders are often still ‘absent’ from their workplaces and not interacting or including their staff in departmental decisions. Dunn (2003) reported that incidentally, his study provided direct ‘written’ feedback. Much of this feedback described feelings of anger and frustration towards nursing administrators, surgeons, and other nurses (Dunn, 2003, p. 986). Further they voiced their perioperative leaders have no real idea of what was going on day-to-day in the department, and therefore were not including their staff in decisions that may directly impact them.

**Educational Interventions for Perioperative Healthcare WPV**

As there is a dearth of recent specific educational interventions for Perioperative WPV, I chose the education interventions described below, because they were related to the increasing of empathic regulatory skills to decrease healthcare workplace stress and HPV. Because education is perceived to be a critical solution to provide healthcare staff the capacity to respond effectively to workplace related violence and bullying, the following studies were reviewed. Incipient themes from these related studies encompassed three (3) predominant areas. These included effectiveness of such education, specifically knowledge, skill and whether or not the interventions were sustained. Each of these three themes is further discussed below.

Warner, Sommers, Zappa, and Thornlow’s (2016) quality improvement project involved a time-series study design. Their premise was that educational interventions aimed at reducing incivility in the workplace are beneficial to nurses, healthcare organizations, and patients. The intervention involved education about incivility, use of cognitive rehearsal techniques, and visual cue cards of techniques. This study emulates that of Griffin (2004) and Griffin and Clark (2014) landmark studies on teaching cognitive rehearsal as a shield for lateral violence.

The goal of the interventions was to determine if incivility and cognitive rehearsal
responses to such behavior influenced the awareness of levels of incivility. The study utilized a pre and post survey, with a training intervention completed between the surveys. The training included a didactic session explaining incivility and the use of cognitive rehearsal as a way to address the behavior.

Beginning with management staff of an inpatient-nursing unit, all staff completed the training within 2 weeks. Each of the training sessions was 45 minutes long. All care providers (Participation was mandatory) in the inpatient unit (n = 114) were involved. A total of 99 out of 114 staff members (86.8%) participated in the pre-survey, with 98 out of 114 (86.0%) participating in the post-1 survey and 41 out of 114 (36%) in the post-2 survey. Participation was higher in the first two surveys because they were administered in conjunction with the training sessions.

The Nursing Incivility Scale was used to measure awareness of incivility and its consequences, and to decrease instances of perceived incivility. Nurse Workplace Scale (NWS) was used to measure respondents’ sense of empowerment, as the authors perceived a higher score on the NWS equates to a greater sense of empowerment. Though the total NWS scores increased slightly, and not statistically significant, the authors concluded that nurses felt more empowered when confronted with incivility. The authors reported that one lesson learned was that they did not provide time to study participants to practice real-life scenarios, perhaps contributing to low rates of confrontation in the post-2 survey; that participants felt more relaxed addressing uncivil behavior if they did have more time to prepare and rehearse. Two months following the training, 27.5% of the participants stated that they had confronted someone in the workplace about uncivil behavior. As mentioned above sustaining new knowledge is of importance to success of any educational intervention. (Staines, Thor, & Robert, 2015)

In a follow-up study to Buruck, Wendsche, Melzer, Strobel, and Dörfel’s, (2014) study of acute psychosocial stress and emotion regulation skills modulating empathic reactions, Buruck, Dörfel, Kugler and Brom’s (2016) research focused on strengthening emotion regulation as one way of dealing with high job demands. The overall aim of this study was to evaluate the impact of a standardised emotion regulation training (Affect Regulation Training [ART]) to improve emotion regulation skills and well-being of employees in elderly healthcare. Their study
sample comprised 96 employees (89 females) working in 14 nursing homes in Germany.

Results supported the ART as an effective intervention for dealing with negative emotions and to enhance well-being among employees in elderly care, and for maintaining these improvements six months after the training. Specifically, participants receiving ART showed significant increases in the emotion regulations skills acceptance and tolerance as well as modification at post assessment, compared with participants in the control group. Additionally, the ART group reported an improvement in the active regulation of emotions (modification). The ability to tolerate negative emotions and the ability to modify negative emotions also improved from pre/post assessment to follow-up, 6 months after completion of the training. Additionally, ‘the change in acceptance and readiness to confront’ obtained moderate effect sizes, and those abilities also tended to improve to follow-up. The ability to actively regulate emotions (modification) additionally increased over time for the ART group with the strongest effect at follow-up. This indicates that the active regulation of emotions was successfully trained and then applied by the participants. As reported later in this literature review, Brunero Lamont, and Coates (2010) similarly supported the premise that emotional empathic skills can be trained, one of the main premises of my study.

This study also found enhanced well-being associated with ART training: Participants in the ART group reported significantly better well-being compared to participants in the control group at post- and follow-up assessments. Thus, their study findings confirmed that well-being could be improved and sustained by training specific personal resources. Additionally, the study reported correlations between training gains in tolerance and modification with well-being. The design and research methods of this study allowed investigation not only of the short-term effects of ART, but also the stability of training results. Thus, Buruck et al. (2016) reported their study results can primarily be attributed to the ART intervention.

In addition to comparing changes in the training group with changes in a control group, study results revealed a further improvement of the emotional regulation skills of interest (modification, tolerance) six months after the last training session. This suggests that the effects in the ART group are in fact attributable to the training of emotion regulation skills. This 6-month sustenance of knowledge and skills is a strong result, suggesting future replicative studies
perhaps in the perioperative area.

A major limitation of the study concerns the mode of sampling (convenience sampling) and the (relatively small) sample size. In an effort to investigate and be more representative this study compared their sample with the larger sample of employees working in elderly care (N 438) that participated in the same (prevention) study and thus shared important features (recruiting procedure, working background). Even though both samples differed in age and gender, there were no differences in the important dependent variables, that is, in emotion regulation skills and subjective well-being.

A second limitation concerned the high proportion of incomplete assessments attributable to the study design. Additionally, it could be argued that the outcome variables were assessed exclusively by self-report, which is prone to common method bias. (Dysvik, Kuvaas, & Buch, 2016). Thus, the study authors cautioned that results on the improvement of the skill acceptance should be treated with care. They also recommended that future studies should assess dependent variables (emotion regulation skills and health-related variables) more comprehensively by interviewing third parties or adding objective measures. Furthermore, to separate the training effects from unspecific training effects, future studies should aim at comparing the results to an active control group, which receives a training or information for a similar time span.

Armstrong’s (2018) related healthcare workplace civility, quasi-experimental quality improvement project involved a modified version of the Civility, Respect and Empowerment in the Workplace (CREW) program with 30-minute sessions, one per week for four weeks, (CREW, U.S. Department of Veterans Affairs, 2017). The purpose of this quality improvement project was to understand if implementation of a civility training program would: a) increase staff nurses’ ability to recognise workplace incivility, b) reduce workplace incivility on a nursing unit, and c) increase confidence in staff nurses’ ability to respond to workplace incivility when it occurs.

Similarly, in response to a request made in my study, hospital administrators reported lack of workplace civility and HWV as specific areas needing to be addressed. Armstrong reported that some of the interviewed administrators described periodically having to mediate with employees for both overt and covert acts of workplace incivility, such as name-calling,
intimidation, and sabotaging behaviors.

A modified version of the CREW program was used in this quality improvement project to help nurses on one medical-surgical unit in a rural Kentucky hospital learn about workplace incivility. The modified CREW program included teambuilding exercises, facilitated discussions about workplace incivility, and experiential learning activities. This included practicing responding to workplace bullying scenarios in a safe environment.

While there were no significant differences in the frequency of the nurses’ exposure to workplace incivility following their participation in the program, there were statistically significant improvements in the nurses’ self-assessed ability to recognise, respond to, and modify their responses to workplace incivility, following the CREW program intervention. Similar to Warner et al.’s’ study, the teambuilding exercises, facilitated discussions about workplace incivility, and experiential learning activities aided in recognition of HWV and attendant incivility. The results suggest that this type of program may be suitable for use in other rural settings to address nursing workplace incivility.

There were several limitations to this project. The first was a small number of participants, as only nine participants completed the project, which limited the project leader’s ability to extrapolate the results in evaluating the potential use of the program facility-wide. The conditions of the implementation were also less than ideal, as the project leader could meet with the participants during down times of their work shift; the full group of participants was never present at the same time. This was similar to my study having the full group of participants present at the same time. As well, there were occasional distractions and disruptions during the training sessions, as patient and worker needs were always prioritized over the training sessions. These limitations may have reduced the effectiveness of training sessions that aimed at improving group communication and teambuilding within the entire group.

Another limitation of the training program was that it was shortened from the length of the original CREW program. While there is some flexibility in the implementation and content of the CREW program, it is preferred that the training sessions occur every other week over a six-month period. This project only evaluated the effectiveness of the shortened program format. Another limitation of this study was the project leader’s decision to only include RNs in the
It would have been preferable, as my study does, to include all unit workers, not just RNs.

In general, the researchers in this study concluded that the familiarity between co-workers, which occurs at rural hospitals, might increase incivility, due to a reduced perception of the need to maintain personal courtesy in workplace relationships. This quality improvement project indicates the need to provide routine educational programs that train employees in how to recognise and manage incivility in all healthcare settings, particular so in rural healthcare settings.

These three recent individual studies of the effectiveness of educational interventions on healthcare workplace empathy, HWV/incivility and stress support that educational interventions can be sustained, and future studies considered in the perioperative area. Gilbert, Foulk, and Bono’s (2018) review of current research literature on interventions that have been used to test workplace incivilities and stresses, supports further enquiry of educational interventions. Their study evaluated the generalizability of these and concluded that indeed such interventions are generalisable for both future research and practice.

**Conceptual Framework**

**WPV Responsive Behaviors: Stress & Empathy in Healthcare**

Three major themes surfaced from the review of healthcare stress literature. Those related to workload, which incorporated available resources, including staff levels and workplace environment; those related to ensuring patient safety; and interpersonal collaborations. Each of these themes is explored below.

**Healthcare Stress**

Nurses deal daily with the reality that healthcare is inherently a stressful occupation and that they work in a rapidly changing and complex environment. For each individual, there are many possible triggers and causes of such stress. Work overload was identified as one of the major sources of stress for nurses in early studies on the sources of stress and dissatisfaction among nurses in hospital environments.
For example, Hipwell, Tyler, and Wilson (1989) examined the hypothesis that occupational stress in nurses is a function of how they perceive their work environment. The nursing staff responded that stressors produced by the work environment consisted of work pressures, lack of autonomy, absence of peer cohesion and non-existence of supervisor support in the work environment correlated significantly with the nursing stress score and were found significantly to predict the degree of stress experienced. When comparing the frequency and sources of nursing job stress perceived by intensive care, hospice, and medical-surgical nurses, Foxall, Zimmerman, Standley, and Bené (1990) noted that although there was no significant differences among the three groups of nurses on the overall frequency of job stress, the stressors were different for each unit. These stressors, among others, ranged from effects related to death and dying, to floating, work overload, and staffing requirements. These findings were close to those of Hipwell et al. (1989) noted above.

Elfering, Semmer, and Grebner (2006) investigated the links between workplace stress and the workloads of nurses, finding that the most intense stressor perceived by nurses concerned patient safety and that healthcare workplace stress has numerous causal agents, with the most frequent safety-related stressful events including incomplete or incorrect documentation being the largest stressor, followed by near miss medication errors, followed by delays in delivery of patient care and violent patients. Elfering et al., (2006) reported that “under stress, hospital staff are more likely to make mistakes because high stress levels can impair the level of concentration, cognitive information processing, decision-making and work behavior” (p. 458), thereby directly impacting staffs’ health and well-being (Elfering et al., 2006).

Elfering et al.’s (2006) study was conducted in Switzerland and documented 314 daily stressful events. The study asked whether objective work stressors and resources predicted important characteristics of stressful events related to safety among novice nurses. Their first important finding being “Roughly 20% of all events reported were coded as being safety-related” Elfering et al., 2006, p. 466). One qualifier to this percentage finding was “One can reasonably assume that the number of events reported altogether represents, if anything, an underreporting, since reporting may be associated with anxiety and shame” (Elfering et al., 2006, p. 466). The second central finding was that the non-singularity of safety-related events was related to
stressors, most notably concentration demands and lack of control. “When people work under high demands and low control, events that endanger safety are experienced as more familiar, and more likely to recur” (Elfering et al., 2006, p. 466). This study added to the growing literature that suggests a relationship between (medical) error and stress. Hutchinson and Jackson (2013) concluded that “the paucity of robustly designed studies indicates the problem is a comparatively under researched area warranting further examination” (p. 15).

As noted by the above three studies, there appears to be a strong association between work stress and safety (e.g. near miss of medication errors) and therefore, patient safety. This linkage is less well understood, and worthy of further study, tying workplace stress incidences with poor patient outcomes. Suggested next steps from the Elfering et al. (2006) study were to consider both redesigning nursing work flow processes while concurrently incorporating into the nursing education curriculum, specific associations between workload and patient safety. Ongoing classes on self-management strategies for stressful situations should be strongly considered (Elfering et al., 2006). Elfering et al. (2006) suggestions for future work process changes concur with those suggested by Gelsema et al (2006) discussed below.

Santamaria’s (2000) study focusing on workplace stress of nurses caring for patients with perceived difficult behaviors results differed from Elfering et al. (2006). This review, as evidenced by Gelsema et al. (2006) and Gillespie and Kermode (2004), demonstrated that research on the relationship between workplace loads and stress for healthcare staff continues worldwide. Gelsema et al.’s (2006) study results were consistent with the transactional models of stress, discussed by Gillespie and Kermode (2004), indicating “that stressors and stress outcomes mutually influence each other” (Gelsema et al., 2006, p. 289). Their suggestion for future research was for “hospital management, to intervene early in the process, (where adverse work conditions and reduced health and well-being negatively influence each other), by improving the work environment” (Gelsema et al., 2006, p. 298).

Santamaria (2000) stated “stress appraisal is better understood from the perspective of personality rather than demographic or work-related factors” (p. 24). This study was based on an understanding or exploration of personalities affecting their perceived stress levels. Santamaria’s (2000) study investigated interpersonal stress in a group of RNs and explored the possible
cognitive mediating function of the personality construct ‘Lifestyle’. His study was conducted in two sections. The first portion consisted of a questionnaire completed by nurses (female only) working in four (4) Melbourne, Australia hospitals. Following the questionnaire completion, a subgroup of these nurses was then interviewed to determine cognitive processes that may be involved in stress responses. Study “results revealed no significant correlations between stress and the nurses’ demographic or professional backgrounds. However, very specific and significant correlations between certain personality profiles and stress levels were detected” (Santamaria, 2000, p. 20). The outcome implications of Santamaria (2000) study were “that current stress theory and individual psychology could provide a basis for interventions to assist nurses in dealing more effectively with difficult patients” (p. 26), thereby adding more tools that could mitigate the stress that some nurses experience when caring for those more unsettling patients (Santamaria, 2000).

The review of literature on healthcare workplace stress connected three (3) major themes related workload, which incorporated available resources, including staff levels and workplace environment; those linked to ensuring patient safety; and interpersonal collaborations. How stress affects the organizations’ staffs’ perceptions of a safe workplace, was also included in these studies. The literature supported the proposition that processes throughout the healthcare workplace may negatively influence any organization and the individual staff’s responses. This early intervention was also recommended by Gillespie and Kermode (2004), and is discussed further below, in their study of the effects of traumatic and stressful events on perioperative nurses, and their responses to these stressors.

**Perioperative Stress**

Five (5) major themes were identified as adding to or causing perioperative stress. These include surgeons’ and other physicians’ behaviors, including WPV; intrapersonal and individual issues, such as lack of education or competencies; interpersonal collaborations, containing intra-professions’; impacts of emerging technologies and firstly, organizational mandates, such as workloads effected by ‘on time first case starts and between case room turnovers’. Each of these themes is explored below.
Elfering et al. (2006) discussed in an earlier section, found that workload stress added to staff trauma and tension. This finding differs from Santamaria and O’Sullivan’s (1998) perioperative study, which found a “relatively small contribution [was] made to the overall stressor load, by the workload” (Santamaria & O’Sullivan, 1998, p. 14). Other study results, such as those conducted by Johnstone (2000), Kingdon and Halvorsen (2006), and Michael and Jenkins (2001), supported that workload burdens play a large role in creating perioperative workplace stress, as further described in the following paragraphs.

While Kingdon and Halvorsen (2006), Michael and Jenkins (2001), and Santamaria and O’Sullivan (1998) studied specifically the levels of stress in perioperative departments, they all examined different perspectives. Each of these studies used questionnaires designed to ferret out levels of traumatic or stressful events, and causative triggers. Though seemingly similar, each perioperative study focused on different relational factors. Michael and Jenkins’ (2001), and Kingdon and Halvorsen’s (2006) studies are discussed subsequently, in this review of perioperative stress studies.

Santamaria and O’Sullivan (1998) found “that [while] interpersonal relationships are the major cause of psychological stress, their [in this group of perioperative nurses] lifestyle type appears to play a significant role in nurses’ cognitive appraisal of some stressful interpersonal situations” (p. 15). Their recommendations for future research was that interpersonal situations could provide “a useful theoretical framework to understand interpersonal conflict and associated perioperative [workplace stress]” (Santamaria & O’Sullivan, 1998, p. 15). Their study, though almost 20 years old, was especially important as little specific research has been conducted into the causes and possible mediating processes involved in the stress response. An unexpected finding from Santamaria and O’Sullivan’s (1998) study was that “the relatively small contribution made by workload to the overall stressor load. Within this [workload] theme the subcategory of time pressure was the main area reported” (Santamaria & O’Sullivan, 1998, p. 14).

Following Santamaria and O’Sullivan’s (1998) work, Johnstone (2000) studied all categories of OTN' perceptions of the impact of operating suite technologies on their job satisfaction, stress and the changing nature and volume of their work. Role conflict inducing
stress among instrument and circulating nurses in operating theatres in Australia, resulted from developments in surgical technologies during the 1990's. Study participants were either members of the Victorian Perioperative Nurses' Group, Australia) or perioperative nurses working in one of seven New South Wales (Australia) hospitals. The question of particular relevance to the topic of this study, focused on one category of nurses inclusive of instrument (or 'scrub') and circulating (or 'scout') nurses. Simultaneous rises in surgical technology-related workload and stress were reported by 75.6 per cent of the nurses in the study.

Of particular note, was that these reported stressors “were consistent with what the literature describes as distress” (Johnstone, 2000, p. 19). As this study produced data relating to major work-related stressors other than technologies, study participants had to be working as a perioperative nurse prior to 1993, preceding the growing influx of OR technology. The latter condition was essential because of the emphasis of the study on nurses' observations of changes over time, especially as related to the emerging use of surgical technologies.

Of note, Johnstone presented evidence that surgical technologies employed in operating theatres have not had the net effect of automating work or simplifying the job for instrument and circulating nurses, as is usually an effect of such mechanization. Indeed, contrary to the mainstream view that technologies in the workplace foster a lower workload, there is evidence that developments in surgical technologies during the 1990s have increased work complexity, increased manual handling and workload and have contributed to increasing employee stress which can be attributed in part to role conflict.

Technology exacerbated “the stress experience by [perioperative staff, and] exemplified a complex set of relationships between numerous aspects of the OR and its broader organizational environment which results in stress” (Johnstone, 2000, p. 24). Further Johnstone (2000), reported that “fluctuations in the nature and volume of work are aggravated by the unpredictable nature of the workload in many operating theatres where non-elective (i.e., emergency) procedures might constitute more than half of the total caseload. These organizational characteristics provided a context in which to appreciate how competing role demands, which can be categorised broadly in terms of responsibility for people and responsibility for things” (p. 25-26), are important contributors to the role conflict which appears to be implicated in the increased work-related
stress among instrument and circulating nurses in operating theatres. Coe and Gould (2008) found that fluctuations in the nature and volume of work were “main sources of disagreement concern[ing] operating list management” (p.614), validating the stress of [perioperative] workloads. More “specific sources were: over-running of operating lists, changes to the order of patients and availability of staff and equipment” (Coe & Gould, 2008, p. 614).

Validating this work, Richardson-Tench (2007), reported that the:

…. role of technician is legitimated in the OR because of the very nature of the work undertaken there; that of repair and replacement of body parts. For the OR nurse, the increased use of technology has created tensions [stress], for their construction of self and the discursive practices undertaken (p. 7).

Further discussion on the important work of Richardson-Tench (2007) is included below in the literature review of empathy in the perioperative workplace.

Similar to Santamaria’s and O’Sullivan’s (1998) study, Kingdon and Halvorsen (2006) in Florida (US), observed higher than expected stress levels of the perioperative staff. They conducted a quality improvement project to determine which of the work situations encountered were perceived as most stressful and the frequency with which these situations occurred. The situations identified as producing much stress or very much stress by the largest number of respondents were pressure to work faster and when the equipment does not function as expected or correctly (Kingdon & Halvorsen, 2006).

Corresponding to the breadth and frequency of stressful events reported by Santamaria’s and O’Sullivan (1998), Kingdon and Halvorsen’s (2006) demonstrated that “the majority of perioperative nurses found situations that fell into the ‘crisis’ category, were the most stressful, though occurred less frequently” (p. 607). Likewise, as reported by Santamaria and O’Sullivan (1998) interpersonal situations and relationships were identified as stressful and these events occurred frequently.

Looking at this from a different lens, Chen, Lin, Wang and Hou (2009) studied the stressors, stress-coping strategies, and job satisfaction of nursing staff who worked in an OR in Taiwan, while simultaneously evaluating the influence of demographic characteristics on these
factors. They posited that understanding the interactive relationships between demographics and work-related variables, job stress, job stress-coping strategies, and job satisfaction for OR nurses is important. The questionnaire was designed to gather data on demographics and work-related information, job stress, stress-coping study include the following: (a) hospitals should set standard operating procedures for the OR, strengthen the designed-in security of the OR working environment, and provide adequate safety protection equipment to safeguard OR staff and patients; (b) the OR department should increase the quantity and the quality of stress relief courses; (c) the OR department should improve the OR environment and the administrative management skills of the hospital leadership; and (d) the OR department should offer self-esteem-related training programs to assist OR nursing staff to adopt constructive stress-coping strategies. Due to the intensely competitive field of medicine, hospital leaders and managers focused on reducing costs, while raising efficiencies, though using fewer staff to do so effecting increased stress levels in the OR staff. Though perhaps insignificant due to the low numbers of nurses with children, and not a finding of any other study, this study found that “nurses who were single or had no children more frequently adopted destructive stress-coping strategies than the other staff” (Chen et al., 2009, p. 205).

Azizpour, Shohani, Ashmore, and Kikhavani’s (2013) findings were somewhat different from other (US and Australian) studies. Though there was no significant relation between stress and work shift, age, experience, type of hospital and marital status, findings revealed that “higher levels of stress were due to the fear of being infected by HIV or hepatitis patients and lack of weekends [off]. Lower levels of stress were related to inadequate skills and [lack of] ambient lighting in the perioperative suites. None of the other studies in this review of perioperative stress studies alluded to environmental lighting as being a stressor or not. Stress was significantly related to job status, conflict of doctors and nurses as well as spouses’ attitude about work” (p. 20).

Their understandings prior to starting this study were that job stress among nurses was relatively higher than that of the other jobs and that a major source of stress can be the workplace environment. Azizpour et al. (2013) attributed that to the “majority of the participants experienced low levels of [these expected] stresses, most likely because they were young, so they
had adequate physical and mental fitness” (p. 21). Based on these findings, they concluded that several considerations should be taken into consideration to reduce levels of stress-induced by job status. They included increasing knowledge pertaining to infectious diseases, providing sufficient rest and vacation opportunities, and improving the communication of all members within the OR.

Comparable concepts to that of Azizpour et al. (2013) were explored by Bakhtiari, Mehrabi and Hasanzadeh’s (2013) descriptive co-relational study which was conducted to investigate the level of occupational stress in OR staff working in the hospitals affiliated to Isfahan University of Medical Sciences, (IUMS, Iran). Specifically, they studied level of occupational stress in OR staff and its association with a variety of factors, e.g. workload, resource availability and conflict. Study framework revolved around the understanding that stress is a nonspecific reaction to everything the body needs. Although occupational stress exists in every occupation, it is more frequent and intense among occupations related to human health, especially [peri-operative staff]. This was noted as well by both Gillespie and Kermode (2004) and Santamaria and O’Sullivan (1998). The population studied by Bakhtiari et al. (2013) was comprised of 100 OR staffs working in hospitals affiliated to Isfahan University of Medical Sciences. The staff surveyed were older than Azizpour et al. (2013). Bakhtiari et al. (2013) showed a small though significant inverse association between stress and monthly hours of work.

Similarly, a small but significant association between stress and income was found, and “that individuals with adequate income, experienced less stress” (Bakhtiari et al., 2013, p. 103). This also could relate to the finding of an “inverse significant association of score and stress and monthly hours of work” (Bakhtiari et al., 2013, p. 103). They work more hours, therefore receive more salary, therefore their stress levels are reduced. Ironically the highest levels of stress were from the workload, which was rated at 88.9, on a scale of 67-100 for acute stress.

There was no significant association found in Bakhtiari et al.’s (2013) study between stress levels and age or stress levels and number of shifts worked. This was also a finding from Santamaria’s related (2000) study, regarding the relationship between nurses’ age and stress levels, which suggested “that the stress reported by nurses appears to be independent of age, clinical experience and postgraduate qualifications” (Santamaria, 2000, p. 24). This was also
different from Azizpour et al.’s (2013) study, as that study reported subjects were younger, therefore were more able to cope with workplace stressors.

A parallel in findings between these two studies was the lack of a significant association between the level of stress and the level of education and working shift (Azizpour et al., 2013; Bakhtiari et al., 2013). Though groups in both Bakhtiari et al.’s and Azizpour et al.’s studies showed most subjects suffered from mild stress, the older group in Bakhtiari, et al.’s study had different trends than the younger group of Azizpour et al. (2013). Bakhtiari et al.’s (2013) study findings that the highest levels of stressors were for work overload, concurred with Johnstone’s (1997, 1998, 1999, 2000) studies of Australian perioperative nurses and the various causes of their occupational stress. Johnstone, (1997, 1998, 1999, 2000) found that most of these perioperative nurses indicated that medical technologies contribute both to their increased workloads and higher levels of stress. This was not found in Santamaria and O’Sullivan’s (1998) study. Since the highest level of stress was for work overload, it was suggested by Bakhtiari et al. (2013) to reduce the staffs’ work overload by employing capable and knowledgeable work force and enhancing their scientific and practical abilities.

Whereas, Santamaria and O’Sullivan (1998) correlated stressful sources with frequency and personality factors, Michael and Jenkins’ (2001) study described “the range and experience of traumatic events” (Michael & Jenkins, 2001, p. 20) and further delved into both the self - perceived effects of these events upon the physical and psychosocial well-being of perioperative nurses. Michael and Jenkins (2001) queried the types of personal and social resources reported by these perioperative staff following stressful and traumatic events. Their findings overall were quite disturbing, in so far as “the perioperative nurses described many situations in which they felt helpless due to the lack of control over the situation and the environment and the consequences have extensive implications for their well-being” (Michael & Jenkins, 2001, p. 24). They further noted that the events, oftentimes, increased the risk of experiencing later stress and trauma reactions, as they place perioperative nurses at risk of both significant distress and impaired functioning. They suggested healing and wellness “strategies should be designed to facilitate understanding the relationships between traumatic experiences and traumatic stress
reactions and to assist the individual to develop strategies of recovery and adjustment” (Michael & Jenkins, 2001, p. 25).

Adding to both Santamaria and O’Sullivan’s (1998) then Michael and Jenkins (2001) research and understanding that “perioperative [work has] an increased risk of exposure to traumatic events” Gillespie and Kermode (2004, p. 20) studied the effects of traumatic events on perioperative nurses, and their responses to such stress. Findings [from] this study suggest[ed] that perioperative [staff] have been frequently, and in some cases, excessively exposed to various traumatic incidents as a part of their daily work” (Gillespie & Kermode, 2004, p. 27). The staff most impacted were those with fewer years of experience, matching the findings of Michael and Jenkins (2001).

Concepts such as ethical dilemmas and moral distress questions led DeKeyser and Berkovitz (2012) to study surgical nurses’ perception of ethical dilemmas, moral distress and quality of care. In this descriptive, cross-sectional study, DeKeyser and Berkovitz (2012) surveyed surgical nurses working in two Israeli hospitals with the purpose of studying personal background characteristics, ethical dilemmas in nursing and quality of nursing care. Results found that while nurses are committed to providing quality care, they experience ethical dilemmas and moral distress and thus stress, while providing this patient care.

While these trends are well acknowledged within the general nursing community, little research has focused on the effect of moral distress or ethical dilemmas on perceived quality of care. DeKeyser and Berkovitz (2012) found that the majority of nurses reported low to moderate levels of ethical dilemma frequency but intermediate levels of ethical dilemma intensity. Frequency of ethical dilemmas was negatively correlated with level of nursing skill; meeting patients’ needs and total quality of care. No important correlations were found between intensity of ethical dilemmas and quality of care. They concluded that levels of ethical dilemma frequency were higher than intensity. Nurses tended to be satisfied with their level of quality of care. Increased frequency of ethical dilemmas was associated with some aspects of perceived quality of care. Significantly, quality of care was related to ethical dilemmas and moral distress among surgical nurses. Nurses become frustrated and stressed when they are unable due to a variety of
reasons, to provide the care they feel they should for a patient. Therefore, efforts should be made to decrease the frequency of these feelings to improve the quality of patient care.

DeKeyser and Berkovitz’s (2012) study adds to the body of work that surgical nurses do not necessarily experience ethical dilemmas or moral distress often but when they do encounter it, the feelings tend to be intense. Michael and Jenkins (2001) found similar results as discussed earlier. Employers of perioperative staffs are starting to evolve and understand implications for future practice and policy; that they should focus more on trying to decrease the intensity of feelings of moral distress experienced by their staff; that decreasing the frequency of ethical dilemmas and moral distress among perioperative staffs could lead to improved quality of care. Further, improving experienced quality of care could lead to decreased ethical dilemmas and moral distress among perioperative staff.

While female staff tended to use avoidance as a coping strategy, “which may temporarily reduce emotional distress, [though] is merely a palliative and ineffective approach” (p. 28), Gillespie and Kermode (2004) reported that male staff were able to problem solve in the moment of stress. Overall, they concluded, “situational agents are significant determinants of coping strategies and need to be considered when examining how perioperative nurses cope with stress” (Gillespie & Kermode, 2004, p. 28). Further they added that healthcare leaders should “take a more person-centered approach when dealing with workplace stress” (Gillespie & Kermode, 2004, p. 20). This finding supports one of the hypotheses of this study, that empathy may ameliorate workplace stress.

Incidents of WPV and bullying (Dunn, 2003) have reportedly been responsible for either directly causing or increasing stress in perioperative staff (Higgins & MacIntosh, 2010). As perioperative environments have become much faster paced, with increasingly more critically ill patients (Bigony et al., 2009), which increases the administrative burden of rapid room turnovers and on time first case starts (Littlejohn, 2012). Other causes of stress include perceived moral and ethical differences, and belief and personality differences between surgeons, anesthesiologists (anaesthetists), and perioperative staff (DeKeyser - Ganz & Berkovitz, 2012).

The overall emotional burden perioperative healthcare workers experience as a result of stress and continuous exposure to traumatic events is pervasive. Therefore, it is essential to
determine the risk factors and find new, innovative means of helping nurses deal with their stressful experiences, feelings, and emotions. As these above-mentioned studies reveal, the majority of people related conflicts were with supervisors, colleagues and physicians (Azizpour et al., 2013; Michael & Jenkins, 2001; Santamaria & O’Sullivan, 1998).

The review of literature on workplace related stressors in the perioperative domain demonstrated a gap in the research in the OR environments, both as a subculture of healthcare organizations, and secondarily, how this stress affects the organizations’ staffs’ perceptions of a safe workplace (Higgins & MacIntosh, 2010). The literature supported the proposition that processes in perioperative departments may negatively influence any organization and the perioperative individual in terms of organizational commitment and job satisfaction (Michael & Jenkins, 2001) This review also demonstrated that research on the relationship between workplace loads and stress for perioperative nurses and staff is growing, however there is a lack of studies in the area of how such workplace stressors may be enhanced by incorporating empathy as a responsive behavior, rather than using avoidance and WPV.

**Healthcare Related Empathy**

Healthcare related empathy related studies encompassed three (3) predominant themes. These include empathy as part of or separated from EI; can empathy be learned or increased; and empathy and compassion as integral to healthcare. Each of these three themes is further explored below.

Some of the early research on EI and its attendant empathy construct demonstrated linkages across the gender gap. On tests of EI’s different components, men or women may score higher, dependent on which component or construct is being measured. For example, men tend to score higher on stress tolerance, whereas women had higher scores on empathy levels (Stein & Book, 2009).

As early as 1927, Elwood (1927) gave a group of student nurses a standard intelligence test and the Colgate Mental Hygiene Tests—Schedule C2 for intro- version–extroversion and Schedule B2 for psychoneurotic traits. He then compared these scores with those of girls in colleges of liberal arts. He reported that the nurses revealed far fewer signs of unhealthy emotional outlets than the college girls, “being more stable than 77% of the arts students, and
that the average nurse of the group tested was more extrovert than 94% of all women entering college” (p. 199). An additional finding from Elwood’s study included that “Nurses prefer working with others, and nurses are readier to share things, even at [their] personal sacrifice” (Elwood, 1927, p. 201).

Humpel, Caputi, and Martin (2001) examined the relationships between emotional competency, stress, and experienced emotions among 43 mental health nurses (male and female) in Australian regional hospitals. When work stress and experienced emotions were measured, a significant relationship was found between emotional competency and personal self-doubt in male nurses only. However, no association was found between emotional competency and experienced emotions. Males and females can feel stress and experienced empathy differently. The fact of being male or female does not necessarily provide more ability to cope with some stressors or be more empathic than another person. Overall study findings included that “male and female nurses have quite different emotional reactions to work stress” (Humpel et al., 2001, p. 58). This fact of gender different reactions to WPV was corroborated by the earlier mentioned study conducted by Michael and Jenkins (2001). While female staff tended to use avoidance as a coping strategy, “which may temporarily reduce emotional distress, [though] is merely a palliative and ineffective approach” (Michael & Jenkins, 2001, p. 28), male staff were able to problem solve in the moment of stress.

Understanding that nursing, as a profession, is always affected by stress and conflict, Morrison (2008) studied existences of relationships between certain constructs of EI and how nurses deal with conflict and WPV. RNs working in three South Mississippi (USA) healthcare facilities, were included in this study. Morrison’s results included that “higher levels of EI correlated with collaborating and a negative relationship between the accommodating conflict-handling style and EI” (Morrison, 2008, p. 974). There are four (4) separate ‘clusters’ in EI; self-awareness, self-management, social awareness and relationship management. The empathy construct is included in the social awareness cluster of EI (Morrison, 2008).

In this particular study, a positive relationship was proven between collaboration and all four EI clusters. These results indicate that increasing collaboration skills of nurses could eventually lead to increases of self-awareness, self-management, social awareness and
relationship management, and in due course, knowing and understanding more about your own reactions. “Empathy and compassion connect us with others. Compassion and empathy are the basic tenets of nursing” (Morrison, 2008, p. 981).

Despite numerous tools being used in nursing research to assess empathy, there appears to be no consistency, suggesting the need to evaluate the rigor of empathy tools appropriately to inform education or for application in clinical settings. In their (2001) study on ‘clarification of conceptualizations of empathy,’ Kunyk and Olson (2001) reviewed nursing literature between 1992 and 2000, to query if understanding of client’s needs, emotions, and circumstances is fundamental to nursing practice. They purport “that empathy is the essence of all nurse-client communication” (Kunyk & Olson, 2001, p. 317).

Though the purpose of their analysis was to describe empathy as presented in current nursing literature, they probed further, whether empathy is the foundation of that understanding (of another person), then a conceptualization of empathy that can be used by nurses would be of utmost importance to the profession. Using a concept clarification methodology, their study revealed five conceptualizations of empathy: empathy as human trait, empathy as a professional state, empathy as a communication process, empathy as caring, and empathy as a special relationship. Interestingly, they write that when ‘empathy as a human trait’ “cannot be taught, it is believed that empathy can be identified, reinforced, and refined” (Kunyk & Olson, 2001, p. 318-321).

While important to the development of the concept, further enrichment of the conceptual work on empathy in [perioperative] nursing and care especially is needed before a mature concept emerges that is beneficial for perioperative nursing practice, research, and education. Hence, one reason for this current study. Yu and Kirk’s (2008) study also recognised the profound impact of empathy on quality nursing care, and realised too, that more conceptual clarification is needed to measure empathy in nursing. They reported empathy levels among nurses range from low to well-developed and that there is clearly debate about what constitutes empathy and how it can be measured and improved. They are concerned that so many tools have been developed and applied to the relatively narrow focus of empathy in nursing, thereby indicating both its complexity of measurement and the interest and importance attached to it.
That there is no such rigorous tool to demonstrate how empathic skills could help to highlight the invisible work of nursing is one more reason for this current study.

Despite the fact that Kunyk and Olson (2001) wrote that while empathy as a human trait cannot be taught, they also reported that “the concept of empathy as a professional state is envisioned as a learned communication tool (p. 321). That empathy could be learned was a basic tenet for this current perioperative study. Ançel (2006) disagrees with Kunyk & Olson (2001), writing that “empathy is a teachable communication skill” (Ançel, 2006, p. 255) though ‘further efforts are required to increase nurses’ level of empathy for effective [patient]care” (p. 249). To support the premise that EE can be trained, Ançel (2006) studied whether in-service communication training enhanced the empathic skills of 263 nurses employed at a University Hospital. Secondary to Ançel’s study was defining “exactly what empathy is” (Ançel, 2006, p. 250).

Ançel (2006) collected data measuring a model of empathy and developing empathy by using psychodrama. The post-test scores of nurses increased exponentially, thus training played a role in enhancing nurses' empathic skills. With these results, they determined a more comprehensive and continuous training and further studies are warranted for nurses to implement their empathy. These results demonstrated that “Empathy is a teachable communication” (Ançel, 2006, p.255). Ançel also reported “the [empathy score] increase varied among nurses in different age groups and education groups” (p. 255).

Adding to the understanding that empathy can be learned, Brunero, Lamont, and Coates’ (2010) reviewed the evidence for empathy education programmes in nursing and made recommendations for future nurse education. Their review verified Ançel’s (2006) body of work that empathy could be learned. This 2010 meta-analysis reviewed studies which measured the effectiveness of empathy training in postgraduate and or undergraduate nurses. The included studies incorporated both qualitative and quantitative methods and were ranked for level of evidence. Seventeen studies met inclusion criteria. Of the 17 studies, 11 reported statistically significant improvements in empathy scores versus six studies that did not. The results of this study “yielded a range of measurement tools used which highlight the need to develop
standardised ways to evaluate changes in empathy as a result of education” (Brunero et al., 2010, p. 70). This result was echoed by both Ançel, (2006) and Yu and Kirk (2008).

Brunero et al. (2010) found that “Engaging patients is seen as a critical part of the nurse-patient relationship with empathy being reported as an integral component of the relationship” (p. 65). Several variables may affect empathy education that need to be accounted in future studies such as gender, cultural values and clinical specialty, (especially for perioperative) experience. Models of education that show most promise are those that use experiential styles of learning. The studies reviewed demonstrated that it is possible to increase nurses’ empathic ability. Future implications for empathy education for nurses, suggested by Brunero et al. (2010), is that “empathy education needs to consider activities to enhance self-awareness and assessment of the clinician’s personal value systems” (p.71). Such an emphasis on self-awareness was integrated into the educational interventions of my study. Brunero et al. (2010) acknowledged their “study was limited by the use of English language publications and therefore understanding of empathy in a western nursing cultural context. Nursing across the world is highly mobile and needs to survive in a multicultural context; the use of empathy will need to be examined within this context in future studies” (p. 72).

Furthering conceptual understanding of empathy, Cecil and Glass’s (2014) completed a qualitative methodology study incorporating in-depth semi-structured interviews and researcher reflective journaling, to explore nurses’ (though not perioperative staff) self-regulation and self-protection modes. Realising that nurses continue to be tested by engaging with patients and their own reactive emotions, this study aimed to investigate nurses’ perceptions of emotional protection and regulation in patient care delivery. Recognising that “emotion is fundamental to nursing practices; everyday practice can be professionally challenging particularly in relation to emotional engagement and therapeutic relationships” (Cecil & Glass, 2014, p. 378).

Trying to shield their own emotions when attempting to maintain a professional, aloof distance, remains difficult for clinical staff. While interpersonal styles of nurse—patient communication have become more relaxed in recent years, nurses remain challenged in emotional engagement with patients and other health professionals. In order to preserve a professional distance in patient care delivery, however slight, nurses need to be able to regulate
their emotions. This study foregrounds the importance of regulating emotions and nurturing nurses’ emotional health in contemporary practice. The results revealed that nurses’ emotional regulation being demonstrated by a ‘professional face’ was an important strategy to enable delivery of quality care even though it resulted in emotional containment. One example of this professional face was explained by “when you go to work, [it] doesn’t matter how you’re feeling inside, you have to have this calm, serene face to show the patients . . . no matter what goes on behind the face . . . [you don’t] show emotion” (Cecil & Glass, 2014, p. 381).

Such regulation was a protective mechanism employed to look after self and was critical in situations of emotional dissonance. The results also found that nurses experience emotional dissonance in situations where they have unresolved personal emotional issues and the latter was an individual motivator to manage emotions in the workplace. Cecil and Glass (2014) recognised that as:

the findings from this study were generated from the analysis of interviews with five nurses and the researcher’s reflective journal, it is representative for the participants involved and therefore it is not intended to be generalised to the wider nursing population. The findings, however, may inform future research on emotional regulation and importantly the role of organized emotionality in the workplace (p. 383).

Corroborating this empathic shielding, Blomberg, Griffiths, Wengström, May, and Bridges’ (2016) study identified that while compassion has been identified as an essential element of nursing practice, it has become expected and studied as part of the delivery of high quality healthcare. Nurses continue to struggle with demonstrating their reciprocal empathy; in other words, how they make plain their empathic capabilities. This systematic review of research studies, evaluated current interventions for compassionate nursing care.

While no studies reported presented sufficiently strong evidence of effectiveness to merit routine implementation of any of these interventions into practice, these afore mentioned healthcare related empathy studies concluded that [while] further investigation of some interventions may be merited, high caution must be exercised. One of the studies they reviewed was that of Ançel (2006). They suggested that preference should be shown for further
investigating interventions reported as effective in studies with a stronger design such as randomised controlled trials.

**Perioperative Related Empathy**

According to McCabe’s (2003) study, exploring patients’ experiences of how nurses communicate empathy is essential to the provision of quality healthcare. However, as noted in Chapter 2, studies on the effect or impact of empathy in the perioperative workplace, globally, are lacking. No studies could be located that studied EE in perioperative settings. Incipient themes from perioperative related studies, encompassed two (2) predominant areas. These include empathy as part of or separated from EI and finding caring moments and actions in such a highly technological environment. Each of these two themes is further discussed below.

Rudolfson, von Post, and Eriksson’s (2007) study of the development of caring in the perioperative culture, was aimed at achieving a more complete and differentiated understanding of what constitutes caring in the perioperative culture as well as their knowledge and responsibility for the development of caring. The research was conducted via open-ended interviews of nurses to ascertain their understanding of perioperative caring. It was envisaged that this study could serve to encourage nurse leaders to focus more attention on caring in the perioperative culture, which in turn fosters a supportive work atmosphere.

According to the nurse leaders involved in this study, the exceedingly technological perioperative area, was creating an environment wherein it is difficult to “retain sight of the patient” (Rudolfson et al., 2007, p. 321). In the effort to meet organizational and financial metrics (start surgeries on time and rapid turnovers between cases), OR leaders realised they were losing sight of their purpose to provide a compassionate environment for their staff while they are caring for patients. Such compassion included ensuring that staff had enough time for breaks and being off shift on time to rest.

This study was followed by Lindwall and von Post’s (2013) study of basic concepts, human being, health, suffering, caring and culture in perioperative practice. Related to both Richardson-Tench’s (2007) study and my study, their findings indicated that part of developing a perioperative caring culture is always a tussle that there is a patient hidden under those sterile
drapes having surgery and that the patient is a whole being, requiring perioperative caring and compassion. The most important goal of nursing is to safeguard the welfare of the patient and the relationship is based on the motive of caritas derived from the idea of humanistic caring. Limitations from this study were that researchers were not able to talk to those nurses who are more interested in advanced technological equipment. The understanding of the researchers has offered opportunities as well as limitations when observing practice and developing the major concepts from practice to theory.

Adding weight to both of the above studies, Mitchell and Flin (2008) and Mitchell et al., (2010, 2012) examined the non-technical job tasks, further defined as cognitive and social skills of the operating theatre (scrub nurses’ roles). Their studies were more focused on the clinical data decision-making points, to protect and keep their patient safe during surgery, rather than the nurturing and empathic caring assumed by their role. While these reports are really important, more specific study is required to understand the empathic portion of such care.

Gillespie and Pearson (2013) studied ‘Perceptions of self-competence in theatre nurses and operating department practitioners’ in both Australia and Scotland in response to a growing shortage on perioperative nurses. Traditionally in Australia, only nurses have filled the roles of both scrub and circulating roles. Historical differences in training and scope of practice of nurses and non-nursing personnel have influenced the convergence of these roles in providing competent patient care in the operating theatre (OT). Perioperative competence was assessed using a 40-item instrument comprising six subscales: foundational knowledge and skills, leadership, collaboration, proficiency, empathy, and professional development. As relevant to this study, one of the constructs surveyed was perioperative empathy. There were significant differences between the two groups in empathy. Though results suggest that there are more similarities than differences between non-nurses and nurse, a defining difference lies in nurses' capacity to demonstrate caring’ skills that extend beyond those with more technical training, education and background.

While the literature addressed herein agree that empathy is central to perioperative healthcare and patient care, it is crucial to realise that much more clarification of empathic
concepts for all healthcare staff is needed to be able to incorporate empathic caring concepts into the healthcare mindset.

**Summary**

Perioperative environments have become much faster paced, with increasingly more critically ill patients (Bigony et al., 2009). This increases the administrative burden of rapid room turnovers and on time first case starts (Littlejohn, 2012). Other causes of stress include perceived moral and ethical differences, and belief and personality differences between surgeons, anesthesiologists (anaesthetists), and perioperative staff (DeKeyser - Ganz & Berkovitz, 2012).

The overall emotional burden perioperative healthcare workers experience as a result of stress and perpetual exposure to traumatic events is pervasive. Therefore, it is essential to determine the risk factors and find new, innovative means of helping nurses deal with their stressful experiences, feelings, and emotions. As these above-mentioned studies reveal, the majority of people related conflicts were with supervisors, colleagues and physicians (Azizpour et al., 2013; Michael & Jenkins, 2001; Santamaria & O’Sullivan, 1998).

Research on the effect of empathy mitigating workplace stress and conflict for perioperative staff, globally is lacking, though studies like Ançel’s (2006) demonstrate the benefits of such for both patients and clinicians. “Professionalism in nursing is defined by the standards for nursing practice. As perioperative leaders, it is important to model ethical and professional behaviors and support nursing personnel in their commitment to patient safety as facilitated by knowledge of and adherence to standards” (Whiteside, 2016, p. 141).

Rudolfson et al.’s (2007) echoed this understanding of a leader’s role in developing a caring perioperative culture, to ensure their staff were less stressed. One leader noted her belief in the value of creating a meaningful atmosphere. In her experience, this led to a more compassionate and workplace, so that staff had no “to resort to personal attacks” (Rudolfson et al., 2007, p. 317), of WPV. Collaborative strengths and strong communications skills, are integral to the role of perioperative care. As was noted by Cecil and Glass (2014), while nurses remain challenged in emotional engagement, empathy is a central component of therapeutic nurse-patient interactions (Ançel, 2006; Brunero et al., 2010). Perioperative nurses serve as “the
patient’s advocate at a time when the patient is totally vulnerable, so they need to be prepared to react quickly and decisively in emergent situations” (Root, 2015, p.3).

Based on this summary, and also other findings from this literature, I distilled the following research questions related to WPV and also stress and EE in the workplace:

**Quantitative:**

1. To what extent is it possible to increase awareness of emotional empathy in the perioperative workplace?
2. To what extent does increasing emotional empathy, reduce instances of perioperative workplace violence?
3. To what extent does increasing in emotional empathy over time, lead to a decrease in perioperative workplace stress?

**Qualitative**

4. What is the relationship between empathy and stress for perioperative staff??
5. What is the relationship between perioperative staffs’ levels of stress and their perceptions of using empathy to reduce WPV?
6. What is the difference in perceived workplace stress and empathy levels between Inpatient perioperative staff (D1) and Ambulatory perioperative staff (D2)?

**Conclusion**

This chapter reviewed current literature of workplace empathy, stress and WPV, with as much as possible, an emphasis on the perioperative area. It is evident, that to more completely understand these phenomena, (despite the knowledge gained, and studies already completed), that more exploration remains of the role of empathy as a responsive behavior to stress and perioperative WPV and conflict; hence this study.

The following chapter addresses simply the theoretical model and design used to further explore to understand what tools might assist in understanding the role of empathy in ameliorating stress and perioperative WPV.
CHAPTER 3:
METHODS AND METHODOLOGY

Introduction

The methodological approach chosen for any research arises from consideration of the research questions and key variables being studied. As already noted in Chapter 1, and derived from the literature review undertaken in Chapter 2, a total of six questions that guided my study. These listed at the end of Chapter 2. In this chapter, I explain the design of my research and why I chose this design to study the empathic effects on perioperative WPV and stress.

It is important to note that the initial conceptual framework envisioned for this study, including the methodology and methods employed, included the use of a quantitative approach only. However, as the project developed, I realised that findings could be enriched by adding a qualitative lens to the analysis, including the collection of data obtained from in-depth one-to-one interviews and focus group discussions with the study participants. The research design, then, evolved over time to address gaps that became evident as the study progressed. This is not uncommon in research undertaken in authentic clinical settings (Mazzucca, et al., 2018).

The first section of Chapter 3 commences with a definition of the key concepts utilized in the research, followed by operational definitions. I decided that these definitions were a necessary means of clarifying the focus of the research (that is, ‘the what’ of the research). Subsequent to this, I describe the methods used to collect and analyse the data (that is, ‘the how’ of the research), before going on to explain the theory underpinning the mixed-methods design. I then provide an overview of the research setting and sample, ethical considerations, and the key variables being studied. I conclude the chapter with an explanation of the data analysis and validation of the results.

Conceptual Definitions

A conceptual definition is an element of the scientific research process, which provides for specific concepts to be defined in a measurable way. It was therefore essential that I establish and define which concepts would be measured or analysed in the study – firstly, to ensure that
the ongoing data collection, inputs, and results could be easily verified; and secondly, so that later researchers can align more easily replicate the study. Indeed, and according to Wacker (2004):

If any theory is to be meaningful, its definitions and their properties must pass logical tests for legitimacy before any statistical (sic) are performed. All construct validity depends upon the conceptual soundness of the formal conceptual definitions. All construct validity requires substantive significance before statistical significance (Wacker, 2004, p. 642-643).

In short, there is a need to provide formal definitions of the key concepts used in the research, from the outset, to ensure research rigor.

Some definitions have already been provided in Chapter 1. Not all of these definitions relate directly to the data collection and analysis. Additional information provided in Chapter 2, the literature review, allowed for the initial definitions to be further developed into conceptual definitions. I identified the need for additional definition of three concepts: ‘workplace stress’, ‘EE’ and ‘WPV’.

The first concept, ‘workplace stress’, was defined in light of the work of Babatunde (2013), whose doctoral research in the field of occupational stress demonstrates the complexity and also multiplicity of the concept. Babatunde (2013) described workplace stress as “the harmful physical and emotional response that occurs when an employee is not able to cope with the job demands. It is due to the mismatch between the job demands and the capabilities of the worker” (p. 74).

The second definition relates to ‘EE’ and was drawn from the work of Mehrabian (1988), whose ground-breaking work in considering an individual’s characteristic inclination to respond (or not) empathically has subsequently informed a range of studies in the important area of person-to-person interactions. Mehrabian, Young and Sato (1988) described the emotional empathic tendency as “an individual’s characteristic inclination to respond with emotions similar to those of others who are present” (p. 221).
The third definition, ‘WPV’, was drawn from the work of Jackson, Clare and Mannix (2002). These nurse researchers considered, at length, the effect of bullying, hostility and violence in the day to day lives of most nurses. In this research, WPV is defined as taking many forms, and includes attitudes and behaviors such as aggression, harassment, bullying, intimidation and assault, verbal or non/verbal, physical, emotional, psychological, or sexual (Jackson, Clare & Mannix, 2002).

**Operational Definitions**

The operational definitions used in the study were distilled from the conceptual definitions and employed when working with the research participants. The operational definitions were deemed necessary to provide a very clear and precise explanation of the items being measured (that is, ‘EE’, ‘workplace stress’ and ‘WPV’) and were used when explaining the research study to the perioperative staff involved in the study.

I saw a need for operation definitions, as well as conceptual definitions, for two main reasons. Firstly, there was a need to communicate simply and clearly to perioperative staff. Secondly, there was a need to ensure that my ability to collect data consistently and reliably was safeguarded. The operational definitions, as explained to and interpreted by the perioperative staff, tended to be less abstract and more emotionally based, than the conceptual definitions used by researchers.

The operational definition for ‘empathy’ was the ability to perceive and reason, as well as the ability to communicate understanding of the other person’s feelings and their attached meanings (Reynolds & Scott, 2000). It was important to differentiate between sympathy and empathy, for participants, with the two concepts often confused.

The operational definition for ‘workplace stress’ was the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope (World Health Organization (WHO), 2018). This definition aligns with understanding of workplace stress used in the PWSSI, developed in 1998 to serve as a simple screening measure of workplace stress, and thereby determine the need for further investigation with more comprehensive assessments. The PWSSI, which is used in this study, also assesses the
The effects of stress and designed specifically for job stress (The American Institute of Stress (AIS), 1998).

The operational definition of ‘WPV’ came from the WHO and the International Council of Nurses (ICN); they define WPV as "incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health." (International Labor Office, ICN, WHO, Public Services International, 2002, p.3). In comparing researcher, practitioner and legal definitions of WPV with lay definitions, “results confirmed that components included the occurrence of harmful and negative workplace behaviors and were frequently cited by participants as central defining components of bullying behavior. In addition, lay definitions often included themes of fairness and respect” (Saunders, Huynh, & Goodman-Delahunty, 2007, p.340). For this reason, the operational definition used in this study draws largely on the WHO and ICN definitions, with a focus on situations where the safety, well-being or health of staff is challenged at work due the abusive, threatening or aggressive behaviors of others.

**Research Design: Mixed-Methods**

As already noted, my study utilized a mixed-methods design, comprising qualitative and quantitative approaches. Some researchers, such as Stange et al. (2006), refer to the mixed-methods approach as multi-method research, suggesting that, firstly, it involves integrating quantitative and qualitative approaches to generate new knowledge; and, secondly, it makes either concurrent or sequential use of these two classes of methods to follow a line of inquiry. For my study, concurrent usage of qualitative and quantitative tools occurred – for this reason, I refer to the approach as ‘mixed-methods’.

This section describes each of the approaches utilized: qualitative and then quantitative. Following this description, justification is given for the research design and how it supports the research undertaken for this study.
Qualitative Research

Qualitative approaches to research are exploratory in approach and are used to gain understanding(s) of and insight(s) into a phenomenon (Venkatesh, Brown & Bala, 2013). Qualitative research is often used when the research focuses on human behaviors, experiences, relationships or interactions, individual or collective; and considers the ‘hows’ or ‘whys’ of these matters (Reeves, Albert, Kuper & Hodges, 2008). Consequently, the findings of qualitative research tend to be inductive, rather than deductive, with meaning(s) or conclusions generated or produced from observations, words or images, rather than numbers (as is more the case in quantitative research). (Miles, Huberman, & Saldana, 2014). A major benefit of qualitative research is its focus on the contexts and meaning of human lives and experiences, for the purpose of inductive or theory-development driven research (Gioia, Corley, & Hamilton, 2013). Indeed, researchers who use a qualitative approach to explore the behavior, perspectives, experiences and feelings of people; and to emphasise that understandings of these elements must include a person-centered holistic and humanistic perspective of lived experiences without focusing on the specific concepts (Field & Morse, 1996).

Qualitative research includes methods of data collection such as in-depth one-to-one interviews or more general group discussions, including focus group discussions (Gill, Stewart, Treasure, & Chadwick, 2008). Typical qualitative methodologies and methods used in health research are case studies, grounded theory, ethnography (including the ethnographic observation), and phenomenology. Another approach, often used in health settings, is called ‘Qualitative Description’ (Sandelowski, 2010) which, rather than being any one specific method, incorporates a diversity of approaches that enables the researcher to achieve the ends to which they aspire in complex and authentic health settings. I see the approach as important as it best described the qualitative approach I take to my research. Qualitative Description is described in more detail below.

I decided to utilize qualitative research in this study because I envisaged that the data generated would help me understand more about the operations of the perioperative department in which my research was set. I anticipated that the insights and understanding I achieved, by analysing data collected using qualitative research, would provide detailed information and
context, and emphasise the voices of the participants through their direct quotes. I also anticipated that utilization of qualitative research would enable the collection of this rich data that is not possible when using quantitative measures alone; and provide me with a more discrete depth of understanding of the main issues for both the staff and also their leadership team.

**Qualitative Description**

Specifically, the qualitative research framework utilized, in the qualitative part of my research, is known as Qualitative Description, as mentioned above and explained by Sandelowski (2010, 2014). To reiterate, this approach does not use one specific method, but rather incorporates a diversity of approaches to adapt to or fit the needs of the research, researcher and also the participants in a complex and ‘real-world’ settings. Sandelowski (2010) also noted that qualitative descriptive approaches can include statistical analyses.

In light of the research questions, provided in Chapter 1 and reiterated in the beginning of this chapter, I decided to incorporate a number of approaches into the Qualitative Description framework. According to Mackenzie and Knipe (2006) and Age (2011), such integration would guide me in matching with the specific questions and purpose of the research study. I chose three main qualitative research approaches to inform the research: firstly, I used interpersonal communication as a research process (Glass, 2013); secondly, I incorporated ethnographic tenets first posited by Geertz (Olson, 1991), including aspects of the abductive reasoning applied. This form of reasoning form part of grounded theory, which is the third approach I chose to integrate into my research (Glaser, 1978, 1992, 1998, 2001, 2005; Glaser & Strauss, 1967). Broadly speaking, each of these approaches can be used to help researchers to understand and interpret a range of phenomena by analysing patterns of values, cultural beliefs, behaviors, attitudes, and interpersonal interactions in a group of people. In combination, with aspects of these methodologies utilized according to need, the approach can be described as Qualitative Description (Sandelowski, 2010).

Interpersonal interaction, as a research process (Glass, 2013), was chosen to assist me to overcome the challenges inherent in the study. The challenges I needed to overcome included knowing how to authentically connect with all of the perioperative staff. For many of the staff, I knew such interactions would or could be threatening to their workplace privacy. Mills, Bonner,
and Francis (2006) suggest that to “ensure a strong research design, researchers must choose a research paradigm that is congruent with their beliefs about the nature of reality” (p. 2). Glass (2013) believes that “strength of qualitative and mixed-methods research is the opportunity to establish an interpersonal relationship or nexus between the researcher and the participant” (p. 20). Rogers verified this (1959, 1975) by reporting, early in his career, that he was surprised to learn that by simply listening to his patients, he had stumbled upon an extremely effective way of helping them.

Indeed, this innate ‘knowing’ is what ultimately led me to conduct this study, employing quantitative and qualitative methods of research, with the qualitative research taking a Qualitative Description approach that supported the integration of tenets of interpersonal interaction, ethnography and grounded theory. The framework produced additional clarity to the research questions, while providing an avenue for the participants to add their own thoughts and observation regarding their workplace environment.

Figure 1 (Glass, 2013, p. 35) depicts the value provided by incorporating the interpersonal interaction as a research process, including listening to and incorporating study participants’ thoughts and observations in the findings. There is also a need to highlight the importance of human interactions; questioning the more traditional research parameters or paradigms (e.g. statistical methods), which often serve to overlook interpersonal interactions. Likewise, researchers must ‘expect the unexpected’, with the unexpected often occurring when dealing with individuals and individuals-in-relationships, as against patterns that arise from large cohorts or samples; and considering before and after ‘intervention’ (e.g. collecting data) phenomena. Interestingly, this latter part of the process could incorporate aspects of ethnography and critical reflection.

Glass (2013) further emphasised the importance of seven (7) specific human interactions, to be included in the qualitative research process where human interaction plays a large part. These interactions are outlined in Figure 2 and were juxtaposed throughout the year in which the data was collected for the study. Indeed, Figure 2 guided me in adapting the survey questions for use during the qualitative portion of the study. Staff were already familiar with these questions
from the quantitative portion of the study. Posing the questions again in a semi-structured way, for discussion by a group, enabled answers that were richer and interactive.

![The importance of human interactions
Refuting traditional research parameters
Expecting the 'unexpected'
Before and after 'intervention' phenomenon](image)

*Figure 1: Glass (2013) Mixed Methodology Research Model*
Reproduced with Permission of N. Glass (2013), p. 35

As the study proposal was being developed, the complexities of the study aims and objectives were realised (McEvoy & Richards, 2006). Figure 3 (Glass, 2013) both embodies and corroborated this process – as noted by Glass (2013), “It is indisputable that participants’ expression of their subjectivity is central to the meaning of qualitative research” (p. 14). For example, and as explained in the next section (titled ‘Quantitative Research’), by incorporating survey questions from the three chosen survey instruments, all these core constructs could be explored more fully. Indeed, the study would call for real-life contextual understandings, multi-level perspectives, and cultural influences. By utilizing a variety of data collection tools (e.g., surveys and in-depth interviews), the study would intentionally integrate and combine these methods to draw on the strengths of each.
Integration of the abductive reasoning applied in grounded theory, into the Qualitative Description framework, included utilizing the methods of in-depth one-to-one interviews and
semi-structured focus group interview discussions with the study participants; together with the understanding of ethnographic observations and reflective journaling to explore the way in which the nurses’ constructed their realities or alternative realities from a workplace cultural point of view. This in turn served to support my exploration of a particular phenomenon or set of behaviors within a discrete cultural group – in this case, nurses working in inpatient settings in a hospital. I saw that both approaches allowed for a deeper exploration of the issues being studied.

For example, the principles of ethnography supported the development of a narrative description of the participants and their actions. The principles of ground theory were useful for the implementing and forecasting of the adult student behavior – specifically, because the interventions used in this study were educational in nature, aspects of grounded theory were integrated, to suggest and shape a more effective educational strategy ongoing post study (Olson, 2008). Additionally, Johnson, McGowan, and Turner (2010) reported that when using mixed-methods that include aspects of grounded theory, questions should ask “how, what and why phenomena operate, (including the qualitative and quantitative aspects of these phenomena. [They further expound that] mixed-methods that included aspects of grounded theory research is about meanings and process or explanatory relationships” (Johnson et al., 2010, p. 72). I saw this as being a good fit for my research.

There are, of course, a number of differences between these three approaches. For example, grounded theory is used to generate theory, firstly, to help explain the values, cultural beliefs, behaviors or attitudes; and secondly, to understand how this helps people to define their reality(ies) (Bryant, 2002, 2017; Gaffney, DeMarco, Hofmeyer, Vessey, & Budin, 2012). When utilizing grounded theory, the literature is considered after the data is collected, so that findings and the development of theory(ies) are not affected by the researcher’s preconceived ideas (Jones & Alony, 2011). In contrast, ethnography is used to provide a description of a particular behavior in light of the culture in which it is located and consider the ‘alternative realities’ that may be posited by some participants (Shenton, 2004). When utilizing ethnography, the literature is considered before the data is collected so that analysis is undertaken in light of the previous research findings (Berg, 2004). This is because the aim of ethnography is to identify the cultural meaning behind a particular concept. Despite these differences, I understood that employing
some of the principles of grounded theory and ethnography in the qualitative part of my research would enable a more authentic description of the perioperative world, as experienced by me and study participants. As will become more evident in the layout of this study process, such genuineness and connectivity with the OR clinicians was vital to a successful study.

As already noted, Sandelowski (2010) suggests that statistical analyses align with Qualitative Description design. In this study, I describe the statistical approaches taken in the process of analyzing the quantitative data in the section titled “Quantitative Research”.

**Quantitative Research**

Quantitative research is a mode of enquiry used most often for deductive research, which aims to test theory(ies) or hypotheses, gather descriptive information, consider causality or examine relationships among variables and deduct conclusions (Polit & Beck, 2014). The variables are measured and yield numeric data that can be analysed statistically. Quantitative data have the potential to provide measurable evidence, to help to establish (probable) cause and effect, to yield efficient data collection procedures, to create the possibility of replication and generalization to a population, to facilitate the comparison of groups, and to provide insight into a breadth of experiences.

Typical quantitative approaches used in the health sciences are descriptive surveys, observational studies, case-control studies, randomised controlled trials, and time-series designs. As observed on the USC Research Guide site (2016), quoting Babbe (2010), “quantitative research focuses on gathering numerical data and generalising it across groups of people or to explain a particular phenomenon.” Moreover, quantitative research designs can be either descriptive, i.e. when the survey instrument is measured only once, or experimental, meaning, the survey instrument is administered at the start, perhaps during and then after an intervention.

A descriptive quantitative study establishes only associations between variables; an experimental study establishes causality. Polit and Beck (2017) advise that choosing how to quantify the study’s variables is, however, of utmost importance. This was an issue I had to consider carefully, for my study, understanding that such quantification would be monitored intently, due to varying numbers of staff availability when the survey tools were administered.
In my study, the quantitative approach was descriptive only – that is, it establishes associations between the variables (Creswell, 2008). The data is collected in my study utilizing the Survey method, including the utilization of validated questionnaires (described in the next section). Survey research is a commonly utilized quantitative approach that involves a researcher posing a set of predetermined questions to a group of participants (Creswell & Creswell, 2018). The approach provides an important means of obtaining information about the group’s perceptions or understanding of a topic and highlight aspects of the topic that may need more focused examination (Creswell & Creswell, 2018).

The Survey method is useful because it provides an efficient and effective means of obtaining a large amount of information (Kothari, 2004). Also, if enough people participate in the Survey, then the information collected can be generalised to other people or groups (Nardi, 2018). This generalizability is based on the probability that, if the majority of a group of people in one group perceive a topic in a particular way, so will the majority of another similar group of people (Nardi, 2018).

The Survey method that uses validated questionnaires, such as is used in my study, is viewed as reliable (Nardi, 2018). This is because the questionnaire has been tested and validated over time with a range of groups of people (Nardi, 2018). While some researchers have argued that surveys can sometimes be inflexible and lack validity, it is generally viewed that the use of validated questionnaires in relevant sample groups will provide a rigorous data set from which high quality results can be deduced (Nardi, 2018).

**Mixed-Methods as a Methodology**

As already noted, in this study, I used both qualitative and quantitative approaches – that is, I took a mixed-methods approach to the research. I refer to this approach as my methodology for a number of reasons. Specifically, a method is a research tool utilized in the research – e.g. in-depth interviews (qualitative research) or a questionnaire (quantitative research) (Johnson, Onwuegbuzie, & Turner, 2007). In contrast, a methodology is the overall framework, including the research strategy, utilized in the research, including the justification for using this framework (Johnson, Onwuegbuzie, & Turner, 2007). This section provides an explanation of the mixed-methods as a methodology, and includes justification for the approach.
Tashakkori and Teddlie (2003), together with and Teddlie and Tashakkori (2003), informed us that mixed-methods more or less birthed as a third methodological movement in the social and behavioral sciences during the 1980's. They further refined their thinking in 2009, when they and others recognised that a study may not necessarily be considered mixed, if no integration occurred across the stages (Teddlie & Tashakkori, 2009). Defining mixed-methods is also described as integrating quantitative and qualitative data collection and analysis in a single study or a program of enquiry (Creswell et al., 2003; Creswell, 2009).

Greene, Caracelli, and Graham’s (1989) early framework for research, identified five (5) general purposes for mixed-methods studies: triangulation, complementarity, initiation, and lastly, expansion. Developing on that work, Onwuegbuzie and Teddlie (2003) theorized that when analysing quantitative and qualitative data within a mixed-methods framework, such as I have used, there is usually inclusion of some array of these seven (7) phases. “Data reduction, data display, data transformation, data correlation, data consolidation, data comparison, and [lastly], data integration” (Onwuegbuzie & Leech, p. 490-491). During the data integration stage, the data (both quantitative and qualitative) are assimilated “into either coherent whole or two separate sets (i.e., qualitative and quantitative) of coherent wholes” (Onwuegbuzie & Leech, p. 491).

More simply, any research study that uses more than one exploratory approach can be described as a mixed-methods study (Burke & Onwuegbuzie, 2004). According to Nair (2015), “[a] mixed [methods] approach has an advantage of triangulation with respect to data, investigator and theory or methods” (p. 365). Babbe (2015) and Stange, Crabtree, and Miller (2006) are all strong proponents of a mixed-methods approach, suggesting that quantitative and qualitative methodologies have more similarities than differences and that social research is strengthened by the use of both quantitative and qualitative methodologies. This is supported by Plano, Clark, and Creswell (2010), who suggest that a merger of quantitative and qualitative data allows development of a more complete understanding of a problem; sort of a complementary picture, comparison and validation, to provide illustrations of context for trends and to examine processes/experiences along with outcomes (Onwuegbuzie & Leech, 2006; Sale, Lohfeld, & Brazil, 2004). To verify if these educational sessions and focused interviews were effective in
reducing both workplace stress and WPV, three (3) different survey tools were employed to measure the key variables.

The second reason a mixed-methods approach was chosen related to the research questions themselves. Mixed-method researchers generally suggest it is the actual research issue which should determine the final design chosen (Rocco, Bliss, Gallagher, & Perez-Prado, 2003). Establishing the research issue, actually determines which methodology would be most appropriate; a mixed methodology design with a pragmatic paradigm (Tashakkori & Teddlie, 2003). With that determination made, the research problem is then centrally positioned (Andrew & Halcomb, 2006; Morse, 2003). See Table 2 (on the next page) (Mackenzie & Kipe, 2006, p. 7) for the ways in which research methods cross paradigm boundaries. Using these suggested parameters, the paradigm that best correlates with this current study would be ‘pragmatic’.

Mackenzie and Kipe (2006) reported that research which uses a pragmatic paradigm provides an opportunity for "multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis in the mixed-methods study" (Creswell, 2003, p. 12; Creswell, Fetters, & Ivankova, 2004). The research questions that formed the basis of this study called for such an approach.

Mixed-methods research questions are questions that embed both a quantitative research question and a qualitative research question within the same question. “Moreover, a mixed-methods research question necessitates that both quantitative data and qualitative data be collected and analysed either concurrently, sequentially, or iteratively before the question is addressed” (Onwuegbuzie & Leech, 2006, p. 483). This is demonstrated in the research questions outlined at the beginning of this chapter.

Of course it must be acknowledged that mixed-methods studies can be challenging for health researchers to plan and implement. According to Catallo, Jack, Ciliska, and MacMillan (2013), this can be both “due to their design complexity and difficulties related to appropriate integration of data and results” (p. 1). These challenges were addressed, however, during the planning my study, where I realised the importance of understanding the sensitive nature of the survey tools, and thereby minimise a mismatch of the qualitative and quantitative data being studied (Meetoo & Temple, 2003; Morse, 2003).
Table 2: Ways in Which Research Methods Cross Paradigm Boundaries

<table>
<thead>
<tr>
<th>Paradigm</th>
<th>Methods (Primarily)</th>
<th>Data Collection Tools (Examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positivist/Postpositivist</td>
<td>ExperimentsQuantitative. &quot;Although qualitative Quasi-experimentscan be used within this Tests paradigm, quantitative methods Scales tend to be predominant . . .&quot; (Mertens, 2005, p. 12)</td>
<td></td>
</tr>
<tr>
<td>Interpretivist/Constructivist</td>
<td>Qualitative Interviews Observations Document reviews Visual data analysis</td>
<td>Interviews Observations Document reviews Visual data analysis</td>
</tr>
<tr>
<td>Transformative</td>
<td>Qualitative methods with quantitative and mixed-methods. Contextual and historical factors described, especially as they relate to oppression (Mertens, 2005, p. 9)</td>
<td>Diverse range of tools - particular need to avoid discrimination. E.g.: sexism, racism, and homophobia</td>
</tr>
<tr>
<td>Pragmatic</td>
<td>Qualitative and/or quantitative methods may be employed. Methods are matched to the specific questions and purpose of the research</td>
<td>May include tools from both positivist and interpretivist paradigms. E.g. Interviews, observations and testing and experiments</td>
</tr>
</tbody>
</table>

Babbe (2015) and Stange, Crabtree, and Miller (2006) are all strong proponents of a mixed-methods approach, suggesting that quantitative and qualitative methodologies have more similarities than differences and that social research is strengthened by the use of both quantitative and qualitative methodologies. This is supported by Plano, Clark, and Creswell (2010), who suggest that a merger of quantitative and qualitative data allows development of a more complete understanding of a problem; sort of a complementary picture, comparison and validation, to provide illustrations of context for trends and to examine processes/experiences along with outcomes (Onwuegbuzie & Leech, 2006; Sale, Lohfeld, & Brazil, 2004).
According to Nair (2015), “[a] mixed [methods] approach has an advantage of triangulation with respect to data, investigator and theory or methods” (p. 365). Flick, Garms-Homolova’, Herrmann, Kuck, and Rohnsch “describe those research issues that support the use of mixed-methods as those that require a triangulation of perspectives to understand a complex problem. In their study, the authors acknowledge that a constructivist paradigm precedes the framing of the research issue” (Mertens & Hesse-Biber, 2012, p.77).

Adding to this, Fielding brings attention to the role of triangulation in mixed-methods research at the analytic stage through the combination or conversion of quantitative and qualitative data. He argues that we mix not because there is something intrinsic or distinctive about quantitative or qualitative data. Rather we do so to integrate the two fundamental ways of thinking about social phenomena; he uses this as an argument to support the quantifying of qualitative data to test hypotheses or the qualitatizing of quantitative data to show patterns or idiosyncrasies (Mertens & Hesse-Biber, 2012, p.78).

Intriguingly, Hesse-Biber, (Mertens & Hesse-Biber, 2012) focus on a feminist theoretical viewpoint with triangulation. This was of special interest for this study, as females dominate much of the healthcare workforce. For Hesse-Biber “ inclusion of women may be challenging in some cultures in which they are relegated to lower status” (Mertens & Hesse-Biber, 2012, p.78). This was realised by me as the study proposal was being developed, I realised the complexities of the study aims and objectives. Glass (2013) corroborated these intricacies by writing “It is indisputable that: participant’s expression of their subjectivity is central to the meaning of qualitative research” (p. 14). I understood that by incorporating survey questions from the three chosen survey instruments (BEES, PWSSI and HWVS), all these core constructs could be explored more fully. The study would call for real-life contextual understandings, multi-level perspectives, and cultural influences. By utilizing mixed-methods, the study would intentionally integrate and combine these different methods used, to draw on the strengths of each.
In summary, there are three main reasons that I chose to utilize the mixed-methods approach to my research, with my methodology framed by the following. Firstly, I sought to view the problem from multiple perspectives, to enhance and enrich the meaning of a singular perspective. Secondly, I wanted to see the need to contextualize information by, for instance, taking a macro picture of a system (e.g., a perioperative department) and adding information about individuals (e.g., working at different levels of education or different staff positions in that same department). Thirdly, the mixed-methods design provides a means by which I could formally integrate or synthesize the findings or results, derived from the different approaches and, in the process, enabling cross-validation.

**Setting**

For this study, the setting was two departments located in a healthcare facility in the western US. I was employed to work as an RN in the same healthcare organization, though across the campus from the perioperative departments involved in the study.

The first reason for choosing these two departments was based on two previously negative Survey research findings by external and internal regulatory bodies, which identified deficits and/or errors in the year leading up to the study development. Both of the perioperative departments involved in the study were identified as having WPV issues and staff workplace dissatisfaction. This is explained in more detail in the following section.

The second reason for choosing these two perioperative areas for study was that they were directly related to my area of clinical expertise, and therefore I felt most comfortable in these settings, for ease of observation. Perioperative departments, across the world, whether inpatient or ambulatory, tend to be comprised of similar zones. The separate areas are pre-operative preparation areas, surgery (OR), Post Anesthesia Care Unit (PACU) (postoperative recovery) and central /sterile supply and processing departments (CSPD). This fact assists with the general ability for perioperative staff to relate to the discussion. Though the sampling was purposive rather than random, I regarded it as appropriate, as the departments are typical of perioperative departments both discussed in this proposal and discovered in the literature readings leading up to this proposal.
Previous Studies on Perioperative Teamwork & Safety Attitudes

The previous studies undertaken in this workplace setting included a workplace climate survey, which measured perceived team cohesion, safety attitudes and conflict resolution; and a staff satisfaction survey, measuring team cohesiveness, respect and cooperation (Towers Watson, 2012). According to the workplace climate survey, a low teamwork climate stems from persistent interpersonal problems among the members of a given unit. When teamwork climate is low, employees feel that their co-workers are not cooperative, that management does not hear their voices, nor support their efforts to effect change.

Perioperative staff, whose names were protected, participated in an assessment of safety culture by frontline caregivers using the Safety Attitudes Questionnaire (Sexton et al., 2006). Results showed workplace safety risks were scored at a high level of five (5) (on a scale of 1 to 5, with five the highest in relation to not feeling safe). In addition, 61 per cent of participants voiced that disagreements in the work setting were not resolved appropriately, 61 per cent also said that it was not easy to learn from the mistakes of others, and 33 per cent said it was difficult to discuss errors made.

In a second study, focused on perioperative teamwork, OR staff rated the teamwork between surgeons and the staff of department at 19 per cent, while surgeons rated this metric at 57 per cent (Goal was 80 per cent). For this same survey, staff rated their ability to have input into decisions at 47 percent, with goal again at 80 per cent. What was the most alarming with these results was that staff perceived it was difficult to speak up, regarding safety-related issues. The danger zone was anything over 40 per cent; but staff scored this at 53 per cent, while surgeons scored it at seven per cent.

In follow-up staff satisfaction and teamwork questionnaire, which occurred in 2012, the staff felt that they were working less effectively (-36 per cent) as a team than in 2010, (-11 per cent). They also felt they were less respected, with a drop from -13 per cent in 2010 to -19 per cent, 2012. These previous survey results, along with consultation from the facility leadership team provided the reasoning to select the settings for my study.
Sample

As already suggested, the sample was ‘purposive’ – that is, they were located in one of the two departments selected for the study. Despite the challenges presented, I decided to strengthen the study design and utilized a control group to serve as benchmark. The first and main group, located in Department 1 (D1), also called the ‘intervention group’, was located in an inpatient surgery department. The second group located in Department 2 (D2), also called the ‘control group’, was located in the ambulatory surgical department.

I made the choice to have two groups to better understand any impact the education intervention had on the independent variables. I acknowledge that this decision needed to be based on a rationale that could meaningfully guide the design and implementation of mixed-method evaluations. In the social sciences, control groups are the most important part of an intervention study, because it is practically impossible to eliminate all of the confounding variables and bias. For example, both the placebo effect in medicine (Kaptchuk & Miller, 2015) and the Hawthorne Effect have been well studied. According to McCambridge, Witton, and Elbourne, (2014) “consequences of research participation for behaviors being investigated do exist, although little can be securely known about the conditions under which they operate, their mechanisms of effects, or their magnitudes” (p. 11). With the Hawthorne Effect, when people know that they are the subjects of an experiment, they automatically change or adapt their behavior.

The control group (D2) was composed of ambulatory surgery department participants who closely resembled the participants in the main group (D1). While the control group (D2) did not receive the education intervention (described in the section title ‘Data Collection’), or

<table>
<thead>
<tr>
<th>Statement</th>
<th>2010 % change (−/+ previous year</th>
<th>2012 % change (−/+ 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department operates effectively as a team</td>
<td>-11%</td>
<td>-36%</td>
</tr>
<tr>
<td>People working in Department respect each other, despite differences</td>
<td>-13%</td>
<td>-19%</td>
</tr>
</tbody>
</table>
participate in the focus group sessions (described in later sections), they still played a vital role in the research process. By using a control group (D2), I wanted to ascertain if awareness of horizontal WPV and EE concepts alone, could positively affect stress and EE levels.

**Exclusions**
Specific exclusions related to the sample and data collection were, firstly, any perioperative staff who did not sign an informed consent form and return it back to myself, as the Principal Investigator; secondly, all non-perioperative staff; thirdly, all physicians; and finally, all providers (including Certified RN Anaesthetists (CRNAs).

**Inclusions**
Specific inclusions related to the sample and data collection were all perioperative staff who signed an informed consent form and return it back to myself, as the Principal Investigator, and all perioperative physician assistants.

**Intervention and Data Collection**
As already explained, the study focused on three research questions:

1. What is the relationship between empathy and stress for perioperative staff??

2. What is the relationship between perioperative staffs’ levels of stress and their perceptions of using empathy to reduce WPV?

3. What is the difference in perceived workplace stress and empathy levels between Inpatient perioperative staff (D1) and Ambulatory perioperative staff (D2)?

Data was collected using both qualitative and quantitative approaches. In this section, I briefly explain the educational intervention that was implemented, to increase awareness of emotional empathy in the perioperative workplace and WPV; and also the way in which the data was collected, with more detailed information is provided in Chapter 4, ‘Intervention and Data Collection Strategies’.

**Education Intervention**
Education was provided to the intervention group (D1) in the form of a professional development sessions, which were held during the data collection period. The education sessions’ material
included a number of topics, including what horizontal WPV and stress look like; the preliminary results of the PWSSI and HWVS data collection; increasing empathy and decreasing anger in the workplace, as well as information on emotional empathy, stress and workplace violence; developing EI and EE to create a healthy workplace; characteristics of healthy work environments; and information on how to manage passive –aggressive behavior in the workplace. As the Principal Investigator, I led the educational sessions based on actual survey results.

Qualitative Approaches
While the group discussion and in-depth interviews served as a means of collecting data from the participants, they were also used, secondarily, as an ‘intervention’. This is because the nature of the focus group discussion and in-depth interviews provided an important means by which participants exchange ideas, reflect – and, in the process, achieve increase awareness about EE, workplace stress and WPV (Polit & Beck, 2017).

Focus Group Discussions
Focus group discussions, which comprise two or more participants, purposively selected, together with a facilitator with a semi-structure interview schedule, are used to gain an in-depth understanding of particular issues, usually social issues (Polit & Beck, 2017). The participants are asked about their perceptions, opinions, beliefs, and attitudes towards the matter under discussion, with the questions and environment interactive (Nyumba, Wilson, Derrick & Mukherjee, 2018). The facilitator, who is generally part of the research team, either takes notes or records the vital points that are discussed by the research participants.

As already noted, the questions used in the focus group discussions arose from the Survey instruments utilized – the BEES, PWSSI and HWVS. These instruments are described in more details in later sections and also in Chapter 4.

In-Depth Interviews
In-depth interviews generally occur one-to-one, between a researcher and a participant. They are loosely structured, to allow the freedom for both the interviewer and the interviewee to explore additional points, in-depth (Ezzy, 2010; Gill, Stewart, Treasure, & Chadwick, 2008). Questions
for the in-depth interviews undertaken for this research were drawn from the BEES, PWSSI and HWVS. The in-depth interviews provided an important means of allowing me, as the researcher, to capture rich, descriptive data about people’s behaviors, attitudes and perceptions, and unfolding complex processes (Polit & Beck, 2017).

**Quantitative Approaches**

To collect the quantitative data aimed at answering the research questions, three validated research instruments were utilized – the BEES, PWSSI and HWVS. Guidance for this choice was provided by Yu and Kirk (2009), who evaluated empathy measurement tools in nursing, though not perioperative healthcare. They conducted an extensive search for the period 1987 and 2007 using the Medline, CINAHL and PsycINFO databases and the keywords ‘empathy’, ‘tool’, ‘scale’, ‘measure’, ‘nurse’ and ‘nursing’; and undertook a systematic review to analyse, evaluate and synthesize the rigor of measures used in nursing research to assess empathy, in order to identify a ‘gold standard’ for application in future studies. An explanation of and justification for choosing the BEES, PWSSI and HWVS is now provided, in the following three sub-sections.

**Balanced Emotions Empathy Scale (BEES)**

The BEES (Mehrabian, 1996) is a validated research instrument that uses a questionnaire format, wherein study participants report the degree of their agreement or disagreement with each of its 30 items using a nine-point agreement-disagreement scale. Of the 30 individual questions on the survey tool, 15 are positively worded and 15 were negatively worded. Some sample items from the BEES survey are: 1) Unhappy movie endings haunt me for hours afterward and 2) I very much enjoy and feel uplifted by happy endings.

Mehrabian (2000) has provided considerable reliability and validity information on the BEES. In particular, findings showed the Abbreviated BEES to be a positive correlate of emotional success (i.e., general emotional well-being), relationship success (i.e., healthy and happy interpersonal relationships), career and financial success, and overall life success (Mehrabian, 2000). Alpha internal consistency of the BEES was .87 (Mehrabian, 1997b).

Background literature, provided by Dr. Mehrabian, includes a review article on reliability and validity by Mehrabian, Young, and Sato (1988) on their earlier scale in this area, the
Emotional Empathic Tendency Scale (EETS). Experimental work, reviewed by Mehrabian et al. (1988) and by Chlopan, McCain, Carbonell and Hagen (1985), yielded the findings listed below for an early version of their empathy scale, the 1972 EETS. The listed validity evidence can be attributed to the BEES (Mehrabian, 1996) because the BEES exhibited a very high positive correlation of .77 with the 1972 EETS (Mehrabian, 1997b). Mehrabian's (1997a) theoretical analysis of traits that are approximately related to affiliation and sociability (i.e., sensitivity to rejection, empathy, dependency, conformity, popularity, loneliness, and shyness) sheds additional light on the construct validity of the BEES and hence a correlation to my study.

Perceived Workplace Stress Survey Instrument (PWSSI)

The PWSSI was developed by the AIS. Feedback from Dr. Kirsch (President of the AIS), is that the PWSSI was not formally validated clinically as its primary use, and as used for this study, is for non-clinical evaluation, to determine perception of stress at any given moment in time. The PWSSI is in a questionnaire format and is relatively easy to administer and score. Subjects reported the degree of their agreement or disagreement with each of its 10 items using a 9-point agreement-disagreement scale. Test format consisted of a 10-item questionnaire, with appropriate population of English fluency, ages 15 and older. Time required for administration is approximately 5-10 minutes with scoring done via hand to yield a single total-scale score.

Sample items of the ten workplace stress questions are 1) I tend to have frequent arguments with superiors, co-workers or customers and 2) My workplace environment is not very pleasant or particularly safe.

Horizontal Workplace Violence Survey Instrument (HWVS)

For the aforementioned People Pulse and Safety Attitudes Surveys, used previously in the perioperative departments in which my study was undertaken, there were no direct questions regarding WPV or stress. The HWVS (Dumont, Meisinger, Whitacre, & Corbin, 2012) and the PWSSI (previous section) were therefore used to bridge this gap.

The HWVS was designed to capture the frequency of workplace bullying, also called horizontal violence. The HWVS is well validated as evidenced by the follow-up report in 2012 of a Survey originally completed by nurses on a USA national level in 2011 (Dumont,
Meisinger, Whitacre, & Corbin, 2012). The report following that research said that “The two individual questions on HV with the highest reported frequency were question #3 [Complaining about a co-worker to others instead of attempting to resolve a conflict directly by discussing it with that person], \((N = 939, \text{ mean } 4.85, \text{ SD } =1.2)\), and question #4 [Raising eyebrows or rolling eyes at another co-worker], \((N = 939, \text{ mean } 4.72, \text{ SD } =1.3)\)” (Dumont et al., 2012, p. 45).

There are ten questions on the HWVS with participants asked to identify how often (ranging from never, once, a few times, daily, weekly, or monthly) they had observed or been subjected to such behaviors. Examples of answers include are 1) Harshly criticising someone without having heard both sides of the story, and 2) Complaining about a co-worker to others instead of attempting to resolve a conflict directly by discussing it with that person.

The HWVS is in a questionnaire format and is relatively easy to administer and score. Subjects reported the degree of their agreement or disagreement with each of its 10 items using a 9-point agreement-disagreement scale with appropriate population of English fluency and ages 15 and older. Time required for administration was approximately 5-10 minutes. I used this HWVS after receiving permission from the authors.

**Data Analysis and Validation of Results**

**BEES Data Analysis**

The BEES Windows software (provided to me directly by Dr. Mehrabian) for administering, scoring, and interpreting the BEES was used. The software was useful even though I administered the paper and pencil version of the BEES. The software was used to input data from each participant; the software computed total scores and z-scores for all participants as well as averaged data for different groups of participants (see next paragraph). The software provided total score, equivalent z-score, equivalent percentile score, and interpretation of these scores for each person tested and a database of scores for all individuals tested. It allowed me to assign a Group ID to each participant (e.g. to assign different Group ID numbers) to individuals from different perioperative departments. The software supplied averaged total scores and averaged z-scores for each Group ID. Additionally, it allowed me to export the data as an ASCII
DOS TEXT file (.txt) that was printable. It also exported a spreadsheet file (.csv) for additional analyses, e.g., with MS Excel (XL).

The software was easy to use, was password protected so that I (Administrator) could control access to the database of results. In this manner, individuals being tested never had access to the results.

**Dataset Construction and Analysis**

I created an XL database for all the survey data. Excel was used to insert survey data per participant, per survey time. The software was useful even though I administered the paper and pencil version of the PWSSI. The XL software aggregated input data for each question from each participant; the software computed total scores for all participants as well as averaged data for different groups of participants. The XL software was easy to use, was password protected so that I (as the Principal Investigator and Administrator) could control access to the database of results. In this manner, individuals being tested never had access to the results.

For all three survey instruments, the data was summarised (control vs treatment and for the different times) using Cronbach’s alpha, means and standard deviations. Two-way analysis of variance tests (ANOVA) were used to determine whether there were any significant differences between the means over the three different times and the two different groups. Assumptions of the ANOVA test were verified using a Kolmogorov -Smirnov (KS) test (Chakravati, Roy & Laha, 1967) for normality and Levene’s Test (Levene, 1960) for equality of variance. The standard level of significance of 5% was used.

**Memoing and Collection of Qualitative Data**

Since qualitative research relied primarily on the collection of qualitative data (i.e., nonnumeric data such as words and pictures), when writing to results, I included observations made during the educational sessions I conducted. To record those observations, I recorded and/or noted these discussions with an mp3 player for follow-up with the group discussions for clarification, as mentioned above.

I completed interim analyses, via ongoing and iterative (nonlinear) process. This analysis encompassed the cyclical process of collecting and analysing data during the study. This was
continued until the process was completed or I felt the topic was understood, which means the study had reached theoretical saturation, and most likely has produced the most relevant data to discriminate or test my theories. This process required me to use a flexible approach to data collection as it progressed alongside data analysis.

Throughout the entire process of qualitative data analysis, I engaged in memoing (i.e. recording reflective notes about what PI is learning from data). This memoing consisted of writing memos to self, when PI had ideas and insights. These memos were included as additional data to be analysed. As I proceeded with the group interviews, observations, interview data was transcribed into MS Word documents. I also transcribed the text (from interviews, observational notes, memos, etc.).

I used these transcriptions that were later analysed, by using the NVivo qualitative data analysis computer program. I carefully read transcribed data, line by line, dividing it into meaningful analytical units (i.e., segmenting the data). When I located meaningful segments, these segments were coded by using a mixture of symbols, descriptive words, or category names, until I segmented all of the data and completed the coding (NVivo). Interview data and text (observational notes, memos, etc.) were transcribed into MS Word documents and analysed (using the NVivo qualitative NVivo program). Finally, they were converted into meaningful information. Findings from this coding were based on interpretations of words, texts, and grouped patterns. NVivo software allowed for easier analysis of text-based data, importing and analysing of text, theme/s, case and NVivo coding; a review coding with coding stripes and highlights, text search, word frequency and coding queries; charts, word clouds, word trees, explore and comparison diagrams.

**Ethical Considerations**

Obtaining ethics approval for my study aided in the realization that staff may be impacted by emotions fuelled by conversations focused on workplace conflict and stress over the study year. In addition, any methods used to undertake the qualitative phase relative to sampling, interview methods, and sampling plan would necessarily be limited, therefore making it difficult to ascertain the extent to which elements of rigor, such as confirmability, transferability, triangulation, and reflexivity would be possible.
While formulating the study and its parameters, in October of 2011, I applied to the HealthCare Facility Research Institute to request for exemption from Investigational Research Board (IRB) Review and determination of privacy rule requirements for the proposed study. It was determined by that body that the study did not meet the federal regulatory of human subjects’ research (a systematic investigation, including research development, testing and evaluation designed to develop or contribute to generalisable knowledge) as defined by 45 CFR 46.102 (d). Furthermore, that IRB determined that this study is not human subject research, and therefore it cannot be described as human subject research in any publication or presentation, though it can be described as a quality assessment project study. Pursuant to this, I submitted the study proposal to Charles Sturt University's Ethics and Human Research Committee for approval of this project. Following facility’s IRB approval, the study was initiated May of 2012.

**Study Assumptions**

All scholarly researchers identify and report assumptions and biases (Creswell, 2008). Several assumptions affected the results of this study. Specific assumptions related to data collection included, firstly, all staff were observed/monitored while surveys were being completed; secondly, individuals who completed the surveys were perioperative staff; thirdly, participants were 18 years of age or older; fourthly, participants truthfully answered all questions, fifthly, the three instruments used for this study were valid, reliable, and suitable for this study; sixthly, use of the instruments minimised bias related to the adapted survey instruments; and finally, approvals were received to use these instruments.

**Rights of Participants via Informed Consent**

Subsequent to receiving informed consent from participant, as Principal Investigator I explained the parameters of the proposed study, conditions of participation, the information sheet, and the voluntary consent to participate to the staff of the Department of Perioperative Services. I also informed potential study participants that their decision to opt in to the study would be determined by my receipt, from each potential study participants, of a signed consent form.

This signed consent form confirmed the following – that the participant had, first, read
and understood the information contained in the "Information Sheet" for participants and any questions asked had been answered to their satisfaction; second, understood they were free to withdraw participation in the research at any time, and that if they did, they would not be subjected to any penalty or discriminatory treatment; third, understood that focus groups discussions may be recorded; fourth, agreed that the purpose of the research had been explained to them, including the (potential) risks/discomforts associated with the research; fifth, understood that any information or personal details gathered in the course of this research about them would be confidential and that no names nor any other identifying information would be used or published without their written permission; sixth, understood that a final report and/or presentation would be produced for institutions associated and interested in this project’s findings; seventh, agreed that their anonymous data may be used for ongoing research beyond this current project; and eighth, understood that Charles Sturt University's Ethics in Human Research Committee had approved this study, and that if they had any complaints or concerns about this research they can contact the Executive Officer, Ethics in Human Research Committee.

Mitigation of Risk to Study Participants

I realised that the study participants may experience psychological/ mental stress, possible embarrassment, anxiety, or discomfort. For this reason, I assured participants of the following: first, if participants experience any inconvenience or discomfort as a result of participating in the discussion groups they were encouraged to contact the Employee Assistance Program (EAP) -the EAP program by its very nature is always confidential; second, study participants were requested to never use individual personnel identifiers in discussion groups or during education offerings; third, if issues between individual participants were unearthed or realised by study participants, e.g. bullying and harassment, employees, were asked to report any such issues to the corporate compliance hotline; and fourth, if employees requested, and consent of all parties was gained, mediation services were offered by the EAP.

Protecting Research Participants’ Confidentiality

All information provided was edited and coded in such a way as to protect participant identity. This included the following processes: first, names were not recorded on any documents, except
the informed consent forms; survey responses will be at no time ‘named’; second, any demographic and social information about the department would be of a general nature; third, all data would be stored securely in a locked cabinet or on password protected and encrypted computer files, for seven years; fourth, the names of the participants would not be entered on computers, tapes or any other technical equipment, so participants cannot be identified even if the equipment is stolen; fifth, discussion groups maybe tape recorded, and then transcribed, to assist me, as Principal Investigator, with follow-up data thematic coding.

In addition, I assured participants of the following: first, before such discussion ensues, study participants were requested and reminded to not use any names or personal identifiers; second, study participants were reminded at every taping, that any recordings would be transcribed quickly and then deleted; and third, study participants were advised and reminded of this often and every time the recording was turned on.

**Summary and Conclusion**

This chapter explained the methodological design of the research, and provided justification for that design. The explanation included definitions of key terms (conceptual and operational), together with a description of the mixed-methods approach taken. Also important was the explanation of the setting and sample; intervention used; and qualitative and quantitative approaches taken to collecting and analysis the data. The chapter concluded by outlining the ethical considerations of the study. In the course of my explanation in this chapter, I also reflect on some of the challenges involved in relation to developing the study, my learning related to overcoming these challenges, and the key considerations.

The next chapter, Chapter 4, provides details of the implementation of the study, including the intervention used to achieve the anticipated changes in practice. I also provide an overview of how I collected the data.
CHAPTER 4:
INTERVENTION AND DATA COLLECTION STRATEGIES

Introduction

In Chapter 3, I explained that mixed-methods design was chosen to frame the research study, with a view to providing a more comprehensive understanding of ‘if and how’ empathic awareness in the perioperative environment make a difference to WPV. Participants in the research comprised two groups of people – the intervention group (D1) and the control group (D2). The first group participated in an intervention that included education, focus group discussions and in-depth interviews. In this chapter, I provide more information about the intervention utilized in the study, and also explain the strategies or approaches used to collect the research data for analysis. I also consider the adaptations made to the study to implement it in the real-world setting and how I overcame the challenges involved to ensure the integrity of the study.

Implementation of the Research

As explained in Chapter 3, the sample population for the proposed study was gathered from hospital based perioperative department, the intervention group (D1); and the ambulatory based perioperative group (D2) (control group), with a similar in scope and staffing mix to D1. Both groups were located in the healthcare facility in which I worked. Reference to ‘all perioperative staff’ refers to those staff members who were working, who had been provided informed consent and had voluntarily signed off on same. Any staff who did not sign the informed consent, was not permitted to complete the survey. Each ‘consented’ staff present on the survey dates, completed each of the three surveys at three designated times (beginning of year, (time #1), mid-year, (time # 2), and at end of year, (time # 3) throughout the yearlong data collection period.

As the study project was planned, it was quickly realised that due to the perioperative settings’ staffing scheduling requirements involved (discussed in Chapter 5), and the voluntary aspect of the study, the participants could not be matched from time 1 to time 2 to time 3. This
was primarily due to staffing regulations in the perioperative areas, and consequently, staff availability on the days the voluntary surveys were completed. Perioperative clinical staffing guidelines are based on individual patient needs, patient acuity, technological demands, staff member competency, skill mix, practice standards, healthcare regulations, accreditation requirements, and state staffing laws, therefore, staffing rotates daily and shift to shift (Butler, Clinton, Sagi, Kenney, & Barsoum, 2012).

**Educational Intervention**

Aware that workplace bullying referred to a range of behaviors that were often hidden and difficult to prove, I wanted to increase awareness of what this bullying actually looked like, and to guide the perioperative staff into sustaining emotionally intelligent and more empathic behavior. For the main group (D1), education offerings continued for the entirety of the proposed study project. All education, focus groups question sessions, ‘one-to-one’ question sessions and survey instruments were completed during the participants’ work time. Due to my self-directed goals, and also direct requests of the healthcare facility senior executives, general topics of education covered were characteristics of healthy work environments, horizontal violence in the healthcare workplace, and recognising and identifying behaviors consistent with horizontal violence and disruptive behavior. I both developed and delivered educational sessions over the year of the data collection.

The main group (D1) educational sessions were delivered at each survey time – specifically June 2012, November of 2012 and April of 2013. D2 surveys were completed on the same days. At the request of the healthcare facility senior executives, educational sessions were mandatory for all D1 staff working on ‘education days’. Hence night shift D1 perioperative staff going off duty and on-coming dayshift staff were educated concurrently. D1 evening shift staff received their education on the same day and were scheduled to start work one-to-one and a half hour prior to their normally schedule shift start time, to receive both the education and complete the surveys.

All non-physician D1 perioperative staff were included in the educational interventions. The staff included STs, surgical physician assistants (PAs), RNs, anesthesia technicians, sterile supply staff (responsible for cleaning and sterilization of surgical instruments), environmental
services staff, and surgical scheduling staff. CRNA, surgeons and anesthesiologists were excluded.

As noted in Chapter 3, the education sessions’ material included: firstly, what horizontal WPV and stress look like; secondly, preliminary results of PWSSI and HWVS; thirdly, increasing empathy and decreasing anger in the workplace, EE, stress and work place violence; fourthly, developing EI and EE to create a healthy workplace; fifthly, characteristics of healthy work environments; and, sixthly, how to manage passive –aggressive behavior in the workplace. The following pages provide examples of the lesson plans that I utilized when facilitating these education sessions (or ‘interventions’).

**Lesson Plan: Example 1**

**Information about Workplace Horizontal Violence:**

What does WPV behavior look like to OR/PACU staff?

*Disrespect:*

Belittling or making hurtful remarks about co-workers in front of others and pretending not to notice a co-worker struggling with his or her workload.

*Subtle intimidation:*

1) Condescending language or tone, 2) Hesitated to ask questions for fear of being ridiculed, and 3) Not speaking up about something thought to be wrong, in fear of retaliation.

*Overt intimidation:*

1) Complaining about a co-worker to others instead of attempting to resolve a conflict directly by discussing it with that person, 2) Body language - raising eyebrows or rolling eyes at another co-worker, and 3) Harshly criticising someone without hearing both sides of story. The ten most frequent forms of WPV in Healthcare Listed by frequency are 1) Nonverbal innuendo, 2) Verbal affront, 3) Undermining activities, 4) Withholding information, 5) Sabotage, 6) Infighting, 7) Scapegoating, 8) Backbiting, 9) Failure to respect privacy, and 10) Broken confidences.
Frequency of WPV Behavior is evidenced by:

1) Fewer than 5 per cent of physicians (Weber, 2004) exhibit this behavior, 2) Experienced by 64 per cent (Diaz & McMillan, 1991) of nurses/healthcare professionals, 3) 23 per cent nurses (Diaz & McMillan, 1991) report something thrown, 4) Reported by 96 per cent of nurses /healthcare professionals, (Rosenstein, 2005) 5) 68 per cent reported disruptive nurses /healthcare, (Rosenstein & O'Daniels, 2005) 6) Effects of WPV behavior, 7) Undermines effective teamwork, 8) Undermines the confidence of any member of the team in effectively caring for patients, and 9) Causes concern for anyone’s physical safety.

Implications of WPV Behavior in Perioperative Arena:

1) Growing concern about the role of human factor issues and their effect on perioperative patient safety & clinical outcomes of care, 2) Horizontal Violence behaviors increase levels of stress and frustration, which impairs concentration, impedes communication flow, and adversely affects staff relationships and team collaboration, and 3) These events increase the likelihood of medical errors and adverse events and to compromise patient safety and quality of care.

Reluctance to question by staff:

1) 49 per cent respondents to survey reported pressure to administer drug despite serious unresolved safety concerns (ISMP, 2003) and 2) 40 per cent kept quiet about a safety concern rather than question a known disrupter (Institute for Safe Medication Practices (ISMP), 2004).

Avoidance:

1) Failure to call a physician and 2) Avoid making suggestions, or to speak up.

Tolerance of substandard care:

1) No pre-op or post-op time-outs and 2) No surgical site marking and 3) No hand-washing.
Productivity Impact:

1) Re-dos, 2) Lost time, 3) Delays in care, 4) Re-processing, 5) Morale, and 6) Increased administrative, paperwork time.

Workforce Effect:

1) Low self-esteem, worthlessness, 2) Single biggest factor in job satisfaction for Nurses/Healthcare staff, 3) 31 per cent (Rosenstein & O'Daniels, 2005) knew at least one Nurse/Healthcare staff who left because of WPV, 4) 18 per cent turnover attributed to verbal abuse (Cox, 1987), and 5) Gen Y respond by leaving (Rosenstein & O'Daniels, 2005).

Lesson Plan: Example 2

What Drives WPV Behavior is complex:


2) When violence occurs in the workplace, it is a matter of individual(s) seeking to have power/or control over another.

Theories offered for consideration are:

1) Lateral and Horizontal Violence Theory, 2) Oppressive behavior and attitudes of healthcare professionals have been so pervasive that it often goes undetected, 3) Without having addressed the systemic issues, the effects of lateral violence (LV) and HV have begun to erode the healthcare environment, affecting everyone (directly or indirectly), and 4) Social Theory.
Social theorist and philosopher Michel Foucault (King-Jones, 2011) looked at the individual’s outlook and existence, in relation to the effects of power and knowledge within a society:

1) Foucault held the belief that power is not controlled but exercised within relationships between people, which can be seen through the resistance of power, 2) The underpinning of Lateral and Horizontal Violence in healthcare has been embedded into the social control of the hierarchy of healthcare, and 3) The negative social behavior by a dominant group has led to internalized feelings of hopelessness, powerlessness among many healthcare professionals.

What should be done about WPV Behavior Differences between Physicians & Other Healthcare Professionals?

Early recognition & intervention is the key:

Providing educational courses and training workshops on diversity training, stress, anger or conflict management, assertiveness training, and improving communication and team collaboration skills. The second component of early intervention is to identify individuals at risk physicians, nurses and other healthcare professionals, due to the nature of their positions, are working under increasing stress and complexity, which can and does lead to fatigue, burnout, depression and even suicidal ideation.

Lesson Plan: Example 3

Recommendations & Solutions should be multifaceted:

1) Adoption and implementation of ‘zero-tolerance to violence’ policy, 2) Means to disseminate policy information to all staff, volunteers, clients, family members and visitors, 3) An inclusive and respectful practice environment where there is collaboration among team members, 4) A WPV committee, which includes nurses, to develop strategies for controlling and reporting violent behavior, 5) Violence prevention/management education and training programs for all staff, including discussion about accountability and respect for others, 6) A
system to identify and flag situations that could create a potential for violence, 7) Immediate response plans, 8) Collaborative agreements with local law enforcement agencies for immediate response in the event of an actual or potentially violent situation, 9) A Critical Incident Debriefing Program that includes peer support, 10) EAP, counseling, security and other support staff as required, 11) Support and encouragement for nurses to report incidents of WPV and to prosecute individuals who commit violent acts, 12) A mechanism to track and review incidents or potential incidents of violence, 13) Use of communication devices and panic buttons in case there is an incidence of violence, 14) Individually as A Professional (Mentor/Preceptor), 15) Demonstrate strong, positive behaviors which are acceptable and supportive, 16) Provide healthcare students and novice healthcare professionals greater opportunities to become actively involved in debriefing sessions to vent frustrations, effects of unfair treatment and negativity to which they are exposed, and 17) Provide students and novice healthcare professionals with manageable workloads that are conducive to capabilities and supportive towards their learning process as they transition into their professional position – also allow for adjustments to workloads to promote success of new healthcare professionals.

References & Resources- Provided to Attendees:

I incorporated into some of the 2013 educational sessions a video developed at and by the Cleveland Clinic (2013). This Cleveland Clinic Empathy Video was launched as a sustainability tool for a culture of empathetic care throughout their healthcare system. This video asked, “If you could stand in someone else’s shoes… Hear what they hear. See what they see. Feel what they feel. Would you treat them differently?”

While I was preparing to facilitate the first educational session, which would include showing and discussing the video mentioned above, one staff member who had not signed an informed consent arrived for the educational session. This video was shown to and discussed by all D1 staff in attendance. The aforementioned staff member contacted me later that same morning. As I worked across the campus from the perioperative department, this staff member had to go out of her way to locate me. She called to ask if it was too late for her involvement in
the study (it was) and to thank me for showing this video. The empathy video helped this staff
member to realise some preconceived assumptions she had made about one of her co-workers.
This allowed her to seek out that co-worker to apologize for some overt and covert actions she
had done.¹

Additional objectives of the educational sessions were to 1) Identify the elements of a
healthy work environment, 2) Describe the underpinning tenets of oppression theory as it relates
to healthcare and LV (AKA Bullying and workplace conflict), 3) Explore the science behind the
physiological responses to positive emotions and their relationship to fostering healthy work
environments, and 4) Describe personal and professional strategies to create healthy work
environments.

I incorporated specific questions into the educational sessions from the conflict survey
tool and presented case study reviews to identify drivers of and to provide an understanding of
how disruptive behavior covert intimidation appears. Examples were, among others, using
condescending language or tone, hesitating to ask questions for fear of being ridiculed, and not
speaking up about something thought to be wrong in fear of retaliation. Overt intimidation tactics
were also called out, such as complaining about a co-worker to others instead of attempting to
resolve a conflict directly by discussing it with that person and body language examples of
raising eyebrows or rolling eyes at another co-worker and harshly criticising someone without
hearing both sides of story. Staff also received education and tools on how resolve conflicts, how
to build a sense of workplace community and a healthy work environment by increasing their
knowledge of EI and managing job stress using empathy

**Focus Group Discussions and In-Depth Interview Process**

Integrating Glass’s seven iterative steps, one-to-one interviews and focus group sessions
incorporated survey questions guided by or directly quoted from the survey instruments, to lead
discussion, in only the main (D1) group. Stange et al. (2006) inform us that using a bilateral

¹ As noted in the Rights of Participants (p.3) only those staff who had signed informed consents, were permitted to complete the
study survey instruments.
approach of integrating quantitative and qualitative approaches generates new knowledge and can involve either concurrent or sequential use of these two classes of methods to follow a line of enquiry. e.g. ‘Do you have a sense of your own empathy and awareness and how that may help you with your work?’

Recruiting staff for the focus groups and one-to-one sessions was iterative. Participants more or less came to me, in a group or one-to-one, and said they wanted to talk with me. Leading the one-to-one or focus group session, I used (for example) one of the WPV survey questions. ‘Have you yourself or seen somebody roll their eyes at somebody else? E.g. ‘I can't honestly say what I really think or get things off my chest at work.’

As some of the questions on both the BEES and the HWVS intrinsically demanded more in-depth enquiry, I conducted in-depth focused group and one-to-one discussions to provide more analysis. These in-depth focused group and one-to-one discussions, included for the most part a group focus, though there was some individual discussion (e.g., one-to-one), when staff were comfortable and requested such. Participants were requested to never disclose any staff identifiers during focus group discussions. The discussion data was recorded, via written notes and an mp3 player, with no one identified by name. There was one questioner (myself) and one or more focus group or one-to-one participants. The purpose of the focused group discussions was to probe the ideas of the focus group participants regarding the phenomenon of horizontal WPV and associated workplace stress.

This largely unstructured questioning involved direct interaction between the researcher, (myself), and staff from D1. The direction for these discussions was taken from the BEES survey, the HWVS and the PWSSI. Although I had some initial guiding questions or core concepts to ask, there was no formal structured instrument or protocol. Using this structure, I was free to move the conversation in any direction of interest that arose.

Consequently, I felt unstructured discussion was particularly useful for exploring topic/s more broadly. These discussions combined with the larger group educational sessions, provided rich examples of what staff voiced when using a more unstructured one-to-one dialogue with the perioperative staff.
Use of the Survey Instruments

As noted in Chapter 3, three different Survey instruments were used to collect quantitative data from the research participants – the BEES, PWSSI and HWVS. The BEES was used to measure components of EE for the main or ‘intervention’ group (D1) and also the control group (D2) (see previous section for explanation). At the beginning of the study, using time 1 baseline departmental measurements, I used the BEES Survey Instrument to establish the initial/current levels of EE of participants. This survey tool was then re-used at the study midpoint and lastly, in the final month of the yearlong data collection period.

Likewise, the PWSSI was used to establish the initial/current levels of perceived stress knowledge of participants. This Survey tool was then re-used at the study midpoint and also in the final month of the yearlong data collection period. Perioperative staff were asked to enter a number from the scale below that best described them: ‘Strongly, disagree, agree, somewhat strongly agree - 1 2 3 4 5 6 7 8 9 10’. If the total aggregate score was lower, between 10-30, staff handled stress on the job well; between 40-60, moderately well; 70-100, they were encountering problems that needed to be addressed and resolved.

Finally, the HWVS was totally blinded with no demographical data requested. AS with the BEES and PWSSI, I employed the HWVS using time 1-baseline department measurements, I employed the HWVS to establish the initial/current levels of HV knowledge of participants. This survey tool was then re-used at the study midpoint and in the final month of the yearlong data collection period.

Operationalizing the Data Collection

Overall the group was 70 per cent female, 30 per cent male and consisted of a wide range of perioperative years of experience from relatively new to the seasoned. Levels of education ranged from ‘On the job’ training, technical certifications, two -year Community College degrees four-year university degrees as well as masters level and doctoral level prepared staff. As well, many cultural and racial groups were represented, including Caucasian, (including Canadian, Russian), African American, Indian American, Filipino, and Hispanic (with representatives from most South American countries and Mexico).
Surveys were completed by the main group (D1) immediately following each educational session completion. Only those staff who had signed an informed consent form, completed the surveys. The focused group sessions and one-to-one interviews occurred randomly, as staff were available, over the year of the data collection.

To more objectively evaluate the implementation fidelity of the study interventions, I referred to Hassan’s (2010) modification of the conceptual framework for implementation fidelity. This was affected by adding two additional moderating factors, context and recruitment. This ‘conceptual framework for implementation fidelity’ (Shown in Figure 4) as described by Carrol et al., (2007) currently is considered the most complete conceptual framework for implementation fidelity. I translated this into Table 4, 5 and 6 below.

Figure 4: Modified Conceptual Framework for Implementation Fidelity (Hassan, 2010 & originally from Carroll et al, 2007)
Table 4: Process Evaluation Plan For This Project

<table>
<thead>
<tr>
<th>Core Impacts</th>
<th>Immediate &amp; Short-Term Impacts</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1 Intervention Group were notified they would be involved in the Focused Interview &amp; Educational Sessions</td>
<td>PI was approached with casual observations regarding workplace stress, horizontal violence and empathy</td>
<td>Instances led to focused one-to-one or group interviews</td>
</tr>
<tr>
<td></td>
<td>These instances were recorded</td>
<td>Following year of data collection, staff maintain contact with PI</td>
</tr>
<tr>
<td>D2 Control Group were notified they would not be involved in the Focused Interview &amp; Educational Sessions</td>
<td>Unofficial approaches to PI with casual observations regarding workplace stress, horizontal violence and empathy</td>
<td>Study participants would have the ability to begin to collaborate as a more cohesive unified department and to care for each other</td>
</tr>
</tbody>
</table>

Table 5: Planned Delivery of the Three Survey Instruments, the Education and the Focused Interview Sessions

<table>
<thead>
<tr>
<th>D1 Intervention Group Were Involved In The Education &amp; Focus GROUP (GRP) &amp;</th>
<th>D1 Intervention Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Data</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>June 2012</td>
<td>Surveys Completed</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5: The General Evaluation Plan
Includes areas to measure, general process questions, data sources and data collection methods

<table>
<thead>
<tr>
<th>Areas to Measure</th>
<th>General Process Questions</th>
<th>Data Source and Data Collection Method</th>
<th>Dosage, Dose Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of Perioperative Staff</td>
<td>Was Informed Consent Provided?</td>
<td>Perioperative Staff Rosters</td>
<td>Main GRP (D1) X 85</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Control GRP (D2) X 30</td>
</tr>
<tr>
<td>Consents Signed</td>
<td>Informed Consent Provided</td>
<td>Consents Signed/Returned</td>
<td>Main GRP (D1) X 83/85</td>
</tr>
</tbody>
</table>

November 2012 Surveys Completed
· What Perioperative Workplace Horizontal and Stress Look Like to the D1 Group per initial survey results
· How can we use EE to decrease both Perioperative Workplace Horizontal and Stress?
· EE

April 2013 Surveys Completed
What Empathy in a Healthcare Facility looks like

As staff were free and available over the 12-month study period
Focus GRP & One-to-One Interview Sessions

**D2 Control Group received no Education, nor were they involved in the Focused Interview Sessions**

<table>
<thead>
<tr>
<th>D2 Control Group</th>
<th>Surveys Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2012</td>
<td>Surveys Completed</td>
</tr>
<tr>
<td>November 2012</td>
<td>Surveys Completed</td>
</tr>
<tr>
<td>April 2013</td>
<td>Surveys Completed</td>
</tr>
<tr>
<td>Content</td>
<td>Was each of the intervention components implemented as planned?</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Intervention Group | BEES Survey Instrument  06/2012; 11/2012; 04/2013  
PWSSI  06/2012; 11/2012; 04/2013  
Horizontal Violence Survey Instrument  06/2012; 11/2012; 04/2013  
Educational Sessions provided  06/2012; 11/2012; 04/2013 | | |
| Control Group | BEES Survey Instrument  06/2012; 11/2012; 04/2013  
PWSSI  06/2012; 11/2012; 04/2013  
Horizontal Violence Survey Instrument  06/2012; 11/2012; 04/2013 | | |
<p>| Frequency | Were the intervention components implemented as often as planned | Interview &amp; Focus GRP Sessions with D1 participants | As staff were free and available over the 12-month study period |</p>
<table>
<thead>
<tr>
<th>Intervention Group</th>
<th>BEES Survey Instrument</th>
<th>06/ 2012; 11/2012; 04/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PWSSSI</td>
<td>06/ 2012; 11/2012; 04/2013</td>
</tr>
<tr>
<td></td>
<td>Horizontal Violence Survey Instrument</td>
<td>06/ 2012; 11/2012; 04/2013</td>
</tr>
<tr>
<td></td>
<td>Educational Sessions provided</td>
<td>06/ 2012; 11/2012; 04/2013</td>
</tr>
<tr>
<td>Control Group</td>
<td>BEES Survey Instrument</td>
<td>06/ 2012; 11/2012; 04/2013</td>
</tr>
<tr>
<td></td>
<td>PWSSSI</td>
<td>06/ 2012; 11/2012; 04/2013</td>
</tr>
<tr>
<td></td>
<td>Horizontal Violence Survey Instrument</td>
<td>06/ 2012; 11/2012; 04/2013</td>
</tr>
<tr>
<td>Coverage (Reach)</td>
<td>Numbers of participants each D1 Educational Session</td>
<td>06/ 2012 X 71/85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11/2012 X 65/85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>04/2013 X 72/85</td>
</tr>
<tr>
<td>Intervention Group (main = D1)</td>
<td>Interview &amp; Focus GRP Sessions with D1 participants</td>
<td>06 - 07/2012 X 10/85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11/2012 X 8/85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>04/2013 X 8/85</td>
</tr>
<tr>
<td>Intervention Group</td>
<td>BEES Survey Instrument</td>
<td>06/ 2012 X 54/85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11/2012 X 33/85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>04/2013 X 52/85</td>
</tr>
</tbody>
</table>
| Control Group | PWSSI Horizontal Violence Survey Instrument | 06/2012 X 59/85  
11/2012 X 30/85  
04/2013 X 51/85  
06/2012 X 53/85  
11/2012 X 31/85  
04/2013 X 47/85 |
|---------------|--------------------------------------------|---------------------|
|               | Numbers of Surveys returned each Control Group Survey Session | 06/2012 X 22/30  
11/2012 X 19/30  
04/2013 X 23/30 |

**Summary and Conclusion**

This chapter provided an overview of the intervention used in the study, including how this intervention was applied. This includes the educational intervention, and also the processes that supported awareness raising about EE, for staff. I also provided information on the approaches taken to collecting the data for analysis, including the plan I followed across the course of the yearlong period of study. I discovered that conducted research requires some flexibility and the theoretical approaches developed before the data collection commences at times need some adapting in real-world settings. By following the plans made, in relation to the research, I was able to overcome the challenges involved to ensure the integrity of the study.
CHAPTER 5:
RESULTS & FINDINGS

In this chapter, I provide an overview of the characteristics of those who participated in the research; and then the findings (Qualitative Description) and results (Survey), derived from the data I collected. I present the results and findings in line with the research questions that framed the study. Following this, I also consider the results and findings using the triangulation that is often utilized in mixed-methods research. I conclude the chapter with the brief summary and look towards the discussion of results and findings.

Sample Characteristics

All non-physicians, D1 perioperative staff was included in the survey completion and educational interventions. CRNA’s, surgeons and anesthesiologists were excluded. The staff included Surgical Technologists (STs), Surgical PAs, RNs, Anesthesia Technicians, Sterile Supply Staff, (responsible for cleaning and sterilization of surgical instruments), environmental services staff, and surgical scheduling staff.

Overall the group was 70 per cent female and 30 per cent male and consisted of a wide range of perioperative years of experience, from relatively new to seasoned. Levels of education ranged from ‘On the job’ training, technical certifications, two-year Community College degrees four-year university degrees as well as masters level and doctoral level prepared staff. As well, many cultural and racial groups were represented, including Caucasian, (including Canadian, Russian), African American, Indian American, Filipino, Hispanic, (with representatives from most South American countries and Mexico).

Quantitative Results

Data were collected from three surveys, including the BEES (to measure empathy), the HWVS (to measure conflict), and the PWSSI (to measure stress). Each survey was administered at three different times (beginning, middle and end of study year) to both the main group (D1) and the control group (D2). For all three survey instruments the data was summarised (control vs main and for the three different times) using Cronbach’s alpha, means and standard deviations.
Three-way analysis variance tests (ANOVA) were used to determine whether there were any significant differences between the means over the three different times and the two different groups.

Statistical analysis in the social sciences will often have an interpretative lens that may not align with the results generated from statistical analyses undertaken in what some call the ‘pure’ sciences, with social statisticians focused on different aspects of the results. For example, in this research, the analysis focused on situations where the safety, well-being or health of staff is challenged at work due to the abusive, threatening or aggressive behaviors of others. Sandelowski (2010) also noted that qualitative descriptive approaches can include statistical analyses.

Neither a repeated measures approach nor adjusting for baseline differences between groups, were possible, as there were not always the exact same number or staff available each survey time (beginning, middle and end of study year). Some other factors affecting this inability to use a repeated measure, was missing data on the completed surveys. One of the biggest problems with traditional repeated measures ANOVA is missing data on the response variable. Further, the problem is that a repeated measure ANOVA treats each measurement as a separate variable. Because it uses list wise deletion, if one measurement is missing, the entire case gets dropped. By using a mixed model, each occasion would be treated as a different observation of the same variable. In smaller samples missing data have greater relevance and by reducing the sample size even further, it can impact the p value of statistical effects (Kline, 2013b). Because missing data occur randomly, (Babbe, Wagner, & Zaino, 2018) the impact of incomplete assessments should be small. I may have lost the measurement with missing data, but not all other responses. For any un-balanced numbers of repeats across individuals’ surveys, a repeated measure ANOVA treats each response as a different variable.

First, there were occasionally a different number of response variables for each (or any) individual. If some had missing data in any responses, they were dropped. Secondly, the ANOVA will compare the responses to each other, assuming that each one represents a different condition. A mixed model can handle unequal repeats.
Assumptions of the ANOVA test were verified using a KS test (Chakravati, Laha & Roy, 1967) for normality and Levene’s Test (Levene, 1960) for equality of variance. The standard level of significance of 5% was used.

Quantitative results are presented sequentially in relationship to descriptive statistics. The quantitative results are also organized by question and variable as that matches the structure of the exegesis. Within each of these sections the table of descriptive results are included before the inferential results. Cronbach’s alpha (a descriptive measure of validity) is also included and were calculated at each stage of data collection for both groups.

Table 6: Cronbach’s Alpha for Times 1 Through 3 on Main and Control Group Participants

<table>
<thead>
<tr>
<th>Scale</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>.55</td>
<td>.57</td>
<td>.62</td>
</tr>
<tr>
<td>Main</td>
<td>.64</td>
<td>.68</td>
<td>.68</td>
</tr>
<tr>
<td>Stress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>.72</td>
<td>.79</td>
<td>.81</td>
</tr>
<tr>
<td>Main</td>
<td>.77</td>
<td>.71</td>
<td>.77</td>
</tr>
<tr>
<td>Conflict</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>.84</td>
<td>.86</td>
<td>.81</td>
</tr>
<tr>
<td>Main</td>
<td>.86</td>
<td>.84</td>
<td>.81</td>
</tr>
</tbody>
</table>

BEES Time 1 n = 70 Time 2 n = 46 Time 3 n = 75
STRESS Time 1 n = 57 Time 2 n = 50 Time 3 n = 74
CONFLICT Time 1 n = 63 Time 2 n = 74 Time 3 n = 61

As seen in Table 8, the lowest internal consistency resulted from the first administration of the BEES among the control group participants (.55). Internal consistency for the BEES was consistently lower than all other scales, particularly for the control group. Alternatively, the conflict scale consistently had the highest internal consistency, ranging from .81 for both the control and main groups at time 3, to .86 among the control at time 2 and the main at time 1.

That the conflict scale consistently had the highest internal consistency, ranging from .81 for both the control (D2) and main (D1) groups at time 3, to .86 among the control at time 2 and
the main at time 1, perhaps reflects that conflict was embedded in this perioperative culture and was the reason I was asked originally to conduct this research study. Overall, the BEES scores had the lowest internal consistency, in an interesting counterbalance with the high overall consistency for the conflict scores.

**Question 1: To What Extent Is It Possible to Increase Awareness of EE in the Perioperative Workplace, Over the Data Collection Period of One Year?**

To address Question 1, a two-way ANOVA was conducted to determine if statistical differences exist on BEES (Mehrabian, 1997b) raw scores by time and group.

**Table 7: Means and Standard Deviations on BEES Raw Scores by Group (Main vs. Control) and Time (1 vs. 2 vs. 3)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control Group</th>
<th>Main Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>BEES raw scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 1</td>
<td>63.65</td>
<td>21.19</td>
</tr>
<tr>
<td>Time 2</td>
<td>60.92</td>
<td>22.95</td>
</tr>
<tr>
<td>Time 3</td>
<td>63.96</td>
<td>21.92</td>
</tr>
</tbody>
</table>

Time 1 n = 70 Time 2 n = 46 Time 3 n = 75

Time was used as an independent variable and the analysis was not done as a repeated measures design. The dependent variable in the analysis was BEES raw scores. The two independent grouping variables in the analysis were time (1 vs. 2 vs. 3) and group (main vs. control). Statistical significance was determined at $\alpha = .05$.

Prior to analysis, the assumptions of normality and equality of variance were assessed. Normality was measured with a KS test (Chakravarti, Laha, & Roy, 1967; Smirnov, 1948); the result was not significant, $p = .516$, indicating that the assumption was met. Equality of variance
was assessed with Levene’s Test (Levene, 1960), and the result was not significant, \( p = .613 \), indicating that the assumption was met.

**Differences of EE Between the Two Groups, Over Time.**

Table 8: Two-way ANOVA on BEES Raw Scores by Group (Main vs. Control) and Time (1 vs. 2 vs. 3)

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
<th>Partial ( \eta^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>94.46</td>
<td>2</td>
<td>47.23</td>
<td>0.07</td>
<td>.930</td>
<td>.00</td>
</tr>
<tr>
<td>Group</td>
<td>4735.22</td>
<td>1</td>
<td>4735.22</td>
<td>7.27</td>
<td>.008</td>
<td>.04</td>
</tr>
<tr>
<td>Time*Group</td>
<td>627.03</td>
<td>2</td>
<td>313.52</td>
<td>0.48</td>
<td>.619</td>
<td>.01</td>
</tr>
<tr>
<td>Error</td>
<td>120574.67</td>
<td>185</td>
<td>651.76</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Time 1 \( n = 70 \) Time 2 \( n = 46 \) Time 3 \( n = 75 \)

The interaction effect between time and group was assessed to determine if time (1 vs. 2 vs. 3) on BEES raw scores was influenced by group type (main vs. control) (Table 9). The interaction did not yield a statistically significant finding, \( F (2, 185) = 0.48, p = .619 \), partial \( \eta^2 = .01 \). This indicated that there were no significant differences in the effect of time on BEES raw scores for participants in the main group and participants in the control group.

The main effect of group on BEES raw scores was found to be statistically significant, \( F (1, 185) = 7.27, p = .008 \), partial \( \eta^2 = .04 \), indicating that there was a significant difference on BEES raw scores by group (main vs. control). The ANOVA model’s effect size (partial \( \eta^2 \)) of .04 indicates a medium difference existed on BEES raw scores between main group and control group participants (Morgan, Leech, Gloekner, & Barrett, 2007).
Table 9: Means and Standard Deviations on BEES Raw Scores by Group (Main vs. Control)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control Group (n = 53)</th>
<th>Main Group (n = 138)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>BEES raw scores</td>
<td>63.11</td>
<td>21.56</td>
</tr>
</tbody>
</table>

The participants in the control group had significantly higher BEES raw scores ($M=63.11$) than those participants in the D1 group ($M=50.81$) (Table 10).

Table 10: Means and Standard Deviations on BEES Raw Scores by Time (1 vs. 2 vs. 3)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Time 1 (n= 70)</th>
<th>Time 2 (n= 46)</th>
<th>Time 3 (n = 75)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>BEES raw scores</td>
<td>52.71</td>
<td>26.21</td>
<td>57.24</td>
</tr>
</tbody>
</table>

The main effect of time on BEES raw scores was not found to be statistically significant, $F (2, 185) = 0.07, p = .930$, partial $\eta^2 = .00$ (Table 11). This indicated that there were no significant differences on BEES raw scores by time (1 vs. 2 vs. 3); therefore, no statistical significance can be interpreted on BEES raw scores by time.

Though this current study indicated no significant differences in the effect of time on BEES scores in either group, it did reveal significant differences in the groups themselves. The ambulatory surgery (control) group demonstrated higher levels of empathy, as is evidenced in Table 12.

I had envisaged that from the beginning of the yearlong data collection period, for those subjects from the main group (being involved in focus group discussions and educational sessions regarding EE), some differences would be accomplished on the BEES raw scores (increased) by the end of the study. The results do not show this.
Question 2: To What Extent Does Increasing EE, Reduce Instances of Perioperative WPV Over the Data Collection Period of One Year?

To address Question 2, a two-way ANOVA was conducted to determine if statistical differences exist in conflict mean scores by time and group.

Table 11: Means and Standard Deviations on Conflict Mean Scores by Group (Main vs. Control) and Time (1 vs. 2 vs. 3)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control Group</th>
<th></th>
<th>Main Group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>Conflict mean scores</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 1</td>
<td>1.74</td>
<td>0.90</td>
<td>2.13</td>
<td>0.89</td>
</tr>
<tr>
<td>Time 2</td>
<td>1.58</td>
<td>0.92</td>
<td>1.78</td>
<td>0.86</td>
</tr>
<tr>
<td>Time 3</td>
<td>1.66</td>
<td>0.80</td>
<td>2.30</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Time 1 n = 63 Time 2 n = 74 Time 3 n = 61

As mentioned earlier, since the participants could not be matched from time 1 to time 2 to time 3, time was used as an independent variable and the analysis was not done as a repeated measures design. The dependent variable in the analysis was conflict mean scores, which consists of the mean of the ten conflict scores (Cronbach α = .84). The two independent grouping variables in the analysis were time (1 vs. 2 vs. 3) and group (main vs. control). Statistical significance was determined at α = .05.

Prior to analysis, the assumptions of normality and equality of variance were assessed. Normality was assessed with a KS test and the result was not significant, $p = .206$, indicating that the assumption was met. Equality of variance was assessed with Levene’s Test and the result was not significant, $p = .930$, indicating that the assumption was met.
**Differences in WPV/Conflict over Time: (Time 1 Vs. 2 Vs. 3)**

The results of the two-way ANOVA are presented below in Table 13.

Table 12: Two-way ANOVA on Conflict Mean Scores by Group (Main vs. Control) and Time (1 vs. 2 vs. 3)

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>3.39</td>
<td>2</td>
<td>1.69</td>
<td>2.26</td>
<td>.107</td>
<td>.02</td>
</tr>
<tr>
<td>Group</td>
<td>8.03</td>
<td>1</td>
<td>8.03</td>
<td>10.71</td>
<td>.001</td>
<td>.05</td>
</tr>
<tr>
<td>Time*Group</td>
<td>1.55</td>
<td>2</td>
<td>0.78</td>
<td>1.03</td>
<td>.358</td>
<td>.01</td>
</tr>
<tr>
<td>Error</td>
<td>143.94</td>
<td>192</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Time 1 n = 63 Time 2 n = 74 Time 3 n = 61

The main effect of group on WPV/conflict mean scores, was found to be statistically significant, $F (1, 192) = 10.71$, $p = .001$, partial $\eta^2 = .05$, indicating that there was a significant difference on conflict mean scores by group (main vs. control), as noted in Table 13 below.

The ANOVA model’s effect size (partial $\eta^2$) of .05 indicated that a medium difference existed on conflict mean scores between participants in the main group and participants in the control group (Morgan, Leech, Gloekner & Barrett, 2007).

The interaction effect between time and group was assessed to determine if time (1 vs. 2 vs. 3) on conflict mean scores was influenced by group type (main vs. control). The interaction did not yield a statistically significant finding, $F (2, 192) = 1.03$, $p = .358$, partial $\eta^2 = .01$, indicating that there were no significant differences in the effect of time on conflict mean scores for those participants in the main group and those participants in the control group.

Table 13: Means and Standard Deviations on Conflict Mean Scores by Time (1 vs. 2 vs. 3)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Time 1 ($n = 63$)</th>
<th></th>
<th>Time 2 ($n = 74$)</th>
<th></th>
<th>Time 3 ($n = 61$)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Conflict mean scores</td>
<td>1.96</td>
<td>0.91</td>
<td>1.71</td>
<td>0.88</td>
<td>2.02</td>
<td>0.87</td>
</tr>
</tbody>
</table>
The main effect of time on conflict mean scores was not found to be statistically significant, $F(2, 192) = 2.26$, $p = .107$, partial $\eta^2 = .02$, indicating that there were no significant differences on conflict mean scores by time (1 vs. 2 vs. 3). No statistical significance was interpreted on conflict mean scores by time (Table 14).

**Differences in WPV/Conflict Between the Two Groups**

Participants in the control group (D2) had significantly lower conflict mean scores ($M = 1.66$) than participants in the main group, D1 ($M = 2.04$) (Table 15).

Table 14: *Means and Standard Deviations on Conflict Mean Scores by Group (Main vs. Control)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control Group $(n = 81)$</th>
<th>Main Group $(n = 117)$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Conflict mean scores</td>
<td><strong>1.66</strong> 0.87</td>
<td><strong>2.04</strong> 0.88</td>
</tr>
</tbody>
</table>

These differences in conflict scores of the control group from the main group could be accounted for by the different variables of each area, such as a rapidly changing, more critically ill patients requiring more difficult, and complex lifesaving and life altering surgeries. This type of environment can be increasingly stressful resulting in higher workplace conflict prone responses (Table 16).

Stecker and Stecker (2014) reported that a significant to this disruptive, conflict prone behavior was a substantial positive correlation with increased stress in the perioperative areas. This is further addressed in hypothesis #3 results, immediately below.

**Question 3: To What Extent Does Increasing EE Levels Over the Data Collection Period of One Year, Lead to a Decrease in Perioperative Workplace Stress?**

To address Question 3, A Two-Way ANOVA was conducted to determine if statistical differences exist on stress mean scores by time and group.
Table 15: Means and Standard Deviations on Stress Mean Scores by Group (Main vs. Control) and Time (1 vs. 2 vs. 3)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control Group</th>
<th>Main Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Stress mean scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 1</td>
<td>3.75</td>
<td>1.49</td>
</tr>
<tr>
<td>Time 2</td>
<td>3.26</td>
<td>1.42</td>
</tr>
<tr>
<td>Time 3</td>
<td>3.94</td>
<td>1.63</td>
</tr>
</tbody>
</table>

Time 1 n = 57 Time 2 n = 50 Time 3 n = 74

Because the participants could not be matched from time 1 to time 2 to time 3, time was used as an independent variable and the analysis was not done as a repeated measures design. The dependent variable in the analysis was the mean of the ten stress scores (Cronbach α = .76). The two independent grouping variables in the analysis were time (1 vs. 2 vs. 3) and group (main vs. control). Statistical significance was determined at α = .05. Prior to analysis, the assumptions of normality and equality of variance were assessed. Normality was assessed with a KS test and the result was not significant, p = .189, indicating that the assumption was met. Equality of variance was assessed with Levene’s Test and the result was not significant, p = .880, indicating that the assumption was met.

Table 16: Two-way ANOVA on Stress Mean Scores by Group (Main vs. Control) and Time (1 vs. 2 vs. 3)

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>1.66</td>
<td>2</td>
<td>0.83</td>
<td>0.39</td>
<td>.679</td>
<td>.00</td>
</tr>
<tr>
<td>Group</td>
<td>8.01</td>
<td>1</td>
<td>8.01</td>
<td>3.74</td>
<td>.055</td>
<td>.02</td>
</tr>
<tr>
<td>Time*Group</td>
<td>5.61</td>
<td>2</td>
<td>2.80</td>
<td>1.31</td>
<td>.272</td>
<td>.02</td>
</tr>
<tr>
<td>Error</td>
<td>374.39</td>
<td>175</td>
<td>2.14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Time 1 n = 57 Time 2 n = 50 Time 3 n = 74
The main effect of group on stress mean scores was not found to be statistically significant, \( F(1, 175) = 3.74, p = .055 \), partial \( \eta^2 = .02 \), indicating that there are no significant differences on stress mean scores by group (main vs. control) (Table 17). Therefore, no statistical significance was interpreted on stress mean scores by group. Although the means are not significantly different, the variability was substantial (F-test of variance \( F(118, 61) = 7.25, p <0.001 \)). In the main group, there was a larger spread of data, and not symmetric. The two data sets have different dispersions (wider values) as it is expressed by the standard deviation.

The interaction effect between time and group was assessed to determine if time (1 vs. 2 vs. 3) on stress mean scores was influenced by group type (main vs. control). The interaction did not yield a statistically significant finding, \( F(2, 175) = 1.31, p = .272 \), partial \( \eta^2 = .02 \), indicating that there were no significant differences in the effect of time on stress mean scores for those participants in the main group and those participants in the control group.

The main effect of time on stress mean scores was not found to be statistically significant, \( F(2, 175) = 0.39, p = .679 \), partial \( \eta^2 = .00 \), indicating that there were no significant differences on stress mean scores by time (1 vs. 2 vs. 3). No statistical significance was interpreted on stress mean scores by time.

Table 17: Means and Standard Deviations on Stress Mean Scores by Time (1 vs. 2 vs. 3)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Time 1 (n= 57)</th>
<th></th>
<th>Time 2 (n = 50)</th>
<th></th>
<th>Time 3 (n = 74)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M )</td>
<td>( SD )</td>
<td>( M )</td>
<td>( SD )</td>
<td>( M )</td>
<td>( SD )</td>
</tr>
<tr>
<td>Stress mean scores</td>
<td>3.93</td>
<td>1.45</td>
<td>3.84</td>
<td>1.50</td>
<td>4.01</td>
<td>1.48</td>
</tr>
</tbody>
</table>

Time 1 n = 57 Time 2 n = 50 Time 3 n = 74
Table 18: Means and Standard Deviations on Stress Mean Scores by Group (Main vs. Control)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control Group (n = 62)</th>
<th>Main Group (n= 119)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Stress mean scores</td>
<td>3.66</td>
<td>1.53</td>
</tr>
</tbody>
</table>

Time 1 n = 57 Time 2 n = 50 Time n = 74

In the first data set, (for the control group, D2), the observations are located more closely around the mean compared to the second data set (the main group, D1), where they are more dispersed. For example, values above 50 or less than 40 would be very exceptional in the first data set in contrast to the second data set where such values seem to be more common. Basically, the data in the second set is less precise, or more spread out. In the PWSSI used during this study, if you scored between 10-30, you handled stress on your job well; between 40-60, moderately well; and between 70-100, you’re encountering problems that need to be addressed and resolved. D1 demonstrated more variability in the PWSSI. The greater variability of stress for main group rather than control is noticeable (SD 4.12 vs 1.53) and is appreciably different.

**Qualitative Results**

I understood that using a Qualitative Description approach, as part of the mixed methodology, would create the authenticity of the perioperative world as experienced by me. For the qualitative portion of the project, focus group interviews were based on the questions from the surveys. Therefore, the participants were already familiar with the questions. This allowed me to capture perioperative staff member’s narratives and stories and simply gave the perioperative staff a more comfortable manner to tell their stories. Researchers have long relied on capturing stories to study various ethnic groups by using observation and interviewing tools (Abma, 2000). I believed such methodology would provide a rich treasure of materials and a window into how both culture and identity influenced the ethos of the perioperative staff, therefore Abma’s (2000) mixed methodology was mirrored in this study.
It was important for me to consider the development of concepts and processes, as the qualitative and quantitative results to test the study hypotheses were reviewed and studied. As for discovering these dimensions, a grounded theory approach (Charmaz, 2006; Corbin & Strauss, 2008) provided the most appropriate means for such integration. Through a review of those stories and gathered interview notes, certain larger themes emerged, [such as leaders engaging their staff] using the detailed NVivo 10 (NVivo Software package, 2012) tool.

Only the main group (D1) members were involved in both the quantitative and qualitative studies. As mentioned in Chapter 4 (Study Activities), interview data and text (observational notes, memos, etc.) were transcribed into MS Word documents and analysed using the NVivo qualitative program and finally converted into meaningful information. The qualitative data in this mixed-methods study was used for comparison to findings from the quantitative data. The NVivo 10 software extracted three parent nodes (Stress, Teamwork Climate, and People Pulse) with creation of 60 subcategories to organize D1 perioperative story participant comments into themes. Stress subcategories were based upon questions asked in three survey instruments (Workplace Stress Questionnaire, Job Stress Questionnaire, and Nursing 2011 Horizontal Violence Survey). People Pulse subcategories were based upon the 2012 People Pulse Survey instrument used by the healthcare facility.

The NVivo 10 software finds the most frequently occurring words excluding any stop words, the number of letters or characters in the word, the number of times that the word occurs within the project items searched, the frequency of the word relative to the total words counted, and lastly, other words that have been included as a result of adjusting the search to include similar words.

Each word by itself can convey meaning and link to the larger categories and subcategories identified deeper in the analysis. Words conveying strong emotive and perhaps reactive feelings such as authority, management, conflict, situation, feelings, and upset were all used and link to the larger categories and some of the subcategories.

Findings from this coding were based on interpretations of words, texts, and grouped patterns. Frequency of stressor and coping words or phrases (some listed below) used in the focus groups and in one-on-one interviews provided valuable information, thereby adding credence to the Milazzo survey (2014). The NVivo software tool, with its built-in coding
properties, provided the bandwidth to demonstrate that the following words and phrases were used more than 65% of the time by the perioperative staffs: ‘belittling hurtful acts; could do a better job, with more time; complaining co-worker; coping by avoidance; feeling bad; harshly critical; much responsibility with little authority; seldom acknowledged; unpleasant or unsafe workplace; disrespectful surgeon and physician behaviors.’

The 65 per cent usage of the phrases above, indicates the weight on these Perioperative staffs’ collective minds of WPV and coping with emotional stressor and assists with understanding of the development of the study questions. The qualitative study questions were incorporated from the three survey instruments. I understood that by incorporating survey questions from the three chosen survey instruments (BEES, PWESSI, HWVS), all these core constructs could be explored more fully.

**Question 1: What Is the Relationship Between Empathy and Stress for Perioperative Staff?**

*EE* Mehrabian, (1997a) defined empathy as feeling what another person feels. Can such moods or a frame of mind be influenced positively, or increased? While the quantitative data discussed in the next section revealed that no increase in empathic levels over the year of the data collection occurred, the data did demonstrate that the main (D1) and Control (D2) groups had differing levels of empathy from each other. That, in itself, indicates to me that it is possible to increase empathic awareness.

During the focus group interviews, D1 staff did not appear to recognise the significance of EE, nor had they even thought about using it as a tool to improve their workplace environment, though, Brunero et al. (2010) support the premise that EE can be trained.

While most interviewees had not often paid attention to the significance of EE, some mentioned that empathy was correlated with age rather than personality type or individual character. That as staff matured, the wisdom of age encouraged empathy.

Though age, education or other demographic details were not captured from either group, the predominance of involved staff had less than 10 years’ clinical experience. Ward, Cody, Schaal, and Hojat’s (2012) study revealed that as [nursing] students gained more clinical exposure, they demonstrated a much greater decline in empathy scores. This adds weight to the
work of Twenge and Foster (2010) who concluded, after completing a meta-analysis of a previous study of narcissism in college students, that there was demonstrated increase in narcissistic traits among college students over recent generations. This is further supported by Konrath (2011), who found that college students’ self-reported empathy has declined since 1980, with an especially steep drop in the past 10 years.

Physicians have for the most part been really nice and sometimes they’re really busy, because I used to work at a teaching hospital, so there would be residents and they would be really busy with all their patients, but I’ve never had any serious issues. You definitely see it, [more EE], with the younger ones [doctors]. (Interview Notes, #2, p.2)

This observation is in contrast to similar studies to Konrath (2011), mentioned above. Physician empathy is actually declining with clinical training (Chen, Lew, Hershman, & Orlander, 2007). Their study corroborated that first-year medical students demonstrated higher levels of empathy than the students in the last year of medical school.

To increase levels or awareness of empathy, my vision is that healthcare educators and leaders understand that while perioperative staff are a collective unity, the group is comprised of individual staff who each need to be individually, as well as collectively, educated on the significance of empathy (Smeltzer & Vlasses, 2004). As each staff person has divergent and fluctuating levels of clinical aptitude, they too will have variances of empathic levels throughout any time period.

**Much Responsibility and Seldom Acknowledged**

Laschinger and Leiter (2000) show that what staff really search for is trust in and by their leaders. Once trust is developed, the staff can make the right decisions for patient care and the right decisions for the organization. Research is still needed to understand the best and most appropriate ways to promote and elicit empathic behavior; however, studies have found that a focus on employee engagement and prosocial behavior seems to help (Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Podsakoff, Whiting, Podsakoff, & Blume, 2009). To keep staff engaged and patients happy, healthcare leaders should consider embracing empathy to let it be the force that drives healthcare forward. Interestingly, while the literature attests to this
association between healthcare leaders’ attitudes and empathy, it does seem that the interviewees throughout the year of data collection came to recognise this connection. Raising awareness and speaking with the staff regarding their day and how they are affected by events is reflected in this statement below.

That’s true- one of the interesting things from the surveys – and this awareness raised the levels of EE, and what we do to cause conflict without even realising it. [your] bodily actions speak louder than words sometimes. I originally thought it was the opposite. I didn’t want to say anything or hurt anybody’s feelings but yeah, my body language tells it all, even when I tense up they know when I am tense, without me even saying anything. (Interview Notes #3, p. 1-2)

They want their organization to be the best there is, and to be trusted by their community of patients. All of these trusts and beliefs are rooted in understanding, listening, and empathy towards colleagues.

I tried to go the organizational way, tried to see if the charge nurse could resolve it. If I could, I go to the assistant nurse manager; if not, go to the OR director; I have had that strength to do to work through- it is hard to do but there’s something that you build up over the years if you have the working relationship with the person; they know how you work, they know your capabilities. I think when I go to them and talk with them, I think that I have more credibility and the person listens to me more as educator & less as a previous staff nurse. You know? How I perform; they’re the ones who recommended me to get this position, so…. (Interview Notes # 6, p.2-3)

**Surgeon and Physician Behaviors**

Healthcare research (Gallagher, 2010) has shown that facilities that are able to attract and retain nursing staff in a competitive environment and provide high quality care are made up of nurses with high levels of empathy. Healthcare staff and their leaders in the perioperative arena could strive to hone their EE and ability to control individual reactions to workplace stressors and violence, such as this story below.
Dr. X will call to book a case, say he has a simple appendectomy and then one of the neurosurgeons will call to book a craniotomy for bleed, that is (usually more) urgent. Well, we more or less know that the craniotomy is more urgent than the appendectomy, right? You do not want to say that to the general surgeon; you just tell him (that they) both called at the same time. You know doctor X, called, and you need to talk with each other, peer to peer, that is just the policy; they need to talk to each other. Doctor X will just start screaming over the phone; He wants to do his case first. He won’t call doctor Y or the other surgeon a lot of the time. (Interview Notes # 6, p. 1)

Such acts, as mentioned above, cause staff to realise the strong emotions at play during their workdays. Life and death are in the balance, literally. Perioperative staff constantly have to possess moral courage and advocate for their patients’ best interests; at times finding themselves experiencing adverse outcomes and emotions. These outcomes influence feelings and emotions throughout the workday. To mitigate any stress, emotionally and physically, staff recurrently second-guess themselves. By discussing, talking about and telling stories to their peers, staff are able to reassure themselves that they are on the right path and doing the right thing for themselves and their patients (Matthias, 2016). Such open conversations have the potential to initiate increased understanding of each other and the opportunity of more empathic collaborations.

**Question 2: What Is the Relationship Between Perioperative Staffs’ Levels of Stress and Their Perceptions of Using Empathy to Reduce WPV?**

**Comfortable Voicing Opinions Even If Different**

The qualitative data revealed that workplace conflicts, and even violence, are commonplace. Most nurses in a perioperative setting have experienced varying degrees of violence and/or conflict. One way the interviewees have managed to overcome this reality is through improving communication skills, which, ultimately, increase empathy:

*It happens [conflict] all the time, but for me it is all about communication, so I will say something. I will talk. I talk to that person about my concerns; before I go home I don’t*
leave behind [conflict]. And the only thing we have to [do, is to] talk with them, the communication. So, communication is very important. (Interview Notes # 5, p.2-3)

This suggests that participants are considering ways to improve their situation and the issues involved.

Unpleasant or Unsafe Workplace

A number of researchers’ findings have supported this perception of workload and unsafe patient care possibilities, leading to intra-staff conflicts. For instance, Bowles and Candela, (2005), Domm, Donnelly and Leurer, (2007), Shader, Broome, Broome, West, and Nash, (2001), Sung, Keum, Roh, and Song, (2013), Zangaro and Soeken, (2007), all report patient acuity, work schedules, poor physician-nurse interactions, new technology, staff shortages, unpredictable workload or workflow, and [potentiate] the perception that the care provided is unsafe. Nurses do not enter their profession anticipating these stressors, though that reality is soon apparent:

You know- it is the patient, it all comes down to the patient. You know I was trained in XXXX and it was always about the patient. If there is no patient you have no job, so that is always, even if the surgeons are screaming... etc., always stay focused on what you need to do; you know they are screaming at me; so I go into the waiting area and start talking to the patients and it is...the reason that I am saying this is that I always think I am representing the hospital ---and nobody (family/patient) knew we were coming and I have to give them one positive experience from the staff; for some reason in my mind it negates all the negative experiences before they came here to me. (Interview Notes # 8, p.2)

This suggests the possible need to better prepare nurses for the realities of providing healthcare.
**Harshly Critical**

In their stories, staff alluded to fellow staff who are always miserable in both their attitude and actions at work.

*I did not ever speak with her, because this particular woman—she’s known for her uhmm...just making the work environment more stressful than it needs to be. [For example], If you are doing something that she doesn’t think it is the right way, she will say... ‘no, this is how you do it,’ and she will correct you in front of a patient, which I think is kind of inappropriate. Things like that.* (Interview Notes #2, p. 1)

Such stories suggest the role of individuals and, perhaps an individual’s personality in WPV.

**Good Sharing of Ideas and Information**

Other interviewees emphasised the importance of letting their co-workers understand how they felt. Through expressing their emotions, candidly, they were able to improve empathy in their co-workers. It is through freely communicating their emotions that they were able to elicit change:

*You know I took a class on interpersonal skills and how to deal with difficult patients and family, just so—we learn and everybody is different, so you learn. I took the class and also working in [this] environment] you learn how to build your relationships, with your co-workers and your doctors, so you build yourself and encourage them to give you, tell you feedback. You learn to tell them. So, I think the way you learn to communicate with your patients. And also with a busy environment, and so people are very quick – you are often interrupted sometimes, but you know you can call them back and say’ you know I didn’t mean to be rude to you, but I need to be clear of your message...do you mean this way or that way?’ sometimes I couldn’t recognise their handwriting, so I call them back and say , ‘ you know I’m sorry to call you back but the instructions I didn’t follow-up at the time but I want to clarify and ...[understand] what you are saying and then I thank them very much for calling me back. I think it is very important.* (Interview Notes # 5, p.3)
As mentioned in Chapter 3 of this exegesis, Glass’s (2013) mixed methodology research model directed me towards the importance of human interactions in research studies. I was able to interact one-to-one or in small groups with study participants and rewarded with the sometimes-unexpected participants’ stories. Glass (2013) also tells us “It is indisputable that participant’s expression of their subjectivity is central to the meaning of qualitative research” (p. 14). These in person connections demonstrate to your employees that you are really interested in them as a human being not just as a staff member.

**Question 3: What Is the Difference in Perceived Workplace Stress and Empathy Levels Between Inpatient Perioperative Staff (D1) and Ambulatory Perioperative Staff (D2)?**

**Missing Deadlines**

The qualitative data revealed, unequivocally, that most nurses felt that they had very stressful jobs. In the main perioperative D1 environment, many felt that they were so bogged down with documenting, charting, and data entry that they were unable to do their jobs. This was viewed by most as both extremely stressful and demotivating.

*One thing that has changed over the years with my job the most is the –or I am not sure the most, but one thing I really dislike and I feel more and more, is that I am a data entry specialist. I am not a nurse, taking care of my patient any more.*

*This is just one more layer, all the screens going back and forth to get all the orders. In the OR, [operating room] at least though, it is easier than on the nursing floors. Very stressful! We have to enter lots of cultures, insert foley, etc., that kind of stuff; so much charting. The charting keeps getting longer and longer and add more and more screens to it. If you have a short case, you cannot get it done and then there is ...the ‘gotta get the next case in the room, & turn around times’, like you need a scrub person, a circulator and now you need a data entry person. It’s one thing & becoming less and less desirable and making me look more and more towards retiring! (Interview Notes #1, p.2)*
**Better Job More Time**

Staff mentioned that stress indeed was part of their daily lives; they spoke of the rush to accomplish required short turnaround times, moving the correct surgical equipment in and out for every surgery case, ensuring that their first case of the day was in the OR on time, and ensuring the patient’s History & Physical Report (H&P), was both available and current:

> They [the surgeons] know what they have to do. Some of these things like site marking are so important. You just have to stand your ground and get yelled at. I think to myself, “you know what you need to do!” Some of them still refuse. Then I just write and incident (occurrence) report, just to cover myself. It is such arrogance on their part... this is sort of what they say. “I [surgeon] do not have the time to stop to do”. You know you just let them yell and remain calm as if nothing has happened. [surgeon] “I’ve dictated the report—it is in the system!!!” So, you just fight and argue and fight and argue, and I tell them “well you have to write something.” (Interview Notes #1, p.1)

The interviewees’ responses were backed up by scholarly literature. In a single center (medical facility) survey, completed by Mealer, Burnham, Goode, Rothbaum and Moss (2010), nurses who work in the outpatient setting are significantly less likely to have a diagnosis of PTSD when compared to inpatient nurses. In Mealer et al.’s (2010) study, perioperative staff were not involved. As noted by Jennings (2008), in her chapter on ‘Work Stress and Burnout Among Nurses: Role of the Work Environment and Working Conditions’, the demand for acute care services is increasing concurrently with changing career expectations among potential healthcare workers and growing dissatisfaction among existing hospital staff. For example:

> I feel stress sometimes [more in], the past – I hope if I need help [from the more senior nurses] they would help me. (Interview Notes #2, p.1).

This is supported by deJonge, Mulder, and Nijhuis’s (1999) article on incorporating different demand concepts in to the job demand-control model and its’ effects on healthcare professionals.
In the perioperative department, when staff work long hours to cover emergency call shifts, “Family and social contacts may be reduced, which in turn may lead to physiological responses associated with stress” (Trinkoff et al., 2008, p. 474). Shift work has been associated with more mental stress, (Suzuki, 2004) and higher levels of burnout (Jamal, 2004) among healthcare workers. Cox’s (2002) article focuses on assessing the work environment of nurses:

This is about workplace stress. A statement “I can't honestly say what I really think or get things off my chest at work. no- I can't. I can't because it wouldn't come across like I'd want it to. With the administration, here and the other people, you have to be very, very careful these days; so, you have to blunt your honesty. You just can’t blurt things out. I'm sure I have to think about it. Everything has to be so politically correct.” (Interview Notes # 4, p.1).

These findings showed that inpatient nurses are not satisfied with their work environment and, therefore, efforts must be undertaken to address these concerns.

**Workplace Bullying** Workplace bullying behaviors included such as being picked on, pretending not to see, raising eyebrows - rolling eyes, and retaliation leading to physical or mental symptoms. While many might describe stress as an unpleasant but acceptable – and possibly even necessary – aspect of the healthcare workplace, bullying by itself represents a unique form of stress that may induce long term health consequences in its victims (Irvin-Lazorko, 2011). In fact, Matthiesen and Einarsen (2004) found that three out of four respondents in a study of bullied workers scored above the threshold for a diagnosis of posttraumatic stress disorder (PTSD). For example:

Stress? I can’t honestly say what I think or get things off my chest at work. In the past, yes, like certain situations happened and you wouldn’t tell somebody...but sometimes it will make things worse. (Interview Notes #2, p. 2-3).

Following on the connections between psychosocial workplace stressors (e.g. bullying) Buruck, Wendsche, Melzer, Strobel, and Dörfel (2014) studied whether psychosocial stress affects
resources for adequate coping with environmental (workplace) demands. Their research looked at the extent to which acute psychosocial stressors impact empathy and emotion regulation. Their findings emphasised the necessity of reducing negative emotions in terms of empathic distress when confronted with another person under psychosocial stress, in order to be able to retain prosocial behavior, and decrease workplace conflict. In the perioperative area, not maintaining prosocial behavior can be especially detrimental to the safety of both any patient having surgery and any staff in the vicinity. As prosocial behavior is any behavior that is meant to help others, the opposite behavior, antisocial, conjures disruptive behavior. Buruck et al. (2014, p. 8) reported that “Changes in (A) Mood and (B) Calmness during the experiment, higher values indicate a better mood and more calmness, respectively”. In a consequent study Buruck et al. (2016) reported, “dealing with negative emotions is a crucial work demand, particularly for employees in healthcare. Job resources (e.g., autonomy, social support, or reward) but also personal resources (such as emotion regulation strategies) might reduce job stress and support well-being” (p.480).

**Unpleasant and Unsafe Workplace**

Healthcare research (Gallagher, 2004) has shown that facilities that are able to attract and retain nursing staff in a competitive environment and provide high quality care have the capacity for nurses to process and resolve moral and ethical dilemmas, such as traumatically caused patient deaths and injury. Further questioning explored whether moral distress and a poor organizational ethical climate increased nurse turnover rate. Nurses working in the perioperative arena have difficulty honing their EE and ability to control individual reactions to workplace stressors and violence, such as this story below.

*It happens [conflict] all the time, but for me it is all about communication, so I will say something, I will talk. I talk to that person about my concerns; before I go home I don’t leave behind [conflict]. I think that that person does not know, that culture, their appearance, the way they look, they are saying that, [don’t think] they mean it; for sometimes after [the patients leaves] the ER, they (ER Nurse) come very quick (ly), they drop the patient and they go. And the only thing we have to [do, is to] talk with them, the communication. I say to them I feel, it is*
not appropriate when you drop the patient without telling me what’s going on. So, communication is very important. (Interview Notes # 5, p. 2)

Workplace disrespect and conflict and adverse psychological relationships in the perioperative environment can quickly devolve into adverse staff or unsafe patient events. (Laschinger & Leiter, 2006):

One of my staff came up to me crying, (this involves two staff members), and said to me ‘do you know what he did?’ and I am thinking I am only in charge of them on my shift. Ok, I am not the boss, so I said, I am listening to you, and I will talk with the other party involved, but my job is not to resolve the issue right now as this is a bigger issue, but for now I have to ensure that it does not escalate. (Interview Notes # 8, p. 3)

If the episode related above had disintegrated into further squabbling and conflict, any number of clinical interactions may have been affected leading directly to patient harm. Stories such as those repeated often in the OR of angry, tense surgeons throwing whatever is at hand across the OR, create a lot of discomfort and tension, thus potentiating an unsafe clinical environment.

The staff -the scrub tech (at another hospital), was a nurse in a case, and the surgeon was so frustrated that she threw Uhhmm...scalpel to the main table and it cut the table and the scrub tech’s arm. You know it’s a dirty knife...so she scrubbed out, called the charge nurse, and called the police. The police arrived here and handcuffed her. I’ve [personally]not had that experience so far...thank god...chuckles. I mean that’s an assault with a deadly weapon. I don’t know if that surgeon meant to harm the tech; I only heard it second hand. Here I haven't heard of any stories similar to the above; you know surgeon is throwing an instrument directly to the staff; what I have seen is some surgeons throwing instruments that they think are defective or inferior, to the floor. You are not supposed to do; just give it to us - is affected; if its dull – just give it to us – don’t throw it on the floor! You know I’ve seen some surgeons do that here...they are just kids! (Interview Notes # 6. p.1)
Such tense interactions as reported above are further corroborated by Jones and Argentino’s (2010) study, which demonstrated a need for us to understand and increase the empathic portions of emotional awareness to achieve constructive and appropriate team member behavior during interactions. Appropriate and calm behavior potentiates the preservation of group trust, effectiveness, and collaboration. If all this occurs, there can be a positive impact on interactions, and patient safety.

**Lack of Respect and Toxic Interactions**

Rosenstein and O'Daniels (2005, 2008) and Rosenstein (2009) have studied and reported extensively on the impact of disruptive behaviors and communication defects on patient safety in the perioperative arena. If clinicians are not concentrating on the surgical activities, and distracted by HV behaviors, patient harm can occur:

*Certain surgeons if they want something, or they want something new or different, instead of just asking or saying what they want, they ask it in a demeaning & insulting, very subtly so, way. But that frustrates me more than anything else. They make it seem like you are stupid or you are an idiot. I do not usually say anything to them and try not to how them that you are upset. Sometimes I just kind of give them eye contact. I think it is their way of kind of motivating to get things done. Their twisted sense. It is probably their upbringing; how they were trained in the OR and pressures they had, you know? And maybe how their parents were* (Interview Notes # 1, p. 2).

Kingdon and Halvorsen (2006) studied perioperative stressors. Interestingly, even though death and cardiac arrests events in the OR were stressful, those events happened rarely, so their negative effects were more able to be absorbed. Though each critical event is stressful, surgical staff is ready for most of these events. Individuals deal differently with each; stressors hover around age of patients, (especially when a child or younger patient is involved).

*We always wish that, of course when you have more time you can finish more. Sometimes though, the pressure of time can be a [good] challenge for you. I work
The more stressful situations that happened frequently were the workplace ‘operations’ pressures. “Pressure to work faster, which produced much or very much stress for 12 respondents (41%), happened frequently or very frequently according to 17 respondents (59%)” (Kingdon & Halvorsen, 2006, p. 610). Perioperative spaces are valuable, generating revenue for healthcare facilities; hence the pressure to work faster and reduce turn over times, for example, in between surgeries, is obvious. Even though this same pressure occurs in both acute inpatient ORs and ambulatory ORs, the equipment and patient preparation times are much heavier in the acute inpatient areas.

Gillespie and Kermode (2003) discussed as part of a larger debate on the nature of stressors experienced by members of ‘high risk’ occupations and professions, in this instance, nursing, and in particular, the perioperative workplace. Their study concluded that due to the cumulative nature of critically stressful events, if left undealt with, could potentiate attrition among nurses (and other staff), in the perioperative environment. This, alluded to earlier, brings to light the importance of recognising that demanding job responsibilities can lead to decreased work engagement, burnout, physical and emotional responses to stress, and generalised job dissatisfaction. Perioperative managers play a pivotal role in staff, patient, and provider satisfaction. Backing up the notion that managers play this balancing supportive role, during one of the focus group interviews, one of the staff mentioned:

I guess, Hmmm...I have the support of the bosses. There are some surgeons, who are grateful, and a lot of times they give thanks. (Interview Notes #1, p. 2).

In 2005, nursing leadership across the USA responded to the Institute of Medicine (IOM, 2000) reports, To Err Is Human: Building a Safer Health System and Keeping patients safe: Transforming the Work Environment of Nurses, by forming the QSEN initiative funded by the RWJF. The initiative’s main function is to effectively, within nursing and interprofessional teams, foster open communication, mutual respect, and shared decision-making to achieve quality patient care. Obviously, there is still a long way to go, as incivility in healthcare is still
leading to unsafe working conditions, poor patient care, and increased medical costs (Clark et al., 2011, 2013, 2017).

**Triangulation of Results**

As already noted in Chapter 3, in which the methodology and research methods were explained, triangulation is commonly used in mixed-methods studies as a means of validating the data collected (and analysis) through cross verification of the data. In this study, triangulation was achieved by comparing the main findings from the qualitative and quantitative analysis, and achieving greater depth of understanding of the situation.

For example, disappointingly, the quantitative results demonstrated that my hypothesis – i.e. that raised awareness of emotion empathy and educational interventions, would reduce the levels of WPV and workplace stress in a perioperative health setting. The quantitative results did not support my hypothesis. Importantly, however, the quantitative findings suggested that EE was highed in the control group. This raised questions as to why.

When placed alongside the qualitative findings, answers are suggested. The ambulatory section of the perioperative department (D2) is conventionally viewed as less stressful than the inpatience section of the perioperative department (D1). Findings from the in-depth interviews and focus group discussions that involved those located in D1 suggested that acuity, high pressure and expectations, and lack of time, often gave rise to disrespectful communication and perceptions of lower levels of EE. When considered along side this quantitative findings, it could be suggested that education is not a ‘universal panacea’ for stress. Rather, people who are placed under pressure, for an extended period of time, will react in a range of ways, regardless of levels of emotional awareness or levels of education. Triangulation suggests, then, that raised awareness and education is not necessarily the answer to the problem of workplace stress and WPV – rather, the answer is minimising acuity. This suggestion, derived from triangulation, most certainly requires more investigation.

**Summary and Conclusion**

This chapter reported the findings of my study based upon the analysis of the quantitative and qualitative data that was collected across a yearlong period. The chapter provided the results
of the quantitative data analysis and findings of the qualitative data analysis, then considers these results and findings in terms of triangulation.

The next chapter, Chapter 6, considers the findings in more depth. This includes a discussion of the implication of these findings in light of the concepts studied and context in which data was collected.
CHAPTER 6:
DISCUSSION OF RESULTS & FINDINGS

Introduction

The purpose of the study was to test the possibility of increasing awareness of EE in a healthcare (specifically perioperative) workplace, reducing instances of perioperative WPV, by increasing EE, and increasing EE leading to a decrease in perioperative workplace stress. As mentioned in the opening chapter, throughout the year of data collection the study, members of the staff emphasised the physical and mental stressors characteristic of the perioperative environment.

Adding to the heavy workloads are also the emotions of this work. Patients who are having major surgery tend to be more critically ill or have suffered traumatic injuries. From Riley and Weiss’s (2016) qualitative thematic review of emotional labor in healthcare [perioperative] settings, their overall view was that much emphasis should be focused on recognising and valuing emotional labor, making sure appropriate support and follow ups are in place to enable staff to cope with the varied emotional demands of their work. Not wishing to diminish the tough emotional work of ambulatory surgery (ASC) from the more critically ill inpatient surgery work, different drivers are often in place in ASC’s, and these tend to be more operationally powered; rapid turnaround times between surgeries, with focus less centered on the patient care provider interactions, can potentiate an appearance of less compassion.

Key Findings

Hypothesis #1 tested if EE (BEES) could be increased in two different sections (D1 & D2) of a perioperative department during the year of data collection. The main effect of group on BEES raw scores was found to be statistically significant, indicating that there is a significant difference on BEES raw scores by group (main, D1 vs. control, D2). Those participants in the control group (D2) had significantly higher BEES raw scores than those participants in the main group (D1). It was envisaged that from the beginning of the yearlong data collection period, for
those subjects from the main group (involved in focus group discussions and educational sessions regarding EE), some differences would be accomplished on the BEES raw scores (increased) by the end of the study; likely to do with the lack of repeated measures ability. The results do not show this. The main effect of time on BEES raw scores was not found to be statistically significant, \( F (2, 185) = 0.07, p = .930, \) partial \( \eta^2 = .00 \). This indicated that there were no significant differences on BEES raw scores by time (1 vs. 2 vs. 3); therefore, no statistical significance can be interpreted on BEES raw scores by time.

That the educational interventions made no difference, was of significance to me, as it has been frustrating to the healthcare educators (myself included) with whom I have worked throughout my years of practice when researchers undertake a study and their recommendation is often to ‘educate the practitioners’. What evidence did I have that education would effect substantial change? My research findings indicated that the influence of education – or, perhaps, the type of education offered by me – is apparently limited. I see this as an important finding as it seems to me, from my results, that the more important ‘variable’ is levels of acuity and types of surgery, especially emergent, trauma versus ambulatory and scheduled.

Hypothesis #2 tested if instances of horizontal healthcare WPV and conflict could be reduced by increasing EE in two different sections (D1 & D2) of a perioperative department during the year of data collection. The main effect of group on conflict mean scores was found to be statistically significant, indicating that there is a significant difference on conflict mean scores by group (main, D1 vs. control, D2). The participants in the control group had significantly lower conflict mean scores than those participants in the main group.

Hypothesis #3 tested to see if an increase in EE (BEES) could lead to a decrease in healthcare workplace stress in two different departments (D1 & D2) of a perioperative service during the year of data collection.

While this current study indicated no significant differences in the effect of time on empathy scores in either group, it did reveal significant differences in the groups themselves. The ambulatory surgery (control) group demonstrated higher levels of empathy. Though this study did not attempt to understand this result of itself, it demonstrates the need for further study on empathy levels in a highly stressful inpatient surgery area with more critically ill patients.
There were no significant differences on stress mean scores by group (main vs. control), during the study. Stress levels were not impacted for either group over the course of the year. For all three variables, the results were inconclusive. Namely, there was insufficient evidence to conclude that there were changes over time.

**Findings in the Context of the Concepts Studied**

**Empathy**

Empathy scores did not change over the year of data collection. Michie (2002) suggested “that for people in many work situations, their jobs and lives may become more manageable and less stressful if they can practice empathy both in their professional environment and in their everyday interactions with those around them” (p. 71).

Explanations for the results not increasing empathy scores as envisioned over the yearlong data collection period could be partially explained by the fact that changes in empathic selves take a much longer time, practice and focus to effect sustained change. Or perhaps the starting scores could have been considered high enough already? Was there much room for change or increase? Other possible reasons where the results were not as hypothesised, could be explained by the somewhat randomization (daily staffing dependent) of those involved in the surveys, even though the deliberate choice of surveying a perioperative department’s staff was quite purposeful. According to Bazeley (2002), one typically expects quantitative research to rely on a large, randomly drawn sample, while qualitative studies are associated with smaller, purposive (non-random) samples. These facts certainly pertained to my study of why an independent design rather than matched design had to be used. The reason a matched design was not used was mostly due to need to adapt to continual fluidity of staffing availability in the main group, at any particular date and time. Though similar numbers of staff were available at each survey time, it was not possible to have exactly the same staff available, at any time the survey tools were measured. Emergency surgeries are added on, requiring shuffling and fluctuations of staff that are available to work; urgent and emergent surgeries continuing throughout the night, necessitating that some staff have to go home to sleep rather than work that day.
Perhaps due to these staffing changes, and differences in who worked on any given day, the variability of BEES scores was high. For instance, the coefficient of variation was close to 50% for each of the three times. This high variability could be masking effects, and uncertain, especially without a matched design, which was not possible due to privacy concerns and with the different staff working each time the surveys were given.

Participants for this study main group (D1) were staff from the inpatient perioperative department, while those in the control group were from the ambulatory perioperative department (D2). Inpatient perioperative departments often have long work hours with the necessity of after-hours call for emergency surgeries. The main group involved in this study relied on staff being on-call evenings and nights after a day shift, weekends, and all day on holidays. Because of this, there was most often a rotating basis following a night or weekend on-call, rather than a permanent shift schedule. Working different shifts can be stressful and exhausting (Jennings, 2008). Holiday coverage, especially on major holidays, affected staff members’ family and recreational activities. Perioperative clinical staffing guidelines are based on individual patient needs, patient acuity, technological demands, staff member competency, skill mix, practice standards, healthcare regulations, accreditation requirements, and state staffing laws, therefore, staffing rotates daily and shift to shift (Butler, Clinton, Sagi, Kenney, & Barsoum, 2012).

Though working in an ambulatory surgery setting can be hectic and stressful, very few ambulatory settings are open on the evenings, weekends or holidays, thus creating a big difference in your family life and job satisfaction. Patients having outpatient surgery tend to have fewer comorbidities and usually are not as critically ill, as those in an acute-care inpatient OR suite (personal experience). These factors generally lead to the staff working in the ambulatory surgery setting, experiencing a less stressful working environment. Van Bogaert, Clarke, Roelant, Meulemans, and Van de Heyning (2010) reported that in any nurse work practice environment, there are significant unit-level associations and further, that emotional exhaustion is particularly indicative of job satisfaction. In the rush of acute setting surgery, sometimes lifesaving situations, it is not always easy to offer routine, empathic and compassionate healthcare. This is obviated even more when our fellow staff is at loggerheads and less than empathic, with each other at work.
Cieri, Churchill, Franciscus, Tan, and Hare (2014) reported that human beings developed a more cooperative temperament when [the] modern human behaviors of technological innovation, producing art and a flourishing rapid cultural exchange which more or less forced human beings to develop “the ability to cooperate and get along and learn from one another” (Cieri et al., 2014, p. 420). EI is the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide our own thinking and actions (Mayer et al., 2001, 2004; Salovey & Mayer, 1990).

The BEES scale was chosen to measure empathy, as evidence reviewed by Mehrabian et al. (1988) reveals that persons with higher EETS scores, compared with those with lower scores, are more likely [in the workplace] to be altruistic in their behavior towards others and volunteer to help others; they also tend to be affiliative, be non-aggressive, rate positive social traits as important, score higher on measures of moral judgment, and have arousable and pleasant temperaments (Mehrabian et al., 1988).

Williams’ (1989) study of empathy in male and female helping professionals (492) male and female nurses, social workers, and teachers), employed among other scales, Mehrabian's EE Scale. This study found there were no main effects of profession on empathy variables, though that “women had significantly higher empathy scores than men, and that [interestingly], these however, men had higher scores than male normative groups” (p. 169).

Other findings showed the Abbreviated BEES (Mehrabian, 2000) to be a positive correlate of emotional success (i.e., general emotional well-being), relationship success (i.e., healthy and happy interpersonal relationships), career and financial success, and overall life success (Mehrabian, 2000). By using a cross-validation sample Mehrabian found (1997b, p. 247), that “approach behaviors refer to preference for the situation, and desire to work or socialize there, whereas avoidance behaviors include physical avoidance of the setting, verbally expressed dislike of it, and avoidance of work or social interaction while in the setting.”
Conflict

Perhaps of significance and warranting further study is the fact the main D1 department had higher conflict scores in general than the control D2 department. Though this may not be of significance; both groups experience internal conflicts at any given moment in time. Although the quantitative results found no substantial changes over time in the three main variables, there is a deeper story available through the qualitative study.

These findings of higher empathy levels and lower conflict scores in the ambulatory surgery group findings warrant further study. The lower empathy scores for the main OR group, supports a serious consideration for further research and also education and training to include all the perioperative staff. Developing a cross cultural comparative study of perioperative staff conflict and empathy levels in Australia, where I originally studied and started my perioperative career, and the USA, where I currently work is merited.

Ambulatory surgery units (such as the control group in this study), have a consistent work schedule as the norm, usually daytime hours with some coverage into the early evening depending upon how late a surgical case may go. Though in this instance, most staff members are off duty by 6pm. There were no weekend hours for this ambulatory surgery control group. A revolving daily schedule and changing patient and surgeon population helped the staff avoid monotony from doing less critical surgeries. Nurse Managers in this outpatient setting had an added benefit of supervising staff that are more content with their schedules and workflow; this makes it less challenging, in one respect, to effectively manage a patient care unit.

A newer stressor for the staff is the evolution of healthcare involving turning to a different mix of outpatient care and procedures and completing more complex surgeries in a traditionally ambulatory surgery space. As a result, the tempo in such a unit and the patient turnover rate is quite fast-paced.

A Health Grades Report (2011) indicated that there have been between 400,000-1.2 million error-induced deaths during 1996–2006 in the US. These deaths have been, in part, attributed to human factors- including fatigue, time pressures and burnout; medical complexity- requiring complicated technologies, admission to intensive care units, prolonged hospital stays,
and lastly, system failures, resulting from poor communication, unclear lines of authority of physicians, nurses, and other care providers, increasing complication rates as patient to nurse staffing ratio increases. To ensure California (USA) healthcare facilities’ nursing to patient ratios are maintained, they are obliged to hire per diem staff nurses. While sustaining state mandated RN-to-patient ratio at all times, California’s OR departments have the opportunity to engage in miscommunications, misunderstandings, and a lack of confidence in that day’s or shifts teammates; perhaps leading to loud voices, anger and conflict. Due to this ever-fluctuating staffing mix, conflicts and misunderstandings can quickly erupt.

**Stress**

Common sense tells us healthcare stress has to be linked with medical errors, poor quality care, fatigue, and burnout; healthcare-staffing fatigue is obviated by increased shift lengths, overtime, and patient loads.

One study by Elfering, Semmer, and Grebner (2006) investigated the link between workplace stress and the 'non-singularity' of patient safety-related incidents in the hospital setting. The results revealed that “the most frequent safety-related stressful events included incomplete or incorrect documentation (40.3%), medication errors (near misses 21%), delays in delivery of patient care (9.7%), and violent patients (9.7%)” (p. 463). Their study further reported “familiarity of events and probability of recurrence were significantly predicted by chronic job stressors and low job control in multi-level regression analyses. Job stressors and low job control were shown to be risk factors for patient safety” (p. 467).

People who work in noisy environments for long shifts, day in and day out, report stress-induced experiences (Penny & Earl, 2004), reporting everything from exhaustion to burnout, depression, and irritability expressed at home. They further report that these stress-induced experiences can lead to ill health, for example, elevated blood pressure. Interfering and distracting sounds have been shown to contribute to medical and nursing errors (Rosenstein & O'Daniels, 2005, 2008) as reported earlier. The JC for Healthcare Organizations (JC., 2007, 2010, 2016) mentions noise as a potential risk factor related to medical and nursing errors.
Are staffs that work in outpatient (ambulatory) setting inherently more emotionally empathic, or is their work life merely less conflict prone? The staffs in the ambulatory group (D2) was not involved in focus groups, nor did they receive any education on empathy, workplace stress and conflict over the year of data collection.

Do ambulatory surgery staffs inherently possess more EE and therefore experience fewer stressors than inpatient surgery staff? The data revealed both lower stress scores and higher levels of empathy for the ambulatory surgery staff. Could this be interpreted to mean that those who inherently have more empathy gravitate to the ambulatory service area? It is not apparent to me that perioperative staffs with higher levels of empathy gravitate to the ambulatory surgery environment. Often, more seasoned perioperative staffs choose to work in the ambulatory surgery area towards the end of their career. This again, is in contrast with below mentioned studies, which report lower empathy levels with age and clinical education, and warrants more study (Chen, Lew, Hershman, & Orlander, 2007; Konrath, 2011; Twenge and Foster, 2010; Ward, Cody, Schaal & Hojat, 2012).

Placing Study Findings into Current Policy and Practice

Contemporary perioperative nurse leaders are encouraged to heed the words of and embrace the challenges of Chappy (2016). Chappy wrote that more stories of perioperative nursing excellence are needed to celebrate the ‘excellence in perioperative nursing’ to which Steelman (2014) also alluded when writing her AORN President’s Message. Seifert (2014) echoed this, as president of the AORN, when she told us, that “stories have been used for centuries to pass on cultural values, preserve a heritage, and create a sense of community” (p. 368).

International perioperative leaders such as Duff (2014), Gillespie et al. (2013), and Ohlin (2016) encourage us to engage with staff and take the time to listen, to use narrative and storytelling, to mitigate conflict, stress and organizational level pressures affecting the work life of all perioperative staff.

As President of the International Federation of Perioperative Nursing, and immediate past president of the Australian College of OR Nurses, Melville (2015) represented perioperative
nurses globally; ensuring perioperative nurses are involved in decision-making related to policy and strategic direction (including foci on mitigation of WPV/HV and organizational level pressures) for the WHO surgical global healthcare goals over the next three years (2014-2017).

Those goals support the ‘Nursing Ethics for the 21st Century- A Blueprint for the Future’ by Johns Hopkins Institute for Bioethics (2014), with its implicit request for individuals and organizations to create and support ethically principled, healthy, sustainable work environments. It is time to assume all of these challenges, to actively encourage all perioperative nurses and staff to share their narratives of perioperative clinical excellence to create and support an ethically principled, healthy, sustainable perioperative work environment.

**Linkages to Recent Research**

Though not studying perioperative healthcare staff, Sinclair, Rafīn-Bouchal, Venturato, Mijovic-Kondejewski and Smith-MacDonald’s (2017) reviewed stress and compassion fatigue. While so doing, they critically examined the construct of compassion fatigue to determine if it is an accurate descriptor of work-related stress in healthcare providers and a valid target variable for intervention. The review findings emphasised that the physical, emotional, social and spiritual health of healthcare providers is impaired by cumulative stress related to their work, which can impact the delivery of healthcare services.

Overall this review added that compassion fatigue appears to lack conceptual foundation; that therefore cannot be empirically validated or measured. Compassion fatigue represents an emotive euphemism for a broad family of occupational stresses unique to healthcare providers. While the concept of compassion fatigue is used synonymously with other occupational stress monikers, an equally significant issue is the conflation of the etymological roots upon which this foundation rests. As a result, the study authors propose that compassion fatigue in clinical research and practice should be re-conceptualized. Suggesting that compassion is somehow the primary contributor to these phenomena is unfounded and detracts from the significant work-related issues and burnout faced by healthcare providers. If compassion were the underlying issue, one would expect that healthcare (perioperative) providers, particularly exemplary compassionate carers, (as in perioperative areas), would be particularly vulnerable to the effects of compassion fatigue.
It is more likely that healthcare providers are experiencing the negative consequences associated with a broad range of occupational stressors that inhibit their ability to be compassionate, and as a result, patient care becomes compromised. The authors further suggest that a valid understanding of compassion fatigue must be based in an empirical understanding of compassion, allowing compassion fatigue to not only be disentangled from other occupational stress monikers such as vicarious trauma and burnout, but from the constructs of empathy and sympathy. Mentioned earlier in this exegesis, Blomberg et al., (2016) identified that while compassion has been identified as an essential element of nursing and healthcare practice, it has become expected and studied as part of the delivery of high quality healthcare. Healthcare professionals continue to struggle with demonstrating their reciprocal empathy; in other words, how they make plain their empathic capabilities.

In a related vein, ongoing classes on self-management strategies for stressful situations should be strongly considered (Elfering et al., 2006). Elfering et al. (2006) suggestions for future work process changes concur with those suggested by Gelsema et al., (2006).

Adding to the importance of empathy, Greeno, Ting and Wade’s (2017) studying empathy and empathic behaviors, conducted a randomised comparison trial of education tools, the overall goal of which was to examine which teaching technique (live supervision with standardised clients vs. teaching as usual) was better at developing empathy and increasing empathic communications and behaviors among a sample of social work and nursing students. The underlying assumption was that training and education would have a positive impact on empathy and increase empathic behaviors. However, while, empathic behaviors were affected by training, self-reported perceptions of empathy did not change over time. Again, it could be due to the fact that empathy is often considered innate, and not something that can be taught, or it could be a measurement issue with the tools used. If empathy is more a personality trait, thus being stable over time (Mehrabian & Epstein, 1972), it could explain the lack of reported change over the course of the study.

One of the main tenets of my study is that empathy can be learned. Adding to the understanding that empathy can be learned, Brunero, Lamont, and Coates’ (2010) reviewed the evidence for empathy education programmes in nursing and made recommendations for future
nurse education. Future implications for empathy education for nurses, suggested by Brunero et al. (2010), is that “empathy education needs to consider activities to enhance self-awareness and assessment of the clinician’s personal value systems” (p.71). Such an emphasis on self-awareness was integrated into the educational interventions of my study.

The lack of change across time and groups on the self-reported empathy levels was not expected; however, the authors suggested that empathy, being multifaceted remains a challenge to measure, especially when asking participants to report their own perceived level of empathy. These results mirrored the results of the Littlejohn current study wherein, the main effect of time on BEES raw scores was not found to be statistically significant. This indicated that there were no significant differences on BEES raw scores by time over the course of the 12-month study (1 vs. 2 vs. 3); therefore, no statistical significance can be interpreted on BEES raw scores by time.

Chadwick and Travaglia’s (2017) review summarised the existing literature, both internationally and in Australia, which examined workplace bullying behaviors in a health context from a management perspective. Interestingly, the authors perceived that though much has been written and studied, there is limited data on workplace bullying behaviors in an Australian health context. This finding ignores the work of Farrell, Hutchinson, Vickers, Jackson, and Wilkes, who have long studied WPV in the Australian nursing work environment (Hutchinson, 2007, 2009b, 2013; Hutchinson et al., 2005, 2006, 2006a, 2006b, 2006c, 2008, 2009, 2010b).

Hutchinson (2009b, 2013) contended that for “more than a decade a common explanation for the occurrence of hostile behaviors between nurses has been the theory of oppressed group behavior and horizontal violence” (Hutchinson, 2009b, p. 563). Hutchinson and Jackson (2013) and Hutchinson (2013) studied hostile clinician behaviors in the nursing work environment to quantify the relationships between these behaviors and patient care. Hutchinson and Jackson (2013) did conclude that “the paucity of robustly designed studies indicates the problem is a comparatively under researched area warranting further examination” (p. 15). Their conclusions mirror those of Chadwick and Travaglia. (2017)

Consistent themes emerged across Chadwick’s and Travaglia’s (2017) review, and, each of these in turn reflected the complex dynamics of current research into workplace bullying,
including the lack of a consistent definition or parameters of what constitutes bullying, by whom, and for whom, within different contexts. The reviewed studies have illuminated, albeit briefly, a range of strategies, when implemented effectively, could reduce the frequency of workplace bullying behavior. The evidence suggests workplace bullying in the health sector affects the individuals involved, the organizations and the patients they serve. The authors conjectured that in the Australian health context, specific state-based jurisdictions have mandatory workplace bullying policies and procedures; however, one of the challenges with addressing workplace bullying, even when there are clear definitions, is interpretation and perception. The literature did not address this area and this study is of significance to the research field. There is a paucity of research into perceptions of workplace bullying and evidence suggests a key determinant to addressing workplace bullying is management practices.

This review indicated a potential and important first step in addressing workplace bullying would be education and awareness rising in the health sector as a prevention strategy. Targeted training, among emerging managers as they commence their management career, within the workplace could address the issue of future organizational culture that may encourage conformity and acceptance of workplace bullying. Currently in some jurisdictions in the Australian health sector, there are diversity workshops, rights and responsibilities workshops, training for managers and employees, training for contact officers (i.e. Human Resource personnel) and skills development training (i.e. communication, leadership, conflict coaching); however, these workshops focus on the broader issues and do not necessarily focus on prevention.

**Study Limitations**

There were several limitations to the research study. The most significant limitation, and due to the perioperative setting, California State (USA) mandated staffing ratios, staffing scheduling issues involved, and the voluntary aspect of the study, the participants could not possibly be matched from time 1 to time 2 to time 3. This was primarily due to staffing regulations in the perioperative areas, and consequently, staff availability on the days the voluntary surveys were completed. This limitation was further expounded in Chapter 5: Quantitative Results section.
As I was correlating all the surveys, it became apparent that there was insufficient evidence neither that the two departments had different changes over time nor that there was any change over time at all. An explanation for the inconclusiveness is perhaps due to the design used. Due to staffing constraints, and an absolute request from survey participants to protect their privacy, the three samples used were independent to each other. Therefore, a recommendation for future research would be to repeat the quantitative portion of this study and use a matched pair design. There would be considerable logistic issues to overcome (including making the survey no longer anonymous, which could drop response rate; and sampling enough at each time so that there were sufficient people in common which is hampered by changing staff rosters). If the issues could be overcome, then a conclusive result would be more likely. Using matched pairs, where the identity of the respondents for each time were recorded could prove to be more powerful – that is, more likely to detect any effect.

Secondly, the data was blinded, with names only included in the signed informed consent forms. The study included all perioperative staff, regardless of licensure, certification, years of employment, and education. While workplace violent perpetrators may be in the sample, they were not identified as such, and their responses may have differed from those who are not perpetrators. Bystanders and non-workplace bullied individuals may have chosen not to participate in the study.

Thirdly, race, ethnicity and gender were not variables of the study. While the study did not address gender and ethnicity issues, any staff whose first language was not English was advised that they could request someone to help them understand any of the questions. Any staff that chose to be included in this study, received and signed, an informed consent.

The fourth, though less strong, limitation were the survey instruments, themselves; Nursing 2011 Horizontal Violence Survey, AIS Workplace Stress Survey and the BEES. Though these instruments were all validated to be used in the study population, they were created by three different entities ANA, UCLA department of Psychology and the American Workplace Stress Institute; thus, there may be differences between the staffs’ perceptions of empathy, horizontal violence, workplace stressors that could have affected the results.
Fifth, the study was open to all perioperative employees, regardless of their education background, licensures, certifications or job title. Following a review of all the signed (and locked away) consent forms, a majority (approximately 70:30) female: male staff was involved in the study. Though perioperative services may employ a higher percentage of males than females, it is simply a fact; there are more females than males, employed overall, in hospitals. Williams’ (1989) study (mentioned earlier), on empathy in male and female helping professionals found there were no main effects of profession on empathy variables, though that “women had significantly higher empathy scores than men, and that [interestingly], these however, men had higher scores than male normative groups” (p. 169). These findings point to further research, and more specifically to test for differences in empathy in nursing from other healthcare professions. Though not clear from my study, the findings from Williams’ (1989) study suggests further research maybe required to explore if among the healthcare professions themselves (not only helping professionals), if nursing differs in its level or type of bullying, and levels of empathy.

Finally, as this study was limited to perioperative staff working in an inpatient perioperative and outpatient (ambulatory) perioperative services department in the USA, thus, the results may not be generalisable to all populations of healthcare, and perhaps not all perioperative staffs. The environment within the perioperative arena differs from other departments of a healthcare facility, in that it is a closed department, the patient is under anesthesia, and there is necessarily reduced staff interaction with their peers outside of the department during work hours.

While the quantitative surveys did not capture age, sex, educational level, licensure status (nurse or technologist, for example), the qualitative analysis, by its very nature, could be more directed. The qualitative data provided clarity and depth to the surveys’ findings, demonstrating the overwhelming need to change the perioperative work environment. It provided evidence to suggest that assistance is needed in creating change in the perioperative workplace environment.

**Summary and Conclusion**

In this chapter, I discussed the results and findings of my research. While the quantitative data did not demonstrate what I anticipated they would, the research findings have provided a good
stepping stone for me to undertake additional research, particularly in relation to the role of education in changing workplace culture, including WPV. Moreover, the qualitative findings certainly added to the research findings, enabling to unpack why the issues involved, in a way that would not have been possible if I had limited my self to using quantitative approaches to collecting alone.

In the next section, I provide a number of conclusions to the study, and make recommendations for future education and research into workplace stress, EE and WPV.
CHAPTER 7:
STUDY CONCLUSION & NEXT STEPS

Study Conclusions

To complement this study and its findings as noted above, earlier perioperative studies, while not specifically focused on using empathy as a stress and conflict reducing tool, provide a platform for present healthcare organizational leaders to recognise that bullying is a huge problem that needs to and can be addressed (Beyea, 2004, 2008; Buback, 2004). Buback (2004), and more recently Saxton (2012), offered that assertiveness training that focused on conflict resolution and communication skills could be an effective method of coping with verbal abuse, to encourage each member to be a vital part of the perioperative team.

Commenting on Austen’s (2016) study on increasing emotional support for healthcare workers and rebalancing clinical detachment and empathy, Neighbour, in a letter to the British Journal of General Practice (September, 2016), suggested that there are some clinical situations where hard-nosed clinical skill is all that is required, and others where the very best we can offer is our ability to understand and to empathise. These thoughts could potentially shed some positive light and a way forward for the healthcare community. It is evident, that to more completely understand these phenomena, (despite the knowledge gained, and studies already completed), that more exploration remains of the role of empathy as a responsive behavior to stress and perioperative WPV and conflict.

Recommendations for Future Education

Clark et al. (2011, 2013, 2016) suggest that a multiplicity of tools be included in any and all healthcare education. Clark believes that in so doing and by laying that base, the current toxic work environment, seemingly endemic, can be mitigated. Supporting that work, Gillespie and Marshall’s (2015) qualitative study incorporating role play simulation, was determined to be an effective and active learning strategy to diffuse bullying in nursing practice. Those findings suggested that bullying in nursing is a problem worthy of incorporation into the undergraduate
nursing curriculum. However, it is unknown whether uniform conflict management tools are equally effective among different hospital settings.

As most entry-level and experienced healthcare professionals have not received training in WPV prevention strategies, a group of healthcare violence prevention researchers (Hartley, Ridenour, Craine & Morrill, 2015), collaborated to develop a mixed bag of solutions. Their final outcome consisted of videos of nurses re-enacting conflict and bullying events, followed by discussion and feedback; such tools will provide valuable fodder for discussion with staff asking for how to deal with hostile behaviors. Chen, Lin, Wang and Hou (2009) study suggested that perioperative departments should offer self-esteem-related training programs to assist OR nursing staff to adopt constructive stress-coping strategies.

With that in mind, Berman-Kishony and Shvarts (2015) conducted a survey of residents and nurses to identify similarities and differences of both disruptive behaviors, and the effectiveness of conflict management tools. Overall results suggested that it would be more effective to tailor conflict resolution tools and strategies, rather than using a ‘one-size-fits-all’ approach. Follow-up indicated that perioperative staff and nurses are asking for healthcare leadership activities to be focused on behavioral change and collaborative relationships, which includes setting boundaries, and holding accountable, those staff who are hostile any time in the perioperative workplace, coaching staff what compassion and civility may look like. For instance, Klimecki, Leiberg, Ricard, and Singer (2013) concluded that that training compassion might reflect a new coping strategy to overcome empathic distress and strengthen resilience.

Even though their study was earlier, Brunero, Lamont, and Coates’ (2010) reviewed the evidence for empathy education programmes in nursing and made recommendations for future nurse education. Brunero et al. (2010) found that “Engaging patients is seen as a critical part of the nurse-patient relationship with empathy being reported as an integral component of the relationship” (p. 65). Several variables may affect empathy education need to be accounted in future studies such as gender, cultural values and clinical specialty, (especially for perioperative) experience. Models of education that show most promise are those that use experiential styles of learning. The studies reviewed demonstrated that it is possible to increase nurses’ empathic ability. Future implications for empathy education for nurses, suggested by Brunero et al. (2010),
is that “empathy education needs to consider activities to enhance self-awareness and assessment of the clinician’s personal value systems” (p.71).

Recommendations for Future Research

Recommendations for future research from this study (lower levels of empathy and higher levels of WPV/HV of the inpatient surgery staff) include the examination of the factors that could influence the transformation of their work environment. Mentioned earlier in Chapter 6, a recommendation for future research could be to repeat the quantitative portion of this study incorporating a matched pair design and developing a cross cultural comparative study of perioperative staff conflict and empathy levels in Australia and the USA. Similarly, Gelsema et al. (2006) suggested future research for “hospital management, to intervene early in the process, (where adverse work conditions and reduced health and well-being negatively influence each other), by improving the work environment” (p. 298). Cecil and Glass’s (2014) findings, may inform future research on emotional regulation and importantly the “role of organized emotionality in the workplace” (p. 383).

Works continues to be undertaken on empathic existence. Ekman and Halpern’s (2015) study on emotional distress in healthcare work focused on empathy as a critical, aspect of this work. In the 2015 article, they proposed “a distinction between basic or general empathy and a professional empathy. Professional empathy in human service settings usually includes a much higher degree of emotional demands than the everyday empathy” (p. 635).

Sandelowski’s (1991) work supports viewing respondents in qualitative research as narrators and then using interview data as stories not only poses new problems but also provides new opportunities for nursing research. Sandelowski (1991) continued by asserting that a narrative framework affords nursing scholars a special access to the human experience of time, order, and change, and it obligates us to listen to the human impulse to tell tales.

During this particular study, some of the staff felt so emotionally impacted and distressed about experiences of traumatic events not captured by the survey tools that they wrote their stories down and gave them to me. Some stories were personal stories, though many spoke of hostile and negative co-worker interactions and the work environment. Coe and Gould (2008) recommended that future studies focus on “conceptualizing the complex nature of
interprofessional working in OTs to develop a less stressful and more efficient working environment” (p. 611). Coe and Gould, (2008) believe that the concepts of teamwork currently applied to the work of the OT are taken mainly from industrial models and that these concepts fail to capture the complexity of multi-professional working in OTs.

Mirroring my thoughts on narrative and listening, Koenig-Kellas, Horstman, Willer, and Carr (2015) wrote that the concept of perspective is especially pertinent to narrative. Therefore, listening to their staff allows emotionally aware leadership to understand more deeply their perspectives and thought processes. Perioperative nurses’ stories could add to the collective wisdom of their individual group; thus, providing a roadmap for orienting newer perioperative staff, while concurrently strengthening the bonds among all perioperative staff. I surmise most inpatient perioperative staff, though indefensibly aware of the toxic, stressful, and less than ethical issues endemic to their workplace environment, have no time to address such issues day to day. Perioperative clinicians remain in a unique and challenging position to address this (WPV/HV), as aggression—both physical and verbal—can erupt between patients, family members, and fellow staff members at any time.

While the literature addressed herein agree that empathy is central to perioperative healthcare and patient care, it is crucial to realise that much more clarification of empathic concepts for all healthcare staff is needed to be able to incorporate empathic caring concepts into the healthcare mindset. There are gaps in the literature for perioperative staff research to address the lead change on decreasing workplace conflict and violence and increasing levels of empathy. Research for the future could also include exploring factors that influence perioperative staff’s intent and actual commitment to change the work environment.

**Recommendations for Future Professional Practice**

Despite increasing awareness and reporting by healthcare staff, to their leadership of endemic healthcare related conflict and stress, such conflict, stress and violence prevail. To address, in a Federal Register notice published on December 7, 2016, the Occupational Safety and Health Administration (OSHA) published a Request for Information entitled Prevention of WPV in Healthcare and Social Assistance.
In response, the ANA expressed support for the creation of a WPV prevention standard and noted that any standard must follow the recommendations laid out in ANA’s 2015 Position Statement on Bullying, Incivility, and WPV and include input and participation by both employers and employees. The ANA letter also stated that ANA looks forward to working in collaboration with OSHA and other stakeholders on the development of such a standard. (ANA, 2017)

Suggested healthcare workplace reforms from the Elfering et al. (2006) study were to consider both redesigning nursing work flow processes while concurrently incorporating into the nursing education curriculum, specific associations between workload and patient safety. Despite the fact that the Elfering et al. study (2006) is dated, it still holds true today as evidenced by the ANA Position Statement (2015), below.

The following statement is attributable to Pamela F. Cipriano (PhD, RN, NEA-BC, FANN), President of the ANA:

ANA is pleased that the JC has issued a Sentinel Event Alert on physical and verbal violence against healthcare workers. They reinforce the urgency to halt the cycle of harm and prevent, handle, and heal from incidents of violence in the workplace. In particular, we welcome its recommendations to employers to help reduce the incidence of violence across all healthcare settings and roles. (ANA, 2018)

This statement was made in response to a 2018 JC Sentinel Event Alert (SEA)

Following SEAs issued by the JC, each healthcare facility is then expected to develop policies, procedures and practice to align with such alerts. Healthcare workers must be alert and ready to act when they encounter verbal or physical violence — or the potential for violence or abuse — from patients or visitors (or staff) who may be under stress or who may be fragile, yet also volatile. Healthcare organizations are encouraged to address this growing problem by looking beyond solutions that only increase security.

As mentioned in Chapter 1, this study project was a first step in an initiative to help
perioperative staff make changes in their work environment. It was envisaged that this effort would result in a sustainable intervention to provide leadership tools and resources for all perioperative nurses and staff. This study is an endeavour to empower via increasing self-awareness and empathic skills of a diverse group of perioperative staff, through stories collected and shared, to actively engage in improvement of their work environments; that findings demonstrate the value of the study and the imperative to continue this empathic journey.

This is recognised as an important topic of research – the use of EE to reduce workplace stress and horizontal violence in the OT environment. Moreover, this research is interesting, pertinent and timely. Research implications of this work are not only relevant to those working in perioperative departments, but beyond these walls, as conflict and WPV in the healthcare settings is pervasive, with serious consequences on both nurses and patient safety. I incorporate the stories gleaned from this study and years of perioperative nursing, to help effect and sustain, changes in the perioperative workplace. Conducting classes on workplace stress and conflict, I allude to the stories told to me, and stories from my perioperative career. The class participants continue to connect with the stories and often join in and relate about how something similar has happened to them. These are how the connections and conversations start. I will continue this journey, using the power of stories and narratives from the workplace (East, Jackson, O’Brien & Peters, 2010), coaching and mentoring all healthcare staff on recognising workplace horizontal violence and providing different de-escalation tools for them to incorporate into their work life.

Stress and conflict affect perioperative staffs who possess moral courage. While advocating for their patients’ best interests, they may find themselves in moral distress, experiencing their own adverse outcomes. This takes its toll on perioperative staff both emotionally and physically. Staff may second-guess themselves. By discussing, talking about and telling our stories to their peers, they are able to reassure themselves that they are on the right path and doing the right thing. This study provided a rich treasure of materials and a window into how both culture and identity influenced the ethos of the perioperative staff.
Summary and Conclusion

The research journey I undertook over the years in which I was enrolled in the Doctor of Health Science degree has supported me in learning a great deal about research, what it is, how it is conducted, and what it can achieve for health professionals. Developing and implementing a research project from the beginning is no mean feat. Collecting and analysing data requires perseverance and rigor. Finally, writing up the findings and discussing the implications for the future, presents a range of challenges.

While the findings of this research were not as I anticipated, this fact in and of itself demonstrates my commitment to the research process – specifically, I commenced with an open mind, I completed knowing that my initial ideas required further development and that there is more work to do. This is the nature of research!

I opened this exegesis by noted that the shadow of WPV continues to hang over healthcare facilities worldwide and presents ongoing challenges for nursing leaders across the globe. WPV continued in a range of health settings, including perioperative environments. I remain committed to supporting perioperative nurses to finding answers to this problem – and achieving change for a more positive future.
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APPENDICES
APPENDIX A:

NVIVO REPORT

NVivo report with respect to coding and analysis of eight stories provided as Word document files. For purposes of discussion in this report, “nodes” refer to “categories” and “subcategories.”

DOCUMENT TITLING FOR CODING

Eight stories were provided as Word document files. Files were renamed, to include department, position, gender, years of experience, and original title ID. This was done to take advantage of the sorting feature in NVivo 10 which sorts coding reports alphabetically according to the titles of the documents, assuming text has been coded from those documents. **To ensure staff privacy all references to male/female or job titles were edited for this final report**

- Department (OR, OR PACU, PACU)
- Position (Nurse)
- Years of experience (actual varying from 1 to 30) - Noted for focused group interviews
- Original title ID (Neuro Nurse 1, Interview Notes #7; OR Interview Notes #3; OR Charge Nurse, Interview Notes #8; OR Educator, Interview Notes #6; OR Nurse 1 Interview Notes #1; PACU Nurse 1-3, Interview Notes, #2 & #5)

Document titles sort alphabetically within the coding reports by department; then by position within department; then by gender (removed for privacy) within position, and so on as shown below and on page 2 of this document.

1. OR PACU Peri-Op _ 27yrExp OR Generic
2. OR_Nurse _ 10yrExp _ Neuro Nurse 1
3. OR_Nurse _ 15yrExp OR Nurse 1
4. OR_Nurse _ 20yrExp OR Nurse
5. OR_Nurse _ 20yrExp OR PACU_Nurse _ 10yrExp PACU Nurse 2
6. PACU_Nurse _ 1yrExp PACU Nurse 3
7. PACU_Nurse_30yrExp_PACU Nurse 1

STORY QUESTIONS

Questions were compiled from each story.

**Neuro Nurse 1**

- Have you ever seen or heard some harshly criticised without having heard both sides of the story, in the workplace? Have you been able to say something to them?
- Have you ever hesitated either now or when you were more junior ever hesitated to ask questions for fear of being ridiculed or retaliation?
- Have you ever pretended not to see a co-worker struggling with their workload, when you are busy or they are busy? And do you ever talk with them about it?
- Have you ever heard or seen anyone complaining talking negatively about a co-worker instead of going and talking with them personally?
- Do you ever feel like you have lost of responsibility in your job, but not much authority? How do you know that they are listening?
- My workplace environment is not particularly pleasant or very safe. Do you ever feel that?
- I seldom receive accolades or acknowledge or appreciation when my work is really good. Do you receive this?

**OR Generic**

- Have you ever seen or witnessed or experienced anyone making belittling or hurtful remarks to others co-workers in front of others? How often does that happen?
- Are staff learning that they can say something back if they feel they are bullied?
- Have you ever heard a co-worker complain about somebody else instead of speaking with that person?
- Have you witnessed or even done yourself, raised or rolled your eyes at someone?
• Have you ever pretended to not see someone, (or seen someone else), when they are really busy and not gone to help?
• Have you ever left work feeling bad about yourself because of something that happened at work with co-workers?
• Have you had (and this is a follow on to the conversation we just had about the conflict you had), physical symptoms, headaches, inability to sleep etc. because of something that happened at work –poor interactions- with co-workers?
• Have you thought about not coming into work because you might have to interact with that person?
• Have you ever felt discouraged because of lack of positive feedback or acknowledgement?
• What about the surgeons- do they ever yell at you especially when they are booking cases?
• Have you ever not spoke up about something that you thought was wrong, in fear of retaliation?
• Have you felt that you couldn’t get something off your chest at work?
• Then a lack of respect for your knowledge and long-time experience?
• Have you ever felt discouraged because of lack of positive feedback or acknowledgement, from your fellow staff?
• Does your job ever roll over to your home life?
• My workplace is not particular pleasant or safe?
• What about the interactions of the various departments within, e.g. PACU, SPD, endoscopy?

OR Nurse

• Starts with three stories and then question is asked:
  Why do you think it made you feel so trusted when he came back and gave you that feedback?
• Another story and then question:
So, what is it that allowed you to be able to do versus someone else who may not have been able to calm down the situation?

- Remember the question on the survey about things that might have make you felt anxious or more anxious at work, someone was rude in front of you, though not necessarily to you? So, tell me about those instances. How you felt, why did it make you feel that way?
- Have you ever see anyone say something behind someone’s back, told you gossip etc. or be rude to them? How do you deflect that?
- Have you ever left work ill after an incident or just not been able to come to work because of an incident that happened at work?
- So, the surgeons do not come out and tell their patients?
- I tend to have frequent arguments with various co-workers? Some of the results scored really high here.
- Question- my job has a lot of responsibility, though I do not have much authority, and you mentioned earlier that do not have much authority. How does that make you feel?
- One of the other questions and I don’t know if you remember this, was ‘I haven’t spoken up about something because of fear of retaliation’. Did that ever happen to you?

OR

- I then tell story of the Ear, Nose and Throat surgeon who was so frustrated with his surgical instrument that he threw it at me while I was circulating. I then asked nurse had anything like ever happened to him.
- Have you called getting ready for patient and she didn't have the H&P done, consents weren’t done & you were ready to take the patient into the room. Have you called them- what were their reactions?
- I seldom receive adequate acknowledgement or appreciation when my work is really well-done.
- I used to have frequent arguments with co-workers or the staff.
- I could do a much better job if I had more time to do it.
- Actual conflict - have you seen or experienced before or seen someone criticising someone else, without having both sides of the story?
- Have you ever heard or seen anyone complaining about a co-worker to others instead of coming to that person to resolve conflict directly?
- Have you ever seen a really busy OR day, that other rooms are really busy, have you ever seen others working really hard and people are not going to help them?
- Have you ever with left work or has anyone ever told you that they have left work feeling bad or ill because of an interaction with somebody at work?
- Has anyone ever mentioned to you that they have felt really bad about something because interaction?
- Have you ever not spoken about something you thought was wrong for which you might be retaliated?
- Have you ever seen other staff or physicians raise their eyebrows or rolling their eyes at a co-worker? Do you realise how that might make someone feel?
- Tell me of the great work you are doing [as a new educator]. How do they take that when you [offer suggestions] do that?
- Is there anything that especially worries you [stressors], at work?
- What helps you be able to deal with conflict you may see in the [peri-operative] areas?
- Do you have a sense of your own empathy and awareness and how that may help you with your work?
- We discussed the connections between the words, silent and listen. [Same letters, different spelling].
- One option may be for you to step into that clinical role as an observer, as a teacher to assess how someone is doing, first-hand.
OR NURSE 1

- Have you seen anyone harshly criticizing someone without hearing both sides of the story?
- Have you ever left work feeling either mentally or physically ill (migraines? e.g.) from something, interactions, etc. that happened from work?
- Have you ever refrained from asking a question because you thought you may be ridiculed or there maybe retaliation?
- I asked about trying to go the OR with a completed H&P report.
- I asked RN how it was going the computerized order entry process? (relatively new).
- Have you ever seen or pretended not to see a co-worker struggling with their workload, when you are busy or they are busy?
- Have you ever heard or seen anyone making belittling remarks behind someone’s back?
- I seldom receive accolades or acknowledge or appreciation when my work is really good. Do you receive this?
- My job has lots of responsibility but not much authority? Especially when you are on-call?
- My job often interferes with my family or personal time.
- ‘I cannot honestly say what I think or get things off my chest at work.’ Thoughts?
- My workplace environment is not particularly pleasant or very safe.

PACU NURSE 1

- This is about workplace stress. A statement ‘I can't honestly say what I really think or get things off my chest at work.’
- Do the physicians treat you with respect?
- Is there ever a concern somebody else may say well that’s not my job?
- Have you ever seen or experienced and you are really busy; people know that you are busy, and pretend to be busy themselves?
- Most the time I feel that I have very little control over my life at work.
Do you find that you take some of it home with you?
I have frequent arguments at work with my co-workers or my superiors?
My workplace environment is not very pleasant or particularly safe?
In general, I am not particularly proud or satisfied with my job.
I could do a much better job if I was given more time.
Have you ever witnessed or experienced someone harshly criticising someone without having heard both sides of the story?
Have you ever witnessed or experienced someone making hurtful or belittling remarks about a person in front of others?
Have you ever come to work or left work feeling bad about interactions with co-workers?
Have you had physical symptoms such headaches or abdominal pain, or inability to sleep because you had run-ins with co-workers?
Have you ever felt discouraged because of lack of acknowledgement of good work?
Have you ever rolled your eyes or raised your eyebrows at work?
Have you ever seen or witnessed anyone complaining about a co-worker rather than going to that person?
Have you ever seen or witnessed staff withholding information so that they would look better in front of somebody else?

PACU NURSE 2

PACU nurse asked to talk with me as she feels unsafe in her work environment and her leadership does not listen to her concerns. Stories follow:
Tell me how you felt about that. What would you like to happen from this?
Have you ever left work, perhaps after such a busy weekend as you described and felt physically ill because of interactions with a co-worker or these families?
• Have you ever been given an order that you don’t agree with but have not felt you could speak up about that, or seen someone about to make an error and you’ve not had the courage to say something, because you fear retaliation?
• Do you get a lot of positive feedback?
• Have you ever heard anyone making belittling or disparaging remarks about somebody else behind their back?
• Have you ever seen people rolling their eyes at you, or raising their eyebrows at something you said, or have you ever done that?
• Stress - at work? Do you feel you have responsibility and authority at work?
• I could usually do a better job if I was given more time.
• My workplace is not safe or particularly pleasant.

PACU NURSE 3

• Have you ever seen or experienced anyone making hurtful or belittling remarks about other co-workers in front of other people?
• Have you yourself or seen somebody roll their eyes at somebody else?
• Do you ever see people pretending to be busy and not helping others out?
• Have you ever left work feeling bad about yourself because of something that happened at work that day?
• Have you ever left work with a headache or other physical symptoms or woken up in the middle of the night because of bad behaviors that happened at work that day?
• I haven’t spoke up about something I thought was wrong because of fear of retaliation.
• I’ve felt discouraged because of lack of positive feedback.
• Stress. I can’t honestly say what I think or get things off my chest at work.
• My job has lots of responsibility but not much authority.
• I could usually do a better job if I were given more time.
• I seldom receive acknowledgement when my work is really good.
• My work Place environment is not safe or particularly pleasant.
APPENDIX B:  
INITIAL NODE TITLES CREATED FROM STORY QUESTIONING

Data was used to determine initial coding categories and subcategories. Three main categories (Stress, People Pulse, and Teamwork Climate) and 34 subcategories were initially created in NVivo 10. Stress subcategories were based upon questions asked in three stress survey questionnaires (Workplace Stress Questionnaire, Job Stress Questionnaire, and Nursing 2011 Horizontal Violence Survey). People Pulse subcategories were based upon the 2012 People Pulse Survey instrument for healthcare facility X. Teamwork Climate subcategories were based upon items in the 2010 Teamwork Climate Results document.

1. **Stress (20 subcategories)**
   - Harshly critical
   - Belittling hurtful
   - Complaining co-worker
   - Raising eyebrows
   - Pretending not to see
   - Discouraged
   - Retaliation
   - Hesitation ridiculed
   - Feeling bad
   - Physical symptoms
   - Seldom acknowledged
   - Much responsibility
   - Not proud or satisfied
   - Better job more time
   - Picked on discriminated
   - Unpleasant unsafe workplace
   - Job family-interference
● Frequent arguments
● No control
● Cannot express feelings at work

2. **Teamwork Climate (5 subcategories)**
   ● Input well received
   ● Difficult to speak up if problem patient care
   ● Patient-centered care and problem resolutions
   ● Questioning encouraged for understanding
   ● Physicians & nurses well-coordinated team

3. **People Pulse ORG (9 subcategories)**
   ● Commitment
   ● Line of Sight
   ● Enablement
   ● Integrity
   ● Feedback and Development
   ● Focus on Patients, Members & Customers
   ● Communication
   ● Inclusion
   ● LMP

This listing is not final; the coding process to create and refine themes is discussed below.
APPENDIX C:
CODING PROCESS

A total of eight stories were prepared and imported using NVivo 10 qualitative software. Each line from the stories was manually read and coded to the initial node titles shown on pages 8-9 of this document. Additional subcategories were created as coding was refined within the nodes; nodes without coding were deleted. Subcategory titles were refined under parent nodes People Pulse ORG and Teamwork Climate based upon item wording in the survey instruments. The parent node Stress was divided into two nodes No or not answered and Yes; the Yes subcategory contains 31 subcategories. The final result is three parent nodes and 60 subcategories for the eight stories as shown below and on pages 10-11 of this document.

NODE LISTING OF CODING REPORTS
(3 coding reports with 60 subcategories)

Titles sorted alphabetically

STORY THEMES

1. People Pulse ORG (6 subcategories)
   - Communication (1 subcategory)
     - 6. Good sharing of ideas and information across ORG
   - Enablement (3 subcategories)
     - 10. I have enough say in how I do my job
     - 31. Department operates effectively as a team
     - 49. Can influence decisions affecting work
   - Feedback and Development (3 subcategories)
     - 4. ORG provides opp for career growth & development
     - 17. Evaluations tell me strengths, areas to improve
     - 41. Supervisor recognises me when I do a good job
   - Focus on Patients, Members & Customers (4 subcategories)
22. Mgmt uses employee ideas to improve care  
30. Encouraged to speak up about errors & mistakes  
43. Supported to satisfy patients customers  
46. Physicians support me in providing quality service

- Inclusion (2 subcategories)  
  11. Valued as an individual at ORG  
  26. Comfortable voicing opinions even if different

- Integrity (2 subcategories)  
  3. Comfortable raising ethical concerns to sup-mgmt  
  47. Trust in job being done by senior management

2. **Stress (2 subcategories)**

- No or not answered

- Yes (31 subcategories)  
  Belittling hurtful  
  Better job more time  
  Body language betrays me  
  Cannot express feelings at work  
  Complaining co-worker  
  Coping by avoidance  
  Deliberate work slow-downs  
  Discouraged  
  EE  
  Feeling bad  
  Frequent arguments  
  Harshly critical  
  Hesitation ridiculed  
  Job family-interference  
  Job security - non-union  
  Lack of knowledge co-workers  
  Lack of respect
202

- Missing deadlines
- Much responsibility - little authority
- Non-compliance standards
- Not my job
- Not proud or satisfied
- Physical or mental symptoms
- Picked on discriminated
- Pretending not to see
- Raising eyebrows - rolling eyes
- Retaliation
- Seldom acknowledged
- Surgeon & physician behaviors
- Toxic interactions between departments
- Unpleasant or unsafe workplace

3. **Teamwork Climate (6 subcategories)**
   - 1. Nurse input well received
   - 2. Difficult to speak up if problem patient care
   - 3. Disagreement resolutions patient-centered
   - 4. Patient care supported
   - 5. Questioning encouraged for understanding
   - 6. Physicians & nurses well-coordinated team
APPENDIX D:
CODING STRATEGY

In general, the coding strategy provided reminders within various nodes rather than attempt to code every line of text to every node possible. This was also coded for context so captured more content than might seem necessary; this saves the PI time from having to look for context when the final analysis was made from the reports.

Context is especially important to provide meaning for qualitative analysis when reading the reports. Please focus on the content that relates to the node title, with the understanding that some of the content may be providing context. For example, the coding report “Stress/No or not answered” contains content relevant to other categories (and that content has been coded to those categories). The PI focused on the content that indicates the participant does not feel a specific question is applicable (no), or the content that does not answer the specific question (not answered).

There are many ways to interpret the data, and as coding is a subjective process; therefore, the coding is not exhaustive. In this study, categories had multiple meanings and content was coded to multiple questions when relevant. However, the PI did not code everything everywhere or it would become burdensome to read and analyse because connections can be made throughout.

Coding Contradictory Statements

Content from a single participant coded to the same subcategory may be contradictory. For example, story participant “OR Nurse_20yrExp_OR” is asked “Have you ever left work or has anyone ever told you that they have left work feeling bad or ill because of an interaction with somebody at work?” He indicates initially that he does not really feel bad: “Hmmm…it’s kind of hard to say… well not really as I don’t ever …talk…” In another response, s/he indicates he feels bad when s/he hears a doctor calling the OR director “stupid.” Therefore, the first response was coded to this “feeling bad” subcategory as it is a contradiction. (See coding report “Stress/Yes/Feeling bad.”)
Coding Reports Overview

Multiple coding reports (node reports) have been created and organized into condensed coding reports for my convenience. In this study, 63 individual coding reports have been compiled into three coding reports (titled as shown below) with multiple subcategory sections within each report. Tables of contents with subcategories and page numbers are provided on the first page of each of the three coding reports; headers for each subcategory section are provided in each coding report to help identify subcategories for each page as they are read through.

1. People Pulse ORG
2. Stress
3. Teamwork Climate

The content in the coding reports sorts alphabetically by eight document titles, which is explained on pages 1-2 of this document. All node titles are shown on page 9-11 of this document and in the document Node Listing.docx.

Understanding References and Percentages in Coding Reports

In reading the coding reports, please notice the insertion of references and percentages at the end of each document title; NVivo 10 automatically inserted these numbers. The percentages give an idea of proportionality in that “a lot” or “a little” was coded from the document to the category. The references relate to the number of times text was selected within the document; the percentage is the percent of the document each selection represents.

Example: In the excerpt below from the coding report “Stress/Yes/Not my job,” from story “PACU Nurse__30yrExp_PACU Nurse 1,” two selections of text (references) were coded which represent 3.81% of the story. The text coded is separated into reference 1 (2.71%) and reference 2 (1.10%) equal to the total coverage (3.81%).

Name: Not my job
Reference 1 - 2.71% Coverage

Me: is there ever a concern somebody else may say well that’s not my job?

“that doesn't happen very often and that's one of the things I truly hate it- either it is not my job, or it is not my patient. I feel they're all our patients and we can help with any job no matter what.”

Reference 2 - 1.10% Coverage

there are some people who still that way, like ‘its not my job or my area’. I cannot do a lot of things in the OR

Frequency Counts Spreadsheet (Appendix H)

Titles in descending order of frequency are helpful to quickly identify the subcategories having the most responses. It is clearly shown in the above table that 6 of 8 respondents or 75% made comments relating to “4. Patient care supported” and “6. Physicians & nurses well-coordinated team,” with other subcategories varying from 63% down to 25%.

Observations and Limitations

In qualitative studies, it is essential that reports are read and evaluated qualitatively rather than relying on frequency counts. Frequency counts pointed the PI in directions, though was reminded they should be used with discretion. These tables are based upon qualitative coding from multiple open-ended questions and are open to the PI's further interpretation as data is selected from within the tables to produce supporting charts.

Examples below, demonstrate when frequency counts are important and when they are not so important. Proportionality is helpful with frequency counts/percentages if observations made that “a lot” or “a little” was coded to various categories.
Example 1 – Sample Size and Percentages

The sample size of eight was used for this qualitative study; generalizations to a larger population may not apply. The possible percentages are shown in the table below for the sample size 8.

<table>
<thead>
<tr>
<th>No of Does</th>
<th>% of 8 (rounded)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>3</td>
<td>38%</td>
</tr>
<tr>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>7</td>
<td>88%</td>
</tr>
<tr>
<td>8</td>
<td>100%</td>
</tr>
</tbody>
</table>

Example 2 – Subcategory Layers

There are up to four layers in “Node listing.docx.” The first layer of coding contains the main category “Story Themes” which is empty in NVivo 10 because everything is coded to parent nodes and subcategories. The second layer of coding contains three parent nodes; the third layer of coding contains subcategories emerging from the second layer, and the fourth layer of coding contains subcategories emerging from the third layer.

In the table below, the node “Story Themes” is in the first layer; “People Pulse ORG” is in the second layer; “Communication” and “Enablement” are in the third layer; and “6. Good sharing of ideas and information across ORG,” “10. I have enough say in how I do my job,” “31. Department operates effectively as a team,” and “49. Can influence decisions affecting work” are in the fourth layer.
Example 3 – Understanding Column Totals

Frequency counts are based on eight stories.

Each story has been coded, but not to every subcategory.
Each story is only counted once within a single subcategory regardless of how
many selections of text have occurred from that story. For example, multiple
selections of text can be coded from a single story to the same subcategory,
but the frequency count will be “1” for that story within that subcategory.

Example 4 – Mutually Exclusive Coding

Responses are mutually exclusive (either/or) when comments must only be coded
to one or another subcategory under the same parent node. This does not occur in
the stories.

Example 5 – Multiple Coding

Coding content to more than one category is called “multiple coding.” This is due
to the nature of responses from a single story having meaning in more than one
category. The story is only counted once within the subcategory but many
participants may, of course, provide a variety of responses to a single question,
and the same content or different selections of text from a single story can be coded
to multiple nodes. Column totals can be more than, less than, or equal to 8 and
100% in this study.

More than 8 or 100%:

In the table below for “Teamwork Climate,” eight stories (or 100%) have been
coded to the subcategories. The subcategories have column totals which exceed 8
and 100% indicating multiple coding has occurred. Coding of this type applies to
many of the subcategories in this study, but coding reports were read to determine
whether there is overlap within the subcategories and whether that is important to
analysis.

It is possible that multiple coding can occur and totals are less than 8 or 100%. Reading the node reports would be required to know this; the frequency counts cannot be relied on to indicate whether or not multiple coding has occurred. An easy and simplified way to understand this is if the same content from one document out of a dataset of ten documents was coded to two subcategories under a parent node. Each subcategory would show a frequency count of one out of ten or 10% for that document and both subcategories would add to two out of ten or 20%; in reality, there would only be one document coded as shown in the parent node row in the table shown below for demonstration purposes. Multiple coding has occurred because it is the same content coded to both subcategories.

**Equal to 8 or 100%:**

It is possible that multiple coding occurred and totals coincidentally equal the total number of documents in this study. In the table below for demonstration purposes only, the totals add to 15 and 100%, but that does not mean there are five unique documents coded to each subcategory. Multiple coding may have occurred if the titles are not mutually exclusive because the same participant can provide answers coded to more than one subcategory. The reports were read to determine if the same content has been coded; more than one coding selection from the same document will only be counted once for that document within each subcategory, as explained in example.
APPENDIX E:

WORD FREQUENCY COUNT PROCESS

A word frequency search for the set of eight stories was conducted; the PI chose to do 500 words of five characters or more. The complete word frequency list is available in the XL file \textit{WF 500 word 5+ characters - all stories}.

The top ten most frequently occurring words of five characters or more are:

<table>
<thead>
<tr>
<th>Word</th>
<th>Length</th>
<th>Count</th>
<th>Weighted Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>think</td>
<td>5</td>
<td>101</td>
<td>1.25</td>
</tr>
<tr>
<td>patient</td>
<td>7</td>
<td>83</td>
<td>1.03</td>
</tr>
<tr>
<td>really</td>
<td>6</td>
<td>72</td>
<td>0.89</td>
</tr>
<tr>
<td>going</td>
<td>5</td>
<td>62</td>
<td>0.77</td>
</tr>
<tr>
<td>people</td>
<td>6</td>
<td>56</td>
<td>0.69</td>
</tr>
<tr>
<td>something</td>
<td>9</td>
<td>52</td>
<td>0.64</td>
</tr>
<tr>
<td>nurse</td>
<td>5</td>
<td>49</td>
<td>0.61</td>
</tr>
<tr>
<td>sometimes</td>
<td>9</td>
<td>46</td>
<td>0.57</td>
</tr>
<tr>
<td>things</td>
<td>6</td>
<td>44</td>
<td>0.54</td>
</tr>
<tr>
<td>person</td>
<td>6</td>
<td>43</td>
<td>0.53</td>
</tr>
</tbody>
</table>

The “word cloud” visual shown (p.74), is included with the list of figures), was created from the word frequency search showing words in various sizes according to the frequency with which they appeared.

The search excludes words shown on the stop list below.

\textbf{Stop List:}

a about above after again against all am an and any are aren’t aren't as at be because been before being below between both but by can can’t cannot can't could couldn't couldn't did didn’t didn't do does doesn’t doesn't doing don’t don't down during each few for from further had hadn’t hadn't has hasn’t hasn’t have haven’t haven't having he he’d he’ll he’s he'd he'll her here here’s here's hers herself he's him himself his how how’s how's i i’d i’ll
APPENDIX F:

FREQUENCY COUNTS

Alphabetical & Descending Order of Frequency
<table>
<thead>
<tr>
<th>NODE REPORTS (titles alphabetical)</th>
<th>Stories (%)</th>
<th>% of S</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STORY THEMES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PEOPLE PULSE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>3</td>
<td>38%</td>
</tr>
<tr>
<td>Enablement</td>
<td>4</td>
<td>30%</td>
</tr>
<tr>
<td>13. Leave enough time to do my job</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>19. Can influence decisions affecting work</td>
<td>4</td>
<td>30%</td>
</tr>
<tr>
<td>Feedback and Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. OUG provides apps for career growth &amp; development</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>47. Evaluations tell me strengths, areas to improve</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>48. Supervisor recognizes me when I do a good job</td>
<td>8</td>
<td>60%</td>
</tr>
<tr>
<td>Focus on Patients, Members &amp; Customers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Helps me with employee forms, paperwork</td>
<td>3</td>
<td>25%</td>
</tr>
<tr>
<td>30. Encouraged to speak up about errors &amp; mistakes</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>43. Supported to satisfy patients, customers</td>
<td>5</td>
<td>33%</td>
</tr>
<tr>
<td>45. Physicians support me in providing quality service</td>
<td>7</td>
<td>56%</td>
</tr>
<tr>
<td>Incivility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Treated as an individual at OUG</td>
<td>5</td>
<td>43%</td>
</tr>
<tr>
<td>26. Comfortable voicing opinions even if different</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Intimacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Comfortable voicing opinions even if different</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>37. Turn in job done by senior management</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td><strong>STRESS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No or not answered</td>
<td>8</td>
<td>100%</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bullying/bullying</td>
<td>6</td>
<td>50%</td>
</tr>
<tr>
<td>Better job more time</td>
<td>5</td>
<td>43%</td>
</tr>
<tr>
<td>Body language betrays me</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Can’t express thoughts at work</td>
<td>3</td>
<td>25%</td>
</tr>
<tr>
<td>Complaining co-workers</td>
<td>5</td>
<td>43%</td>
</tr>
<tr>
<td>Coping by avoidance</td>
<td>8</td>
<td>62%</td>
</tr>
<tr>
<td>Deliberate work slow down</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Discouraged</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Emotional empathy</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Feeling bad</td>
<td>7</td>
<td>100%</td>
</tr>
<tr>
<td>Frequent arguments</td>
<td>3</td>
<td>43%</td>
</tr>
<tr>
<td>Harshly critical</td>
<td>8</td>
<td>75%</td>
</tr>
<tr>
<td>Illness indicated</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Job limits-interruption</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>Job security - variation</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Lack of knowledge co-workers</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Lack of respect</td>
<td>3</td>
<td>43%</td>
</tr>
<tr>
<td>Missed deadlines</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Much responsibility - little authority</td>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>Non-compliance standards</td>
<td>5</td>
<td>75%</td>
</tr>
<tr>
<td>Not my job</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Not paid or under paid</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Physical or mental symptoms</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>Risk of error</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Rude or notnice</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>Raising eyebrows - rolling eyes</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>Rivalry</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Sibling acknowledged</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>Superiors &amp; physician reflections</td>
<td>6</td>
<td>56%</td>
</tr>
<tr>
<td>Tense interactions between departments</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Unpleasant or stressful workplace</td>
<td>5</td>
<td>50%</td>
</tr>
<tr>
<td><strong>TEAMWORK CLIMATE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Nurse input not received</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>2. Difficult to speak up if problem - patient care</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>3. Disagreement-well intentioned patient-centered</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>4. Patient care supported</td>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>5. Questions encouraged for understanding</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>6. Physicians &amp; nurses well-coordinated team</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>NODE REPORTS (titles describing order of frequency)</td>
<td>Studies (S)</td>
<td>% of S</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>-------------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>STORY THEMES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PEOPLE PULSE ORG</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Good sharing of ideas and information across ORG</td>
<td>3</td>
<td>38%</td>
</tr>
<tr>
<td>Enablement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I have enough say in how I do my job.</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>45. Can influence decisions affecting work.</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>31. Department operates effectively as a team.</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Feedback and Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41. Supervisors recognize when I do a good job.</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>4. ORG provides opp for career growth &amp; development</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>47. Evaluations tell me strengths, areas to improve</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Focus on Patients, Members &amp; Customers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46. Physicians support me in providing quality service</td>
<td>7</td>
<td>83%</td>
</tr>
<tr>
<td>43. Supported to satisfy patient's customers</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>22. Staff members encourage ideas to improve care</td>
<td>3</td>
<td>38%</td>
</tr>
<tr>
<td>30. Encouraged to speak up about errors &amp; mistakes</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Inclusion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Comfortable voicing opinions even if different</td>
<td>8</td>
<td>100%</td>
</tr>
<tr>
<td>11. Valued as an individual at ORG</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>Integrity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47. I feel my job being done by senior management</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>2. I feel comfortable raising ethical concerns to my mentor</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td><strong>STRESS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No or not answered</td>
<td>8</td>
<td>100%</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling bad</td>
<td>7</td>
<td>83%</td>
</tr>
<tr>
<td>Unpleasant or hostile workplace</td>
<td>7</td>
<td>83%</td>
</tr>
<tr>
<td>Belting hurtful</td>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>Coping by avoidance</td>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>Hardly critical</td>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>Much responsibility - little authority</td>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>Surgical &amp; physician behaviors</td>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>Better job more time</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>Complaints at work (competing)</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>Lack of respect</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>Raising eyebrows – rolling eyes</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>Seldom acknowledged</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>Physical or mental symptoms</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>Pretending not to see</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>Frequent arguments</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>Cannot express feelings at work</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Discouraged</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Emotional exhaustion</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Job family interference</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Non-compliance standards</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Revalidation</td>
<td>2</td>
<td>25%</td>
</tr>
<tr>
<td>Body language betrays me</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Deliberate work slow downs</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Irregularity</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Job security - non-union</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Lack of knowledge co-workers</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Missing deadlines</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Notary job</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Not proud or satisfied</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Picked on or discriminated</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td>Toxic interactions between departments</td>
<td>1</td>
<td>13%</td>
</tr>
<tr>
<td><strong>TEAMWORK CLIMATE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Patient care supported</td>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>6. Physicians &amp; nurses well-coordinated team</td>
<td>6</td>
<td>75%</td>
</tr>
<tr>
<td>1. Nurse input well received</td>
<td>5</td>
<td>63%</td>
</tr>
<tr>
<td>3. Disagreement resolved patient-centered</td>
<td>4</td>
<td>50%</td>
</tr>
<tr>
<td>5. Questioning encouraged for understanding</td>
<td>3</td>
<td>38%</td>
</tr>
<tr>
<td>2. Difficult to speak up if problem patient care</td>
<td>2</td>
<td>25%</td>
</tr>
</tbody>
</table>
APPENDIX G:

SAFETY CLIMATE RESULTS

Definition

The perceived level of commitment to and focus on patient safety within a given unit.

Items

1. I would feel safe being treated here as a patient.

2. Medical errors are handled appropriately in this work setting.

3. I know the proper channels to direct questions regarding patient safety in this work setting.

4. I receive appropriate feedback about my performance.

5. In this work setting, it is difficult to discuss errors.

6. I am encouraged by others in this work setting to report any patient safety concerns I may have.

7. The culture in this work setting makes it easy to learn from the errors of others.

Intervention

When employees indicate that they don't perceive a good safety climate, they are messaging that they don't see a real dedication to safety in their unit. Safety climate is significantly related
to both caregiver safety (e.g. needle sticks, back injuries) and patient safety (e.g. bloodstream infections, decubitus ulcers) and so low safety climate is critical to address. During interventions, emphasise the importance of keeping lines of feedback and communication open. Let employees know that it is OK to bring errors to the attention of managers and clinical leaders. And, let managers and clinical leaders know that they need to be responsive to error reports and show appreciation for having errors brought to their attention.
# APPENDIX H:

## 2012 MAIN OR PEOPLE PULSE REPORT

<table>
<thead>
<tr>
<th>Index</th>
<th>% Top Box</th>
<th>% Fav</th>
<th>% Unfav</th>
<th>Diff. % Favor from 2011</th>
<th>Diff from all employees</th>
<th>Diff from others in Hosp in Area</th>
<th>Diff from others in State</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engagement Index</strong></td>
<td>40%</td>
<td>87%</td>
<td>2</td>
<td>8</td>
<td>-1</td>
<td>-2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Workforce Effectiveness Index</strong></td>
<td>27%</td>
<td>74%</td>
<td>4</td>
<td>9</td>
<td>-3</td>
<td>-5</td>
<td>-2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme/Item</th>
<th>% Top Box</th>
<th>% Fav</th>
<th>% Unfav</th>
<th>Diff % Favor from 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commitment</strong></td>
<td>30%</td>
<td>79%</td>
<td>2%</td>
<td>-7</td>
</tr>
<tr>
<td>1. Proud to work for ORG</td>
<td>42%</td>
<td>92%</td>
<td>0%</td>
<td>2</td>
</tr>
<tr>
<td>15. Recommend ORG as place to work</td>
<td>33%</td>
<td>75%</td>
<td>0%</td>
<td>-2</td>
</tr>
<tr>
<td>20. ORG job security equal to other healthcare orgs</td>
<td>30%</td>
<td>80%</td>
<td>0%</td>
<td>-7</td>
</tr>
<tr>
<td>35. People in dept go the extra mile to help ORG succeed</td>
<td>17%</td>
<td>58%</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Line of Sight</strong></td>
<td>43%</td>
<td>82%</td>
<td>2%</td>
<td>8</td>
</tr>
<tr>
<td>37. ORG good at providing info about performance on goals</td>
<td>33%</td>
<td>83%</td>
<td>0%</td>
<td>12</td>
</tr>
<tr>
<td>48. Know about department goals@</td>
<td>42%</td>
<td>75%</td>
<td>0%</td>
<td>7</td>
</tr>
<tr>
<td>50. Know about ORG Mission/Vision</td>
<td>42%</td>
<td>67%</td>
<td>8%</td>
<td>-1</td>
</tr>
<tr>
<td><strong>Enablement</strong></td>
<td>21%</td>
<td>67%</td>
<td>6%</td>
<td>5</td>
</tr>
<tr>
<td>Statement</td>
<td>17%</td>
<td>42%</td>
<td>25%</td>
<td>-39</td>
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<tr>
<td>--------------------------------------------------------------------------</td>
<td>-----</td>
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<td>-----</td>
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</tr>
<tr>
<td>2. ORG supports a healthy and balanced life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ORG provides resources necessary to work effectively</td>
<td>25%</td>
<td>75%</td>
<td>0%</td>
<td>4</td>
</tr>
<tr>
<td>10. I have enough say in how I do my job</td>
<td>8%</td>
<td>67%</td>
<td>0%</td>
<td>4</td>
</tr>
<tr>
<td>24. ORG effectively applying new technology to work</td>
<td>33%</td>
<td>67%</td>
<td>0%</td>
<td>-4</td>
</tr>
<tr>
<td>25. Efficient work procedures in dept@‡</td>
<td>8%</td>
<td>67%</td>
<td>0%</td>
<td>15</td>
</tr>
<tr>
<td>29. Usually enough people in department to do job right‡</td>
<td>17%</td>
<td>50%</td>
<td>25%</td>
<td>7</td>
</tr>
<tr>
<td>31. Department operates effectively as a team</td>
<td>8%</td>
<td>33%</td>
<td>0%</td>
<td>-2</td>
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<tr>
<td>33. Encouraged to suggest better ways to do work in dept</td>
<td>33%</td>
<td>75%</td>
<td>0%</td>
<td>-5</td>
</tr>
<tr>
<td>30. Integrity</td>
<td>30%</td>
<td>77%</td>
<td>4%</td>
<td>8</td>
</tr>
<tr>
<td>3. Comfortable raising ethical concerns to sup/mgmt</td>
<td>33%</td>
<td>75%</td>
<td>8%</td>
<td>-9</td>
</tr>
<tr>
<td>47. Trust in job being done by senior management</td>
<td>8%</td>
<td>50%</td>
<td>0%</td>
<td>-10</td>
</tr>
</tbody>
</table>