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Enhancing Nurses' Perceptions of Patient Safety Culture Through the Just Culture Model

Aida Solomon
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Walden University

College of Health Sciences

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Aida Solomon

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the review committee have been made.

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Walden University
2014

Abstract

Enhancing Nurses' Perceptions of Patient Safety Culture

Through the Just Culture Model

by

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MS, Oregon Health University, 2005

BSN, Linfield College—School of Nursing, 1996

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

December 2014

Abstract

An organizational culture of safety affects employees' attitudes, beliefs, perceptions, and values related to safe practice as well as their behaviors and level of engagement. The purpose of this project was to determine the influence of introducing the just culture model through staff engagement in an interactive workshop. A convenience sample of acute care staff were recruited for this 1-sample pretest and posttest project design. The Agency for Healthcare Research and Quality Hospital Survey on Patient Safety Culture instrument was used to measure safety culture perceptions on 7 dimensions pre and post intervention. For the theoretical framework, Ajzen's theory of planned behavior and Kantar's empowerment theory were used. Welch's *t* test results showed significant improvement in perception scores overall ($t = 2.7, p < 0.01$), with posttest mean scores ($\mu = 3.7$) higher than pretest mean scores ($\mu = 3.5$). The dimension-specific mean posttest scores were significantly higher on 3 of the 7 dimensions including teamwork ($t = 2.99, p < 0.05$), feedback and communication ($t = 2.14, p < 0.05$), and frequency of event reporting ($t = 2.31, p < 0.05$). Major implications for social change include reduction of preventable errors and iatrogenic events; creating a healthcare environment that is safe, fair, transparent, and reliable; creating organizational learning through evidence-based patient safety training; and promoting the use of perception surveys to measure and improve the culture in one's organization. The project may provide a road map for just culture implementation. Future qualitative and quantitative research should explore effects of a just culture on safety reporting patterns and specific events such reducing medication errors or risk-taking behaviors.

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Dedication

My DNP education accomplishment is dedicated to my mother, Hannah Mekuria, who always had encouraging words of wisdom throughout my doctoral journey. She has been part of my progress every step of the way. I appreciate all the late night coffees, the home cooked meals and staying up with me so I did not fall asleep without completing my assignments. She kept me excited and focused all the way through. Words cannot describe how grateful I am for her ongoing prayers, support, and love. Her dedication to her children is eternal; giving all of us the best in life. I am eternally honored to have her as my mother, my biggest cheerleader.

I also dedicate this to my grandmother, Debitu Tessema, for giving me the foundation and teaching me to always trust in God and who introduced me to what it means to be a social change agent and humanitarian. I acknowledge God, the constant center of my life, the alpha and the omega, for through Him everything is possible. He provides opportunities and in turn expects hard work, dedication, and paying it forward.

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Section 1: Overview of the Evidence-Based Project

Background

The Institute of Medicine (IOM) published *To Err Is Human: Building a Safer Health System* (Kohn, Corrigan, & Donaldson, 2000), which included studies that indicated inadequacies of patient safety culture measures in healthcare organizations. The publication detailed how a culture of safety can reduce preventable medical errors that were determined to cause between 44,000 and 98,000 deaths per year in United States (Kohn et al., 2000). Studies have shown that organizational responses to errors such as establishing committees, changing policies, and scrutinizing individuals for adverse events have not proven adequate without addressing the contributing human factors (Sirota, 2005). Human factors such as fatigue, communication issues, stress, fear of speaking up, and blame and shame play an important role in lack of error reporting and negative patient outcomes (Anderson & Webster, 2001; Gorini, Miglioretti, & Pravettoni, 2012). An organizational safety culture that has a top-down support for error reporting and resource allocation for system improvements promotes error and risk reduction (Sirota, 2005). Studies have shown a correlation between an organization's safety culture, including safety subcultures within the organization, and risk reporting behaviors (Sirriyeh, Lawton, Armitage, Gardner, & Ferguson, 2012). Therefore, a culture of safety that fosters consistency, transparency, trust, and open communication is imperative for an organization to deliver highly reliable and quality care.

A *just culture* model offers a unique framework where hospital leadership and employees share the responsibilities for maintaining safe practices. The foundation of a

culture of safety is trust, yet health care leaders often struggle with clearly articulating and modeling such a culture of trust within their organization (Gorini et al., 2012). In a just culture, shared responsibility is established through trust, open communication, and transparency. Organizational commitment to a just culture involves acknowledgment that in a high risk and complex environment, employees require highly reliable systems in order to minimize adverse events. In a just culture environment, employees are empowered to take responsibility and accountability for their actions, which reduces the level of risk taking behaviors (Marx, 2001). Together, organizational commitment to high reliability and employee accountability make up the just culture model, adapted by many healthcare organizations to improve the safety and quality of patient care (Khatri, Brown, & Hicks, 2009).

This section of the paper addresses current issues in developing a culture of safety in healthcare and introduces the study, which uses the just culture model as a framework for an urban medical center patient safety structure. The implementation of a just culture model interactive workshop is essential for employees to gain the knowledge and tools necessary to apply the just culture model for patient safety into everyday practice. Implementation of the model will require changes in the organization's commitment to foster trust and employees' perceptions and behaviors toward embracing the core concepts. This section presents the evidence that supports the need for implementing the project, the purpose and goals of the project, the implications of the project for social change, and definitions of related terms.

Problem Statement

A culture of safety focused on individual blame has devastating consequences in a complex healthcare system where errors are known to occur. The IOM report *To Err Is Human* emphasized that an organization's culture of safety greatly impacts employee behavior in reporting incidents or near misses and taking accountability for behavioral choices (Kohn et al., 2000). An organizational blame or punitive based culture creates feelings of fear and shame and often results in medical error underreporting (Gorini et al., 2012; Kharti et al., 2009). The IOM report also provided evidence that a punitive culture, practiced in many healthcare organizations, discourages error reporting, making it challenging for organizational leaders to correct systems and mitigate risks (Kohn et al., 2000). Therefore, the error reporting pattern may be an indicator of whether or not the organization's safety culture promotes open communication and transparency.

The IOM report regarding the lack of adverse event reporting practices is supported by research that showed that between 50% and 96% of adverse events and near miss events are underreported each year (Sarvadikar, Prescott, & Williams, 2010). Studies have shown healthcare professionals who encounter errors on a daily basis report significantly lower numbers of those errors and express fear as the major barrier to reporting (Legg, Dempsey, & Aaron, 2013; Stavrianopoulos, 2012). Incidents or errors that were reported also tended to be major events and errors that could not be concealed or externally required to be reported (Morris, 2011). Major or serious adverse events that were required to be reported to the Federal Drug Administration (FDA) and the Joint Commission (TJC) did not provide enough data for analysis, trending, and prioritization

of high risk issues (Sorra et al., 2008). Lucian Leape, a leader in patient safety, stated that organizational awareness of risks from near miss and adverse event data is hindered when employees are blamed for their mistakes (Marx, 2001; Rideout, 2013). Studies support Leape's statement, showing that fear of being blamed was present and equally apparent irrespective of individuals' position and rank in the organization. Fear of blame held greater power in deterring staff from reporting events than the fear of being punished (Gorini et al., 2012). Overall, a punitive culture led to perceptions of shame and fear and underreporting of near misses and adverse events, impeding the organization from implementing prevention measures to mitigate further errors (Morris, 2011).

It is imperative for an organization to assess employees' perceptions of safety culture continually in order to identify barriers to employee participation in patient safety activities and provide targeted interventions. Employee perception of safety culture should be measured every 1 to 3 years, as culture change takes time, especially when unacceptable behaviors have become the norm (Sheard, 2014). A study measuring perception of safety culture showed that 40% of surveyed respondents believed that error reports would become part of their personnel file, 33% perceived that errors would be held against them, and 22% felt that employees were treated unfairly for mistakes (Sorra et al., 2008). In another study, patient safety scores were found to be strong predictors of error reporting behaviors (Kagan & Barnoy, 2013). There are key categories in safety culture survey assessments that allow organizational leaders to gauge employee willingness to report errors and prevent risk behaviors. The key categories are overall patient safety, nonpunitive response to error, communication openness and shame,

teamwork, feedback about errors, and senior management actions in promoting patient safety (AHRQ, 2004). El-Jardali, Dimassi, Jamal, Jaafar, and Hemadeh (2011) stated that a culture of safety implementation must have a top-down approach and culture changes are not sustainable without senior leadership engagement. Positive perception of safety culture needs to be equally visible among senior leaders, managers, and front line employees in order to maintain an environment of trust and shared accountability for safe practices (Mantynen et al., 2014).

In the IOM publication *To Err Is Human*, a challenge was put forth to senior leaders to conduct a hard analysis of their safety culture and change their paradigm on error management and prevention (Bogner, 2009). The follow up publications from the IOM, including *Keeping Patients Safe: Transforming the Work Environment of Nurses*, provided recommendations to promote the delivery of safe patient care (IOM, 2010). Studies have been published that support IOM's recommendation of a systems approach to error management to ensure prevention of future errors along with less focus on individual punishment, which may impede organizational learning and improvement (Sorra et al., 2008). In addition to the IOM studies, mandatory requirements have been established by TJC, acknowledging the need for restructuring the safety culture within organizations through implementation of programs and systems specifically focused on enhancing and measuring patient safety climate and culture (The Joint Commission, 2009).

Despite IOM's published recommendations and the requirements from TJC, healthcare facilities continue to struggle to establish a culture of safety that provides an

environment that is just and fair (Kohn et al., 2000). Although it is indicated in current literature that a safety culture should be just, fair, and built on the principles of high reliability and accountability, research showing outcomes of such culture is limited. As multiple organizations are moving toward a just culture model, scientific research on evidence-based models for its implementation and education is essential. The gaps identified in current research related to just culture support the importance of this project in which a validated safety perception tool was used to measure the impact of the introduction of the just culture model on employee safety perception scores.

Purpose Statement and Study Objectives

The purpose of this project was to explore the influence of a staff engagement in just culture model interactive workshop on their safety culture perception. The safety culture perception dimensions included in this study were overall perception of safety, nonpunitive response to error, teamwork, communication openness, feedback and communication, hospital management support for patient safety, and frequency of event reporting, measured pre and postintervention. The members of the medical center senior leadership were in support of this project.

The senior leadership of the medical center, as part of the strategic plan, established a goal to implement and promote just culture principles to create an environment where employees feel safe to report safety concerns or issues (C. Lopez, personal communication, September 9, 2013). This project was conducted after the strategic plan was published, providing the necessary medical center director support for this culture change. Research showed that collecting information on perceptions of

patient safety culture is a best practice for leadership to understand the safety culture that is practiced on a daily basis and ensures that highly reliable systems are in place (Durbin, Hansen, Sinkowiz-Cochran, & Cardo, 2006 ; Legg et al., 2013). Research has also indicated that culture perception scores may indicate employees' level of engagement in expected safety practices such as error reporting, effective communication and teamwork, prevention of risk behaviors, and adapting to technology and systems that improve safe practices (McGuire et al., 2013; Sine & Nothcutt, 2008). Therefore, it is imperative to establish an ongoing system for safety culture assessment for continual organizational learning and improvement.

The Agency for Healthcare Research and Quality (AHRQ) developed the safety culture perception questionnaire used in this project, which addresses the just culture factors mentioned above. I developed a just culture workshop that was provided to staff as part of this project. The interactive just culture workshop was designed as a comprehensive and interactive learning session emphasizing senior leadership support, key concepts of just culture, principles of errors and human behaviors in healthcare, and essential tools for practicing just culture. The interactive workshop was designed to help introduce new concepts to employees during the initial stages of the culture change journey. The project measured employees' perceptions of safety culture before the workshop intervention and 2 weeks after the intervention. The 2 week gap between implementation and measurement was intended to allow participants time to evaluate how the just culture model applied within their work area, as this activity was encouraged during the just culture interactive workshop. It was critical to the project that the

participants could relate the information provided in the just culture model interactive workshop to the environment in which they currently work. The outcomes of the study were useful in the evaluation of the interactive workshop for future use as a training tool for the organization.

The study had three main objectives: (a) to explore acute care unit clinical staff perceptions of patient safety culture at an urban medical center, pre just culture workshop intervention (Time 1) and 2 weeks postintervention (Time 2); (b) to compare the difference in the total perception scores between time 1 and time 2; and (c) to explore differences in scores for each of the selected dimensions for the study—nonpunitive response to error, teamwork, communication openness, feedback and communication, hospital management support for patient safety, and frequency of event reporting—between time 1 and , 2.

Major organizations such as the IOM, the AHRQ, and TJC have encouraged a culture of safety driven by transparency, openness, and accountability from all employees and organizational leaders. The just culture model provides a framework for a culture that is driven by transparency, openness, and accountability. Implementing culture change in an organization may present many challenges, but it is not impossible.

Project Questions

Based on the literature review, it was expected that the project would result in a positive change in employee patient safety perception scores from the post Just culture model interactive workshop intervention as compared to the preintervention results. A just culture safety environment is believed to increase positive perception of psychological safety and safety culture, which empowers staff to practice safe behaviors

and increase risk awareness of their surroundings (Marx, 2001). The project addressed these questions:

1. Will patient safety culture perception scores show a significant difference in the overall perception of safety after participation in a just culture model interactive workshop?
2. Will patient safety culture perception scores show a significant difference on the safety dimension of nonpunitive response to error after participation in a just culture model interactive workshop?
3. Will patient safety culture perception scores show a significant difference on the safety dimension of teamwork after participation in a just culture interactive workshop?
4. Will patient safety culture perception scores show a significant difference in the safety dimension of communication openness after participation in a just culture model interactive workshop?
5. Will patient safety culture perception scores show a significant difference in the safety dimension of feedback and communication about errors after participation in a just culture model interactive workshop?
6. Will patient safety culture perception scores show a significant difference in the safety dimension of hospital management support for patient safety after participation in a just culture model interactive workshop?

7. Will patient safety culture scores show a significant difference in staff's perceptions in the safety dimension of frequency of event reporting after participation in a just culture model interactive workshop?
8. Will patient safety culture total scores across the dimensions show significant increase after participation in a just culture model interactive workshop?

The hypotheses were as follows:

- Ha1: There is a significant increase in the perception toward overall patient safety culture.
- Ha2: There is a significant increase in the perception toward nonpunitive response to error.
- Ha3: There is a significant increase in the perception toward teamwork.
- Ha4: There is a significant decrease in negative perception toward communication openness.
- Ha5: There is a significant increase in the perception toward feedback and communication about errors.
- Ha6: There is a significant increase in the perception toward hospital management support for patient safety.
- Ha7: There is a significant increase in the perception of frequency of error reporting.
- Ha0: There is no difference in perceptions of safety in all tested dimensions above pre and post participation in a just culture interactive workshop.

Evidence-Based Significance and Relevance to Practice

The literature review revealed that there has been minimal research conducted on outcomes of implementation of the Just culture model as a patient safety framework, including the relationship of model implementation with employee perception of safety culture. The study is significant to nursing because the findings will contribute to understanding the impact on nursing practice of implementing a just culture model. The IOM (2010) recognized the nursing profession as being the largest workforce in healthcare whose members can make a significant impact as leaders of change to prevent harm associated with healthcare errors. Acute care nurses at the bedside have the ability to determine whether a negative outcome has occurred, and to detect and report events prior to harm reaching the patient (Despins, Scott-Cawiezell, & Rouder, 2010). One of the major influences on a nurse's ability to detect and respond to unexpected events is a strong patient safety culture.

Reluctance to report adverse events stems from an organizational culture that does not promote adverse event recognition and reporting. The literature suggested that among healthcare providers, nurses feel more guilt and embarrassment about reporting an error (Sarvadikar et al., 2010). A study showed that nurses experienced on average 19.5 medication errors in a 3-month period but only reported to their leadership 1.3 errors (Joolae, Hajibabae, Peyrovi, Haghani, & Bahrani, 2011). A study done by Espin et al. (2007) showed that staff only reported about 26% of errors they identified. Nurses also voiced hesitance to report errors made by persons working in other health care disciplines. These studies indicate that although nurses were aware of errors in the work

environment, they may not have felt empowered and supported to report to their leadership. The just culture model provides an environment where error reporting is positively acknowledged and promoted.

A culture that balances accountability takes a nonpunitive approach to human error, encourages continuous improvement, and fosters error recovery and organizational learning (Marx, 2001). Nurses need to feel supported and empowered in their practice environments, as studies have shown a positive correlation between positive safety culture perception and team performance (Bradley, Postlethwaite, Koltz, Hamdani, & Brown, 2012). Teamwork is essential for nurses to engage in error and risk prevention. Although limited, nurses' role in error recovery is beginning to emerge in the scientific literature. Error detection theory indicates that harm occurs when nurses are not able to detect warning signals in a timely manner (Despins et al., 2010).

Error prevention requires a nurse's ability to detect errors early, intervene promptly, and feel empowered to speak up in front of other team members. Organizations need to develop effective training modalities that address the cognitive complexities and decision-making skills necessary for execution of timely interventions when risks are identified to prevent patient harm (Henneman, Marquard, & Fisher, 2012). The just culture model, according to Marx (2001), emphasizes the importance of providing adequate resources and support at the point of care in order for nurses to increase their situational awareness or ability to detect errors before harm reaches the patient.

Magnet designation requires demonstration of continuous nursing excellence in delivering safe and quality care. According to Tinkham (2013), a just culture

environment is essential for the successful implementation of the magnet model. The just culture model provides an environment where components of the magnet model can be sustained, such as shared governance, transformational leadership, continuous improvement, and empowerment (Walker, Esquieres, Fowler, & Tennaro, 2013). A major element that the just culture model and the magnet model share is structural empowerment. Kantar's empowerment theory indicates that having advancement and professional growth opportunities with support from leaders creates an empowered workforce (Yang, Liu, Huang, & Zhu, 2013). Structural empowerment provides an environment where teamwork can flourish through encouraging employees to become more accountable (Tinkham, 2013).

Studies have found a correlation between nursing empowerment, professional practice environment, safety culture, and a nurse's commitment to the organization (Tigert & Laschinger, 2004; Yang et al., 2013). A study conducted with intensive care nurses demonstrated the positive correlation of empowerment to having better mental health, the ability to function as a team member, and less emotional exhaustion (Tigert & Laschinger, 2004). A study examining the relationship between empowerment and professional practice environment characteristics, and the relationship between empowerment and patient safety culture found that empowerment was positively correlated with both variables. Professional practice environment characteristics that were strongly correlated with empowerment included use of the nursing model and physician-nurse relationships (collaboration). The patient safety characteristics that strongly correlated with empowerment were found to be leadership support, informal power, and

opportunities for growth (Armstrong & Laschinger, 2006). The commonalities between these studies inform leadership of the importance of empowerment, visible leadership support, opportunities for professional growth, and informal power to participate in change. Just culture provides a just, fair, and safe environment for nurses to feel empowered to improve their professional growth and involvement in the organization.

Implications for Social Change in Practice

The project's implications for social change are vast, including creating awareness of the benefits of just and fair safety culture among healthcare workers and hospital leaders; providing evidence-based patient safety training; and promoting the use of perception surveys or questionnaires as measurement tools to gauge the culture in one's organization. All of the activities listed above are important in order to yield improved patient outcomes. According to IOM, high numbers of medical errors are preventable; thus, there is a need for a national change in how patient safety is addressed in the delivery of healthcare (Kohn et al., 2000). The project can be used as a catalyst to increase research in the area of just culture and its relationship with improved safety measures. Safety measures such as reduction of hospital-acquired infections (HAIs) continue to be problematic. The Office of Disease Prevention and Health Promotion (ODPHP) indicate that 1 in 25 inpatients suffer from HAIs (ODPHP, 2009). A Just culture model could enhance compliance with evidence-based practices that have shown to reduce preventable adverse events such as HAIs. The Just culture model will promote shared accountability between healthcare workers and hospital leaders to adhere to policies and procedures, thereby addressing global and national issues that are leading to

preventable patient harm. Statewide efforts related to the adaption of the just culture model and healthcare are described below.

In recent years, there have been statewide just culture initiatives that illustrate the important social change that can emerge from positive patient safety culture in healthcare systems and the community as a whole. Preventable medical errors cause between 44,000 and 98,000 U. S. deaths per year; therefore, statewide initiatives such as the ones described below are critical to provide safer care (Kohn et al., 2000). North Carolina and Minnesota are two states that are exemplary in their approach to implementing statewide initiatives for the adoption of a just culture Model in healthcare systems. The statewide initiatives have demonstrated the importance and the feasibility of impacting social change on a larger scale by building a statewide just culture of fairness, trust, and accountability.

North Carolina has provided the path and lessons learned for other states to implement just culture at a state level in order to influence social change related to safe healthcare practices. The North Carolina Hospital Association created the North Carolina Center for Hospital Quality and Patient Safety in 2004 in order to promote high-quality hospitals, fair and just culture, evidence-based practice, and organizational learning. The North Carolina state collaborative allows healthcare facilities to have access to national experts in just culture implementation at a reasonable cost, to participate in ongoing training, to have access to resources, and to hold collaborative meetings between facilities (NCHA, 2012).

Similar to the North Carolina initiative, in 2003, the Minnesota Hospital Association, the Minnesota Department of Health, and the Minnesota Medical Association established the Minnesota Alliance for Patient Safety (MAPS) to lead a statewide initiative for the implementation of a just culture model across healthcare facilities. MAPS partnered with several healthcare facilities in Minnesota to provide guidance and resources in establishing a just culture. To bring about an effective patient safety culture change, MAPS developed processes to support healthcare organizations in their journey toward a just culture model. In the initial steps, MAPS created a process for social awareness of the just culture model. The statewide efforts of MAPS resulted in just culture awareness at senior leadership, management, and administrative staff levels; provided education and training for senior leadership and clinical leaders; developed just culture champions; and aligned organizational policies with just culture principles. Healthcare facilities implemented a standardized algorithm for error investigation in order to provide a fair, objective, and consistent way of responding to errors; as well as embedding just culture principles in performance improvement efforts such as hand hygiene (Page, 2007). Both state initiatives have provided lessons learned from their healthcare organizations' combined efforts for spreading and maintaining the journey toward just culture.

In the initial stages of developing this DNP project, it was understood that in order to attain a social change toward a just culture model at an organizational level, there must be senior leadership buy-in and ownership. Culture change requires leadership to establish just culture awareness, guidelines, policies, and systems conducive to sustaining

a just culture model as part of daily work practices (Marx, 2001). In preparation for this project, I provided 20-minute presentations at each of the key medical center committees, physician meetings, and nurse manager meetings on just culture objectives and concepts to gain ownership and buy-in for this important culture change. This project was supported by the medical center director and other senior leadership. According to the quality and performance director, just culture implementation is one of the organization's strategic plan initiatives, is part of the performance measures for the medical center service chiefs/directors, and is intended to increase the ownership of implementation at the service level (C. Lopez, personal communication, September 9, 2013). Leadership buy-in demonstrated organizational readiness to introduce the just culture model to employees where the culture needs to be embedded to yield meaningful outcomes.

In order to produce sustained social change related to a patient safety culture, interventions should focus at the microsystem level of the organization, where care delivery occurs (Sammer & James, 2011). Employees working at the bedside and delivering patient care need to be supported and empowered to adapt the just culture model. Empowerment has been shown to be positively correlated with increased job satisfaction and less turnover, where safety issues are more likely to be reported and mitigated (Bashaw & Lounsbury, 2012). The social change implications of just culture are considerable for healthcare providers and the patients they serve. A just culture environment supports the professional development of nurses by creating a framework for collaboration and shared decision making (Bashaw & Lounsbury, 2012). An environment of empowerment, accountability, commitment, and trust leads to safe and

quality care (Mayer & Cronin, 2008). A cultural change of this magnitude at the microsystem level where care is delivered can lead to major reduction in preventable errors (Kohn et al., 2000).

Definitions of Terms

There are several key terms and concepts to understand when studying just culture. The following operational definitions will be used in this project:

Adverse event: Incident or injury associated with health care or services provided (Tran & Johnson, 2010). This term is interchangeable with the term *incident*. These events may or may not have resulted in patient harm.

At-risk behavior: Practice drift toward unsafe habits such as circumventing policies and processes, and inappropriately justifying risks associated with rule breaking (Marx, 2001).

Blame culture or punitive culture: Defined as the set of organizational norms and attitudes that discourages speaking up when an adverse event is recognized due to fear of punitive actions (Gorini et al., 2012).

Close calls or near misses: Events that could have resulted in patient accident, injury, or illness that was prevented by chance or nursing interventions (NCPS, n.d.).

Communication: The effective exchange of critical information among interdisciplinary teams, healthcare staff, and leadership (Polito, 2013).

Culture: The integrated pattern of symbols, rituals, values, and beliefs that are unique to a particular group, system, or organization (Kaufman & McCaughan, 2013).

Evidence-based care: Care based on scientific evidence and clinical expertise that is patient centered, resulting in positive patient outcomes (Wenstock, 2013).

Environment: Includes the factors, objects, or conditions that are present within the surroundings of patient care delivery such as visual and auditory stimulation, temperature, and objects or equipment (Frankel, Leonard, Simmonds, Haradan, & Vega, 2009).

Error: Failing to complete an action as intended or using a wrong plan (commission) and/or failure to carry out an intended action (omission), which could result in unintended negative outcomes (Frankel et al., 2009; NSPS, n.d.).

Harm: Temporary or permanent damage that results from physical or psychological injury of a person (NCPS, n.d.).

Human error: Unintended action or an omission of an action that caused an adverse outcome. “When there is general agreement that the individual should have done other than what they did, and in the course of that conduct inadvertently causes or could cause an undesirable outcome, the individual is labeled as having committed an error” (Marx, 2001, p. 6).

Human factors: The relationships that need to be considered in designing processes to ensure optimal interface between the process or tools and humans using the processes and tools. An example of a strong human factors engineering process is the use of forced functions not allowing individuals to skip steps in processes (Frankel et al., 2009).

Just culture model: Provides an environment of psychological safety where staff members feel empowered to speak up during risky situations to prevent harm and where near miss and error reporting behaviors are incentivized and not punished (LaSala &

Bjarnason, 2010). When there is a just culture, staff understand the need to take accountability for their own behavioral choices and that reckless behaviors may result in punishment. In a just culture, an organization strives to learn from mistakes and takes responsibility to build systems and processes designed to prevent adverse events (Marx, 2001).

Leadership: An individual influence on the behaviors and actions of others that produces the desire of others to follow with or without the use of authority (Ellis & Abbot, 2013).

Near miss: A potentially adverse event that was intercepted and prevented in a timely manner prior to producing patient harm (NCPS, n.d.).

Organizational culture: A “complex mixture of different elements that influence the way things are done as well as the way things are understood, judged and valued” (Kaufman & McCaughan, 2013, p. 52).

Patient outcome: The measure of health and well-being of patients associated with medical care. *Patient-centered care* is the provision of individualized and holistic care congruent with patients’ needs and values and with shared decision making among patients and healthcare professionals.

Patient safety: Being free from harm or risk (NCPS, n.d.).

Patient safety culture: An environment that includes shared values, beliefs, norms, and priorities related to safe practices among an organization’s leadership and employees (Stavrianopoulos, 2012).

Preventable events: Events that are due to errors or system failures leading to previously unnecessary or unplanned services and negative patient outcomes. These events are preventable when they could have been mitigated prior to causing error (Goldfield, Kelly, & Patel, 2012).

Psychological safety: A perception one has regarding interpersonal risk taking within a defined work group. Risk taking includes reporting an event, acknowledging a mistake, or seeking feedback. When there is a perception of psychological safety, staff members feel confident that they will not feel embarrassment, rejection, or punishment for speaking up. There is open communication, constructive disagreements, increased contribution, and sharing of critical issues affecting patients (Bradley et al., 2012).

Quality of care: Providing evidence-based care that is patient centered and delivered safely.

Reckless behavior: The third behavior that occurs when an employee purposefully disregards the rules and processes, knowing the risks are substantial (Marx, 2001).

Sentinel events: Unexpected events leading to significant physical or psychological injury, loss of limb(s) or function, and/or death to staff, visitors, and vendors occurring within the healthcare facility (TJC, 2012).

System failures: Failures that occur due to system design, human factor engineering failures, and/or organizational failures (NCPS, n.d.).

Assumptions of the Project

For this project, it was assumed that participants were willing and engaged in the intervention process and, additionally, that the participants were willing to provide honest and accurate responses to the pretest and posttest questionnaires administered. It was

assumed that employees had basic patient safety knowledge regarding error reporting. The assumptions also included management support for employee participation and application of information learned during the interventional workshop in their work areas.

Limitations of the Study

The design of this quasi-experimental one group pretest/posttest project posed limitations including the use of a convenience sample and lack of randomization. The generalizability is limited because the targeted group for the study was staff members working on the acute care units within the urban medical center. The small sample size (33 participants, a 27% participation rate) for the pretest was anticipated due to potential unwillingness of nurses to participate in the project due to fear of disclosure of their own safety culture views, including perceptions regarding managers and other team members (Burns & Grove, 2009).

Summary

A positive culture of safety can reduce preventable medical errors. An organizational culture that supports individual blame creates feelings of fear and shame and often results in an increased number of medical errors and underreporting of errors. Therefore, an organization must establish a safety culture that has top-down support for error reporting and resource allocation for system improvements that promote error and risk reduction. Despite IOM's published recommendations and requirements from the TJC, healthcare facilities continue to struggle to establish a culture of safety that provides an environment of just culture to support employee empowerment and accountability in order to increase safety and reporting behaviors. The gaps identified in current research, lack of just culture model implementation and outcome studies supported the importance

of this project. The purpose of this project was to explore the influence of a just culture model interactive workshop on employee safety culture perceptions measured pre and postintervention. Limitations were explored including recruitment of a convenience sample, having no control group, and a small sample size. The implications for nursing practice are significant, as the nursing profession is the largest work force in healthcare whose members can act as leaders of change to prevent harm associated with healthcare. North Carolina and Minnesota are two states that have demonstrated an impact on social change on a larger scale for just culture model implementation in healthcare facilities statewide. The following section further explores the existing literature on patient safety models, focusing on the Just culture model and the theoretical framework that will be used in implementing a Just culture model in the project organization.

Section 2: Literature Review

Introduction

Adverse events occur in healthcare due to the complexity of care, environmental factors, communication failures, and failure in interactions of humans with technology (Henneman et al., 2012). Within healthcare, it is essential to have clear definitions and expectations regarding organizational values and safety culture. Executing leadership functions with vague or unclear policies and structure leads to staff frustration, disengagement, and poor behavioral choices. The literature review for this project begins with a clear definition of patient safety culture. With a clear definition, exploration can begin into the core concepts and characteristics of patient safety culture that drive organizational practices. The purpose of this project was to explore the influence of a Just culture model interactive workshop on employee safety culture perceptions. In this section, existing literature is explored to clarify the impact of Just culture core concepts on error reduction. It is imperative to understand current research pertaining to patient safety culture and to evaluate the evidence before implementing a culture change to improve safety practices. Literature is explored to identify effective patient safety culture, recommendations for Just culture model implementation, and the impact of safety culture on the work environment, errors, incident reporting patterns, and employee behaviors. The theoretical model used to deliver the Just culture model education intervention is explained.

An extensive literature search was conducted using the Cumulative Index of Nursing and Allied Health Literature (CINAHL), MEDLINE, and PUBMED databases through the Walden University library. Research articles were limited to peer-reviewed

articles published between 2005 and summer 2014. Research articles and systematic reviews related to safety culture were identified using combinations of various key words including *patient safety*, *error recognition*, *nurse role*, *patient safety*, *just culture*, *organizational culture*, *just culture algorithm*, and *adverse events*. In addition, the National Center for Patient Safety (NCPS), World Health Organization (WHO) AHRQ, IOM, and TJC websites were searched to gain information regarding current trends, measurement tools, and research opportunities related to patient safety culture.

General Literature

Patient safety culture is driven by individual and shared values, beliefs, norms, and priorities as they relate to safe practices among organizations' leadership and employees (Stavrianopoulos, 2012). National institutions such as the IOM, TJC, NCPS, and AHRQ have been instrumental in shaping and improving patient safety culture across U. S. hospitals. It is known that healthcare organizations lack systems that allow for identifying and addressing weaknesses prospectively to prevent further adverse events, which claim an estimated 98,000 lives each year in the United States (Kohn et al., 2000). Similarly, reports published prior to the publication of the IOM study in 1999 supported the phenomenon of patients experiencing high rates of iatrogenic injuries (Liang, 1999).

Healthcare organizations have learned about patient safety from other industries, especially aviation. In the 1980s, large-scale disasters in industries such as railway and nuclear power plants started an initiative to create principles for safe cultures. There was minimal research related to patient safety or medical errors (Vincent, Stanhope, & Crowley-Murphy, 1999); slowly, organizations began to understand that the complexity

of an organization increased the probability of having more system failures. Accidents were reviewed as multifactorial chains of events rather than being regarded as having a single cause. (WHO, n.d.). According to Leape, a patient safety expert, healthcare organizations were still attributing medical errors to increased need for training and motivation of healthcare workers and not perceiving the causes as multifactorial. Leape suggested that errors should be viewed from a human-systems interface point of view that recognized the fallibility of healthcare providers and the need to support the practice environment with reliable systems (Vincent et al., 1999). Healthcare began a shift in error management processes, understanding the relationships between patient safety and adverse events. The concepts to reduce variation in quality of care standards in healthcare settings further contributed to the patient safety movement (Vincent et al., 1999). James Reason, considered the intellectual father of the patient safety field, was a leader in shifting the healthcare paradigm to view errors as failures in system layers and not as individual errors (WHO, n.d.).

In the 1990s, healthcare systems began to acknowledge that errors do occur and began to develop systems thinking in error prevention. Systems thinking theory using information about human behaviors and capabilities for redesigning or building systems and technology was beginning to emerge (NCPS, n.d.). However, it was the IOM publication that sparked a national movement toward improving healthcare quality and safety (Wears et al., 2000). The commitment to developing a safety culture has had a significant impact on saving lives, as more people die each year from medical errors (Sammer, Lykens, Singh, Mains, & Lackan, 2010). Organizational commitment to safety

reflects an acknowledgment that in high-risk and complex environments, employees require highly reliable systems in order to minimize adverse events and foster positive organizational safety cultures, the delivery of quality and safe care, management of errors, and organizational learning (Kagan & Barnoy, 2013; Starvrianopoulos, 2012).

Multiple scientific research studies have shown that adverse events occur in healthcare due to the complexity of care, environmental factors, communication failures, and failure in interactions of humans with technology (Elliott, Page, & Warrall-Carter, 2012; Henneman et al., 2012). Cultural and nontechnical system failures such as breakdowns in communication were cited as major contributory factors in medical errors (Garon, 2012; Khatri et al., 2009). Factors that lead to miscommunication or no communication include workplace disruptive behaviors, lack of interprofessional collaboration, and lack of empowerment (Garon, 2012). Effective methods have been identified to improve communication, teamwork, and overall safety climate perception such as team training, hands-off communication tools, and interdisciplinary patient rounding (Weaver et al., 2013).

In a just culture, employees are empowered and feel psychologically safe to report adverse events and near misses (Morris, 2011). An organization committed to safety fosters an environment of open communication, trust, continuous improvement, and adverse event and near-miss reporting without fear of reprisal. The Just culture model will be further discussed in the following section.

Specific Literature

Just culture Model

In recent years, healthcare organizations have begun adopting just culture as a critical framework for improving the safety and quality of patient care (Khatri et al., 2009; Marx, 2001). Many healthcare organizations have yet to implement just culture as a framework. David Marx, an expert in human error management and human factors engineering, emphasized that just culture is not a blame-free but an accountability-rich culture. Just culture establishes accountability from both employees and leadership. Just culture facilitates appropriate investigation of adverse events in the context of human behavior including human error, at-risk behavior, and reckless behavior (Marx, 2001).

To promote organizational learning, a patient safety paradigm needs to shift toward creating opportunities to learn from errors and educating health care staff on practice and situational awareness (Rideout, 2013; Westphal, 2009). Organizations that have adopted just culture principles are able to manage unanticipated events successfully by being proactive in failure identification and mitigation through analyzing the root cause (Despins et al., 2010). In a just culture, there needs to be transparency concerning the expectations of organizational responsibility for system failures and employee accountability for behavior choices (Marx, 2001).

The just culture model (see Figure 1) has the following key components:

- Risks should always be anticipated due to system failures, human errors, decreased sense of risk, or practice drift
- Everyone in the organization is accountable for his or her actions

- Organizational values and mission should drive patient safety
- The just culture algorithm should be used to objectively and fairly investigate near-miss or adverse events
- Appropriate management of three behaviors associated with errors: human error, at-risk behavior, and reckless behavior
- Speak-Up tool should be used to communicate concerns and prevent risk
- Leadership support for creating a psychologically safe environment in order to promote staff members' intentions to speak up, report near-miss and adverse events, and be accountable for their own behavioral choices (Marx, 2001).

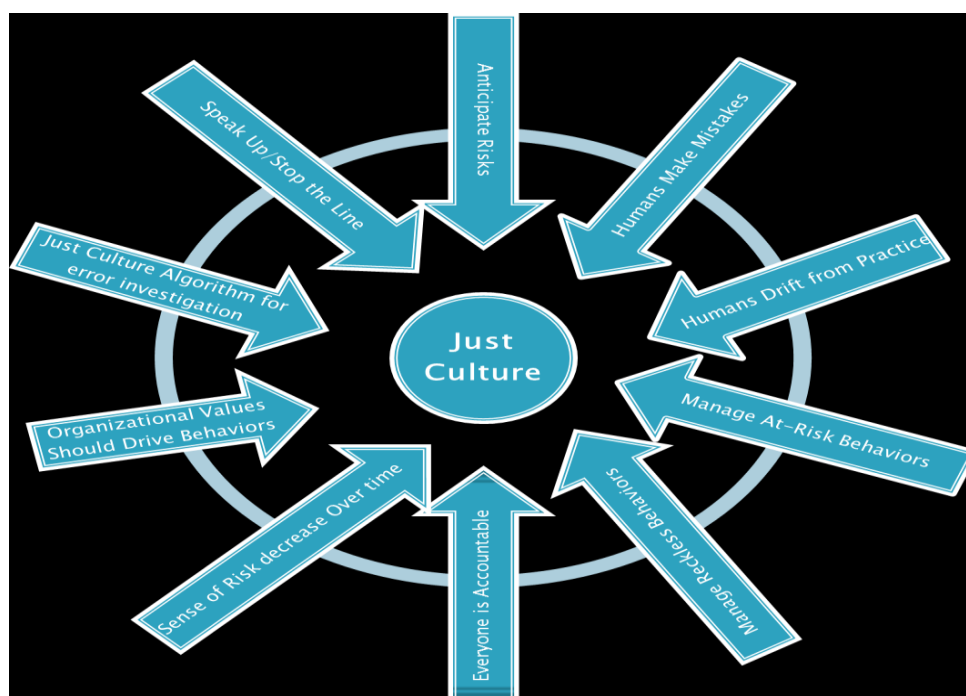


Figure 1. Just culture model core concepts. From *Patient Safety and the “Just culture”*. A Primer for Health Care Executives, by D. Marx, 2001, retrieved from <http://www.safer.healthcare.ucla.edu/safer/archive/ahrq/FinalPrimerDoc.pdf>

The WHO, the American Nurses Association (ANA), and the IOM have endorsed the concepts of just culture to prevent patient harm in the healthcare environment (ANA, n.d., WHO, n.d.). Just culture is a framework for patient safety in which both leaders' and staff members' accountability is expected and practiced (Westphal, 2009). Just culture promotes transparency among leadership, employees, and customers or patients. In a just culture environment, employees feel safe to disclose medical errors, allowing the organization to learn from and prevent similar occurrences (Marx, 2001). Transparency is possible as long as organizational leaders accept that adverse events will occur in a complex healthcare environment and believe that open communication is the key to creating accountability and trust (Bashaw & Lounsbury, 2012). The just culture Model promotes transparency through the use of a Just culture algorithm for event investigation. Transparency builds an environment of trust where employees perceive they can speak up to prevent risks and report adverse events to ensure positive outcomes for patients (Marx, 2001).

Four main concepts of Just culture are as followed: establishing a psychologically safe environment, use of the Just culture algorithm, speaking up to prevent risks, and event reporting. These concepts should be referred to as a "Just culture bundle," as they are all essential for successful implementation of Just culture. These are further explained in the upcoming paragraphs.

Psychological Safety

Employees' perception of psychological safety is a driving factor in employees' attitudes and behavioral decisions. A brief description of psychological safety and impact on safety behaviors is provided. It is organizational leadership's responsibility to create a

psychologically safe environment for employees. Without a psychologically safe environment, procedures such as hands-off communication and surgical timeouts designed to improve communication are more likely to break down. TJC reported that the number one cause of sentinel events such as wrong-site surgery was a lack of clear communication (TJC, 2012). Psychological safety is threatened by perceptions of consequences including rejection or punishment from openly expressing ideas, opposing views, beliefs, and feedback to peers or team members (Bradley et al., 2012).

Psychological safety influences individuals' behavioral choices (Singh, Winkel, & Selvarajan, 2013). In one study, team psychological safety was found to be related positively to reported errors ($\beta = 0.28, p < 0.05$; Leroy et al., 2012). A study examining the relationship between psychological safety and conflict management in teams showed that resolution of task conflicts such as disagreement and differences in opinion correlated positively to high performance when teams perceived high levels of psychological safety ($\beta=0.25, p < 0.05$; Bradley et al., 2012). Therefore, psychological safety impacts safety culture or climate, teamwork, and openness with error reporting. Factors that enhance psychological safety such as communication, trust, transparency, organizational learning, and leadership commitment and support have a major influence on positive organizational safety culture (Starvrianopoulos, 2012).

Just culture Algorithm

Embedding just culture principles into practice requires managers and employees throughout the organization to use a standardized algorithm for event investigation and postevent decision making. There are various algorithms published that provide guidelines for event investigation (Marx, 2001; Meadows, Baker, & Butler, 2005;

Peltomaa, 2012). The algorithms provide a consistent methodology to address critical questions that lead to the cause of the issue (Frankel, Leonard, & Denham, 2006). They provide a framework in which human behavioral choice can be evaluated in the context of the adverse event or near miss being investigated. The just culture algorithm allows leaders to avoid rushing to individual judgment and punishment, instead identifying the human behavior and the system failures associated with the error in order to prevent future occurrences (Marx, 2001). Similarly, James Reason developed an error investigation algorithm and the Swiss cheese model to illustrate how potential for errors related to system issues such as lack of policies, failure to communicate, and insufficient training can result in patient harm (Peltomaa, 2012; Perneger, 2005). Managers must review errors for contributing human behaviors in order to address both systems issues and potential human behavior issues (Marx, 2001). Thus, use of the algorithm can be a catalyst for building trust between employees and management through the knowledge that each incident will be treated using a fair and objective method (Frankel et al., 2006).

The just culture principle is based on management of three types of human behavior: human error, at-risk behavior, and reckless behavior. Each of these behaviors should be managed differently, as human error requires consoling, at-risk behavior requires counseling, and reckless behavior requires punitive action (Marx, 2001). A just culture algorithm guides managers during error investigation in identifying the type of human behavior that contributed to the event. Analysis of errors based on these three types of behavior balances employee accountability and organizational learning (Mayer & Cronin, 2008). Human error addresses the notion that even highly trained healthcare

professionals make mistakes (Wilson, Fabri, & Wolfson, 2012). Treating human error differently than at-risk behavior and reckless behavior ensures that individuals are not blamed for errors that were outside of their control. Anticipating that there will always be human error in a healthcare environment is a key concept of a just culture model (Marx, 2001).

Just culture focuses on reducing at-risk behaviors and eliminating reckless behaviors, which can cause significant errors and patient harm due to behavioral choices such as circumventing policies and creating workarounds. At-risk behaviors become the norm over time if leadership does not catch and fix the systems, coach the employee, and deincestivize the at-risk behavior. Decreased perceptions of risks, attitudes toward policies and procedures, and cultural norms cause employees to drift toward at-risk behaviors and unhealthy habits. In a just culture model, the organization has increased awareness of at-risk behaviors and strives toward reducing or eliminating system-wide issues that create at-risk behaviors (Pepe & Cataldo, 2011). A just culture model encourages zero tolerance when staff members are engaged in reckless behaviors. Reckless behaviors occur when an employee purposefully disregards the rules and processes, knowing the risks are substantial (Marx, 2001). In a just culture model, employees are educated about accountability for behavioral choices and are incentivized to avoid risk behaviors.

The just culture algorithm (see Figure 2) that was used in this project was created based on knowledge gained from the Marx just culture model, Reasons error investigation, human factors science, and literature on peer review, root cause analysis,

and quality improvement processes (Marx, 2001; Meadows et al., 2005; Peltomaa, 2012).

The just culture algorithm consists of 7 investigative categories: (a) Individuals intent, (b) Equipment failure, (c) Peer action of similar experience, (d) Training issues, (e) Competency evaluation, (f) Individual's risk awareness, and (g) System barriers. The algorithm as illustrated below guides managers and employees through the 7 categories with questions to identify a potential cause of the problem with recommendations for follow up actions.

Use of this algorithm requires review the event or incident, interview with staff and evaluation of processes and appropriate policies.

Just Culture Algorithm - Decision Tree for Review of Safety Events

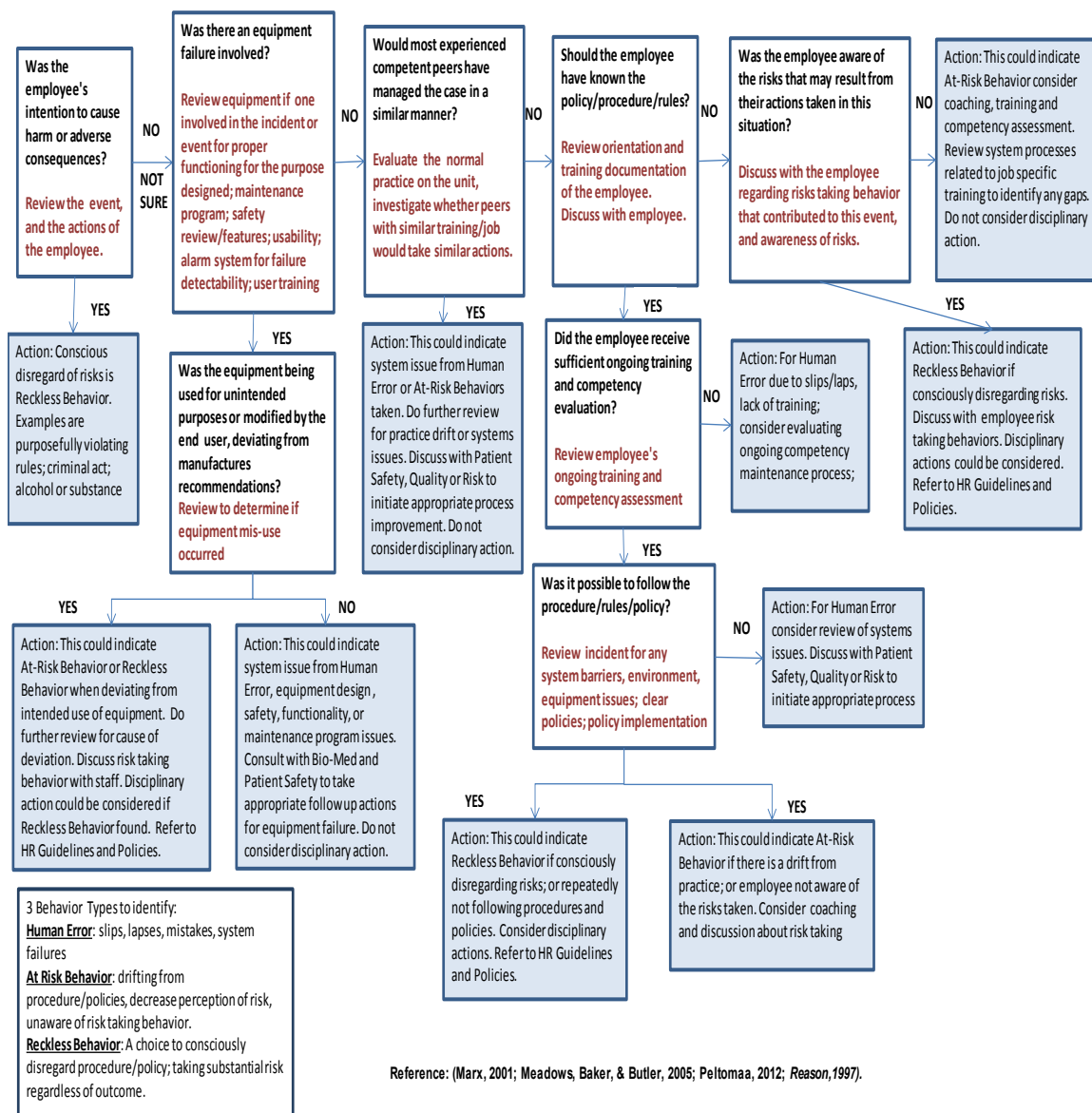


Figure 2. Just culture algorithm (Marx, 2001; Meadows, Baker, & Butler, 2005; Peltomaa, 2012, Reason, 1997).

Adverse Event Reporting

In a just culture model, errors are analyzed objectively and in a just manner, as human errors and at-risk behaviors do not result in punitive actions. Just culture cultivates employee accountability for risk taking behaviors (Frankel et al., 2006; Marx, 2001). The just culture model encourages objective error analysis to identify risks, prevent inappropriate punitive actions, and increase error reporting. The IOM's report regarding the lack of incident reporting practice is supported by scientific research that showed about 50% to 96% of adverse events are under-reported every year (Breathnach et al., 2011; Sarvadikar et al., 2010). The organization's culture of safety greatly impacts staff's behavior to report incidents or near misses, accountability for choices, and involvement in systems improvement studies. Punitive safety cultures have resulted in decreased error detection and reporting patterns. In a recent study, significant relationships were discovered between willingness to report and nonpunitive response to error and the number of reported events ($p < 0.01$) (Smits et al., 2012).

Blame or punitive culture has contributed to deeply rooted fear of punishment and embarrassment that has prevented employees from reporting adverse events and near misses. Employees develop norms of under-reporting through long-term exposure to blaming and shaming employees for mistakes and labeling as professionally incapable for carrying out assigned duties (Gorini et al., 2012). This is evidenced by research studies that showed nurses were reporting approximately 1 out of 19 medication errors and only 26% of identified errors (Joolae et al., 2001; Espin et al., 2007).

In a complex healthcare organization, there are often sequences of near-miss events that lead to an actual harmful event. Near miss events occur at a rate of 300 times

more than actual events and are considered to be early warning signs of an inevitable harm event if not mitigated (Cohoon, 2011; Grant & Larsen, 2007). Organizational leaders can take action to prevent system failures when made aware of near miss events. In one study, data showed 5 times more near miss reports than adverse event reports during an 18-month period after employees received intensive education regarding near miss events and importance of reporting (Frankel et al., 2006).

The literature review indicated that the current state of patient safety reporting patterns, organizational safety culture, and infrastructure are inconsistent across healthcare facilities. Healthcare organizations have been adopting error reporting mechanisms based on aviation industry that established an effective Aviation Safety Reporting System (ASRS) in which employees were encouraged to make anonymous safety reports for systematic improvements (Liang, 1999). There is lack of research studies that define the root cause of why barriers exist for identification and reporting of adverse events across healthcare settings. However, many research studies indicate fear, shame, blame, and poor access to reporting systems as causes of under-reporting, but the deeper question remains.

In order to address under-reporting of incidents on a national scale, the federal government provided funding to the Department of Health and Human Services (DHHS) division for Patient Safety, AHRQ and established the Patient Safety and Quality Improvement (PSQI) Act of 2005. After much debate over creating mandatory versus voluntary reporting structures, Congress passed the PSQI act. This voluntary, confidential, and national reporting system was established for hospitals, physicians, and

other healthcare providers to submit safety reports called patient safety work product (PSWP). AHRQ created local and regional Patient Safety Organizations (PSO) to manage, analyze, and disseminate information learned from reported adverse events.

Congress provided funding for AHRQ to establish a Network of Patient Safety Databases (NPSD) to store adverse event data for national level aggregation and analysis. The goal of the Act was to discover and analyze system weaknesses in delivery of care and to mitigate adverse events. Based on the current literature review, is it unclear that the PSQI Act alone can achieve this goal. Literature reports the barriers punitive organizational cultures continue to place on employee reporting patterns and organizational process improvement, even after the Act passed in 2005. There are many studies evaluating interventions that lead to improved patient safety culture but limited studies focus on measuring the impact of an organization's culture on the patient safety reporting patterns (Weaver et al., 2013).

Empowering Staff to Speak Up

Just culture is a shared accountability between organizational leaders and employees (Marx, 2001). Empowering staff to speak up or stop the line is part of implementing just culture. The goals of this project included increasing staff skills to speak up and intercept errors before they reach the patient. Nontechnical skills such as situational awareness and speaking up are important for prevention of adverse events (Rideout, 2013). Communication failures have been cited as the main root cause of system failures. TJC reported that 70% of sentinel event root causes were determined to be communication failures (Polito, 2013).

In healthcare organizations, Patient harm can occur when the team providing the care is not able to speak up. An essential component of communication is the ability to speak up during crucial moments that have the potential to result in negative outcomes. A qualitative study conducted by Garon (2012) regarding speaking up behaviors of nurses identified personal influences such as culture, education, and home environment as common themes for shaping their attitudes towards speaking up. Most importantly, the study identified that nurses felt they were more likely to speak up if the managers and supervisors promoted open and positive communication (Garon, 2012). Organizational structure and culture influenced staff behaviors in speaking up. Patient safety issues arise when a culture is driven by blame and silence. Leaders are not able to address organizational issues when there is a lack of open communication and transparency (Garon, 2012).

Employees need to have effective communication skills as part of the interdisciplinary team caring for patients. A study utilizing Clinical Resource Management (CRM) training for enhancing team communication, which included speaking up techniques, found a positive correlation between CRM training implementation and improvement in teamwork and communication scores (3.7 to 4.4, $p < .05$). The study used the Clinical Teamwork Scale (CTS) Likert scale measurement tool (Paull et al. 2013). As a team member, when an immediate risk to the patient is recognized, the team member must be empowered to speak up. The NCPS developed the “3W” tool that assists staff in organizing their thoughts to speak up clearly and directly. The abbreviation “3W” stands for: “What I see, What I’m concerned about, and What I

want” (NCPS, n.d.). This “3W” tool can be helpful in teaching employees how to communicate concerns and risks effectively.

Measuring Patient Safety Culture

Major oversight organizations such as TJC require healthcare organizations to establish a patient safety program and have an ongoing method for measuring patient safety perceptions of employees and utilizing the results to improve safety and quality of care for patients (TJC, 2012). Tools such as the Patient Safety Climate in Health Care Organizations (PSCHO), Safety Attitudes Questionnaire (SAQ), and the Hospital Survey on Patient Safety Culture (HSPSC) have been developed to measure employee perceptions of patient safety culture. All the tools use Likert scale questionnaires for quantitative measurement and a free text comment section for qualitative measurement. The PSCHO was built on high-reliability culture principles and has demonstrated validity tested in 105 U.S hospitals (Cronbach’s alpha coefficients 0.50 to 0.89) (Singer et al., 2007). The SAQ originally developed for intensive care environment measures working conditions, staffing, stress, teamwork, job satisfaction, and management; and has no strong validation of reliability in other work units (Sexton et al., 2011).

AHRQ established a patient safety center and developed the HSPSC tool in 2004. It is widely used by healthcare centers to measure patient safety culture perception among employees. The HSPSC instrument is a reliable tool that measures safety culture perception across ten safety culture dimensions and two outcome dimensions with 42 questions. The dimensions of safety culture measured by the HSPSC include: nonpunitive response to error, communication openness, teamwork within unit, teamwork across hospital, feedback and communication about error, staffing, organizational learning

continuous improvement, hospital management support for patient safety, supervisor/manager expectations and actions promoting patient safety, and hospital handoffs and transitions. Outcome measures include overall perceptions of safety and frequency of event reporting. HSPSC was pilot tested in 21 U. S. hospitals and has established psychometric properties. Reliability of the tool has been reported with Cronbach's alpha coefficients ranging from 0.63 to 0.84 for each of the 14 safety culture dimensions (AHRQ, 2004). Measuring the above dimensions through a validated instrument is the key to the establishment of positive patient safety culture (IOM, 2000; 2004).

Since the IOM publication of *To Err Is Human* and TJC's requirements to establish a culture measurement process, studies on measuring perceptions of patient safety culture have increased. Studies show the important connection of employee perceptions of a safety culture and the safety climate of the organization (Pronovost et al., 2003). The commonalities in the safety culture perception studies included showing differences in perceptions among groups of professionals such as nurses and doctors, indication of lower staff perception of management commitment to safety, lower scores in willingness to report errors, and feedback regarding errors (Pronovost et al., 2003; Singer et al., 2007). Some studies showed differences in perception of safety culture among managerial and non-managerial staff, with managerial staff providing more positive responses (Singer et al., 2007). Most studies had limited generalizability due to the sample size and convenience sampling methodologies used. Studies about patient safety culture perceptions have focused on a comparison of perceptions across units in

the hospital, disciplines, and leadership hierarchal status. Studies are limited to measuring perceptions of safety culture pre and postintervention. In this DNP project, the HSPSC tool was used to evaluate the impact of a just culture model interactive workshop intervention on employee perceptions of patient safety.

Theoretical Framework

Ajzen's theory of planned behavior (TPB) was used as a framework to implement an effective just culture training program to improve safety culture successfully. The TBP model provided an approach for evaluating and coaching staff toward embracing a culture change based on fairness, justice, and accountability. The major factor in TBP is the intent of the individual to perform. Intent is described as the willingness and motivational level of the individual to carry out a specific desired behavior. Factors influencing intent to perform include degree of actual and perceived control, attitude toward behavior, and subjective norms. These factors were discussed during the workshop when exploring barriers to performing patient safety activities such as speaking up to prevent risks and reporting of near misses and errors.

Perceived Behavioral Control

Perceived behavioral control is the degree of control an individual has which is driven by level of motivation and resources such as time, skills, empowerment, and cooperation of other key players (Ajzen, 1991). Perceived behavioral control is more important to focus on than actual behavioral control when evaluating intent to perform an act or behavior. Perception of control relies on the individual's perception of the level of difficulty in performing the desired behavior including obstacles and barriers (Ajzen, 1991). An individual's level of perceived behavioral control would vary depending on the

situation or task being performed. For example, a nurse may perceive that she/he has a higher degree of control asking a nurse peer to adhere to hand washing requirements than asking a surgeon to perform the required a time out prior to a procedure.

In a just culture model, it is important to recognize that even though it may seem that staff members have the knowledge and actual control to prevent risks by speaking up, reporting, and mitigating risks (internal control), the perception of control plays a significant role in the individual's ability to carry out the intended behavior. (Ajzen, 2002). According to TBP, staff willingness to integrate just culture principles in their daily practice may be predicted by the factors that drive perceived behavioral control and behavioral intention. TBP recommended specific behavior of interest and the "specified context must be the same as that in which the behavior is to occur" in order to use perceived control of behavior as a predictor for actual behavior (Ajzen, 1991, p. 185). In addition, perceived behavioral control can be used as a predictor for actual behavioral control (Ajzen, 2002). This theory supports the efficacy of administering safety culture perception surveys to predict staff behaviors related to error reporting, teamwork, and open communication.

Attitude Toward Behavior

Behavioral attitude, the second component that impacts intent to perform, is the degree in which the individual believes the intended performance adds value or is necessary. Beliefs and values drive ones attitudes towards the desired action. Other attributes such as risks and benefits of the action and cost and resources needed to carry out the action will influence how the individual values the behavior either negatively or positively. In studies, increased knowledge alone was not found to change attitudes and

correct behaviors without the appropriate support (Ajzen, Joyce, Sheikh, & Cote, 2011). In order to change one's behavior through engagement or training, there must be an evaluation of current knowledge and how the employees are utilizing their current knowledge to drive their behavioral choices (Ajzen et al., 2011). The consequences of performing the intended action and the probability that it will result in the desired outcome also drives staff attitudes (Ajzen, 1991). Therefore, it is important for leaders to demonstrate openness and positive outcomes related to staff engagement in patient safety culture.

A study done by Timmins and McCabe (2005) showed that lack of assertiveness was not the driving force behind the nurses' inability to speak up effectively; rather, it was their desire to maintain positive interpersonal relationships with their colleagues and avoid conflict (Garon, 2012). This study indicated the attitude of nurses toward the importance of speaking up was influenced by the perceived consequences, which was the potential for a negative impact on relationships and conflict. Similarly, studies reporting reasons for not reporting incidents indicated staff attitudes about blame, increased workload, and fear of litigation were some of the main barriers to incident reports (Grant, Donaldson, & Larsen, 2006; Martowirno, Jansma, Luijk, Wagner, & Bijnen, 2012). Martowirno et al. (2012) conducted a qualitative study that showed how negative attitudes of residents working in a hospital setting negatively affected their error reporting pattern. Barriers to reporting included a lengthy reporting system and a perceived lack of organizational actions to fix patient safety issues. Staff members' willingness to speak up and report incidents are part of the core principles of a just culture model (Marx, 2001).

Addressing staff attitude toward behaviors that support the just culture model were a critical part of the just culture interactive workshop training.

Subjective Norms

Lastly, intent to perform is influenced by subjective norms, which is the peer pressure to carry out or not to carry out a specific action. Unit level culture is driven by subjective norms established by formal and informal leaders or persons with influence as to what an approved behavior is and what it is not. Ajzen referred to these leaders as “important others” (Ajzen, 1991, p. 195). A study that measured fearfulness related to criticism from others demonstrated that participant’s subjective norms were significant positive predictors of intent to exercise only for those participants who scored high on fear of negative evaluation scores. There were no significant impacts of subjective norms on those who had a lower fear of negative evaluation scores (Latimer & Ginis, 2005). This study demonstrated that individuals who have a lower perception of psychological safety and fear of consequences may be more influenced by social norms than those with higher perception of psychological safety.

All three components, including perceived behavioral control, behavioral attitudes, and subjective norms influenced behavioral achievement either individually or together depending on the circumstances and desired action. TBP theory is congruent with the just culture model as in both frameworks behavioral achievement can be directly correlated with perceived behavioral control coupled with behavioral intention. In a just culture model, when an error is investigated, the first step is to establish the intention of the person involved in the error, and the subsequent steps allow for evaluating the role of at-risk behaviors. A key component in just culture implementation is assisting employees

to identify at-risk behaviors and reflect upon their own behavioral control, which depends on their perception of the ease or challenges in performing that behavior (Côté, Gagnon, Houme, Abdeljelil, & Gagnon, 2012). In order to sustain a just culture model, this theory emphasized that interventions should focus on changing perceptions of subjective norms towards one that embraces speaking up, peer to peer feedback, and reporting errors even if it involves a colleague.

Complementary to this theory, Kantar's (1993) theory of structural empowerment supported creating an environment for staff that allows them to access appropriate resources and support to make critical decisions (Larken, Cierpial, Stack, Morrison, & Griffith, 2008). Literature showed a strong correlation between empowerment and having equity, ownership, partnership, and accountability (Barden, Griffin, Donahue, & Fitzpatrick, 2011). These are also part of just culture concepts. Equity encourages an atmosphere where employees are working collectively with fair distribution of opportunities and informal power. Ownership encourages aligning ones work with the organizational mission and values, and partnership encourages working towards organizations mission and goals collaboratively and collectively. Lastly, accountability refers to taking responsibility for decision making and being cognizant of decisions that affect individual and team outcomes (Barden et al., 2011). Theory of structural empowerment has been widely applied to nursing practice, showing the relationship between empowerment and increased commitment, accountability, and accomplishments of positive outcomes at work. Psychological empowerment leads to feelings of autonomy and importance in a team setting, and needing to make a strong contribution toward the

mission of the organization (Larkin et al., 2008). Employees who are empowered are more committed and, therefore, able to engage fully in the just culture concepts. The theoretical framework is further illustrated in Figure 3 below.

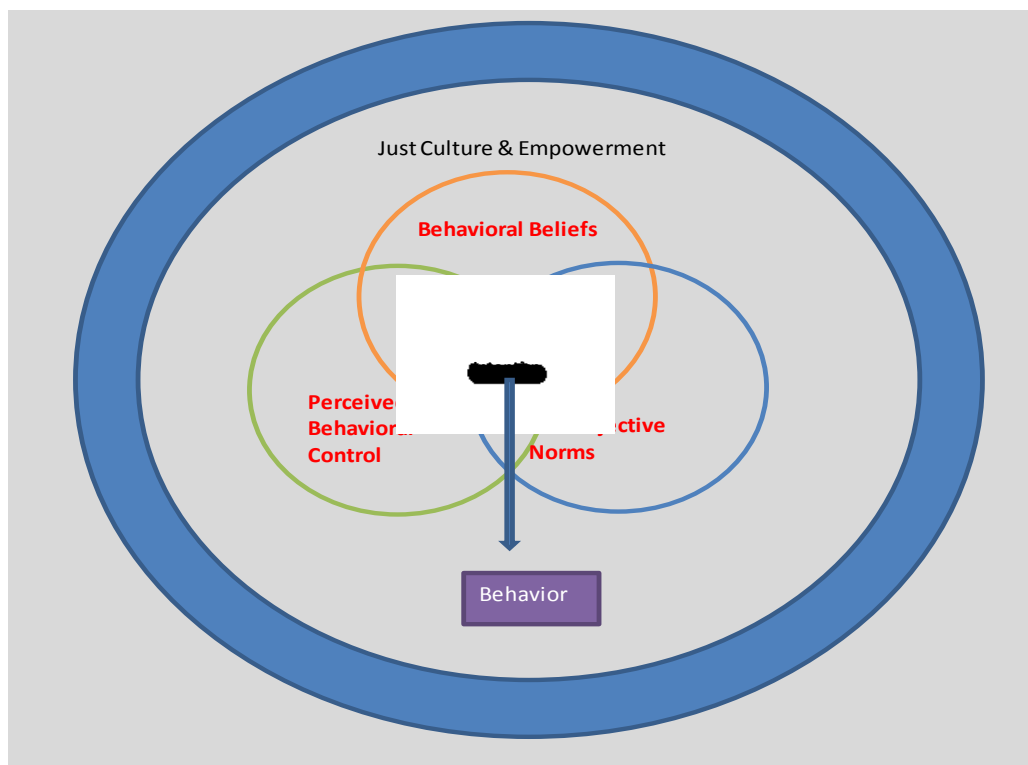


Figure 3. Combined planned behavior and empowerment theoretical framework modified model base on theories of Kantar and Ajzen. Permission provided for original model of Ajzen for noncommercial use (Ajzen, 2000; Côté et al., 2012; Larkin, Cervical, Starck, Morrison, & Griffith, 2008).

Summary

Minimal research has been conducted on implementation of just culture principles and the relationship with employee perception of patient safety culture. Studies have shown that a strong patient safety culture has a major influence on staff members' ability to detect and respond to unexpected events. Interventions to improve patient safety should focus on the unit level of the organization where care delivery occurs. Employees

at microsystem levels have the ability to determine whether a negative outcome has occurred and to detect and report events prior to the harm reaching the patient. Employee empowerment to increase error reporting will lead to safer systems for patients. Just culture environment supports professional development of employees by creating the framework for collaboration and shared decision making. The main component of the just culture model includes creating a psychological safe environment, using of a just culture algorithm, empowering employees to speak up, and increasing adverse event and near miss reporting. Ajzen's theory of planned behavior (TPB) in combination with Kantar's theory of structured empowerment was utilized as a framework for developing the just culture model interactive workshop content for the project intervention. It is important to recognize the impact perceived and actual behavioral control, employee attitudes, and social norms have on influencing behavioral choices as described in Ajzen's TPB. Employees who are empowered are more committed and, therefore, able to engage fully in the just culture model. The just culture model of transparency, trust, and open communication improved perceptions of safety and increased behaviors of adverse event or near miss reporting without fear of reprisal. Section 3 will describe the methods used to conduct this project.

Section 3: Approach

Introduction

The purpose of this project was to explore the impact of a just culture model interactive workshop on employees' perceptions related to overall safety, nonpunitive response to error, communication openness, teamwork, feedback and communication, frequency of event reporting, and hospital management support for patient safety. This section addresses the project design, methodology, population, measurement instrument, data collection process, and data management and analysis.

Project Design/Methods

Project Design

The type of project design depends on the purpose, problem, population, and desired outcome for applicability of research findings to practice (Burns & Grove, 2009). The design chosen for this project fit my intent to focus on possible generalization to the hospital acute care staff population or the organization. The design of the project involved 3 stages (see Figure 4): (a) a preintervention patient safety culture quantitative questionnaire, (b) a face-to-face interactive workshop session, and (c) a postintervention patient safety quantitative questionnaire.

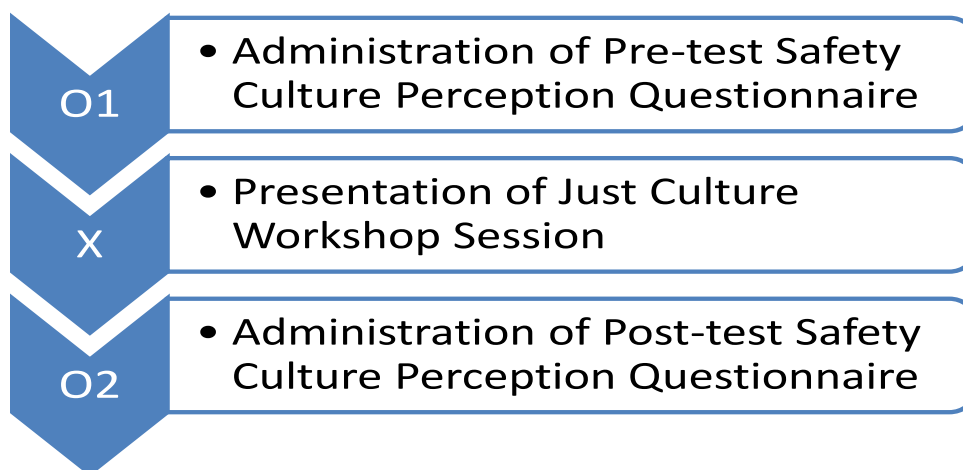


Figure 4. Three stages of just culture project design.

Experimental designs that are randomized with a control group and intervention group are the strongest research designs (Terry, 2012). In this project, due to the focus on culture change, it was not possible to have tightly controlled randomization with a control group. In these situations, quasi-experimental designs are recommended with the awareness of other variables that may affect the conclusions of the study (Brown, 2009). A quasi-experimental one group pretest-intervention-posttest design was used to analyze cause and effect between a just culture model interactive workshop and employee perceptions of patient safety culture (Burns & Grove, 2009). This design was also feasible within this project's timeline and resource constraints.

For this project, the independent variable was the implementation of a just culture model interactive workshop, and the dependent variables were staff perceptions in the patient safety dimensions measured in the pretest and posttest questionnaire. Table 1 further illustrates the connection among purpose, question, and measurement.

Table 1

Purpose, Question, Measure

Project purpose	Question	Measure
The purpose of this quantitative project was to explore the influence of a just culture model interactive workshop on employee safety culture perception in dimensions of overall perception of safety, nonpunitive response to error, teamwork, communication openness, feedback and communication, hospital management support for patient safety, and frequency of event reporting, measured pre and postintervention.	Will patient safety culture scores show a significant difference in the staff's perceptions in the safety dimensions of overall perception of safety, nonpunitive response to error, communication openness, teamwork, feedback and communication, frequency of event reporting, and hospital management support for patient safety after participation in a just culture model interactive workshop?	Use of HSPSC quantitative tool to measure staff perception on safety culture dimensions using Likert scale, pre just culture model interactive workshop implementation and 2 weeks postimplementation. The questionnaire will be administered anonymously with no identifiers or demographic information.

A researcher needs to consider and minimize threats to internal validity when using a quasi-experimental one-group pretest-intervention-posttest design (Slack & Draugalis, 2001). Statistical association may not imply casual association. Dimitrov and Rumrill (2003) indicated that pretest/posttest quasi-experimental designs have threats related to history, maturation, randomization, instrumentation, and mortality. The major weakness in this quasi-experimental design is the lack of randomization (Shadish et al., 2002). However, due to variability that exists in unit-level culture; it was not deemed beneficial to use a control group for this project. In addition, withholding of safety culture based training for any group may have caused inconsistencies in patient safety practices and may have contributed to potential patient safety issues. Research has shown that unit-level team communication and shared perceptions of value and safety are important to developing a positive safety culture; therefore, all acute care staff were invited to be part of the just culture model interactive workshop (Stavianopoulos, 2012). Because controlling for confounding variables is difficult due to lack of randomization, it is important to maximize the control and address plausible threats (Shadish, Cook, & Campbell, 2002). Therefore, I focused on minimizing the three major threats to this project: maturation, regression, and mortality.

Maturation is a phenomenon that could threaten the validity of causal relationships between the project variables of staff perception and the intervention. The maturation effect is related to other influences that could potentially occur between the first and second measure in addition to the intervention (Slack & Draugalis, 2001). For this project, potential maturation threats from changes in management, processes, and

external variables such as the introduction of other new safety education initiatives were evaluated and not found. The participant received the pretest immediately prior to starting the workshop and the posttest within 2 weeks after the workshop to minimize unforeseen maturation threats.

The regression phenomenon may impact the relationship between the intervention and improvement seen in scores from pretest to posttest (Dimitrov & Rumrill, 2003). In this project, the variable that might have impacted regression effects between the two scores was the challenge participants might have in providing honest answers about sensitive personal perceptions of patient safety culture, which included their own, their team, and leadership actions. The sensitivity of the questions might have caused the participants to score higher or similarly on the posttest questionnaire. I informed the participants about the anonymity of both tests. For this project, no identifying information, including demographic data, was included on the survey. In addition, the survey was gathered and placed in a folder or administered online in order to not identify any particular individual who might have participated.

The third threat evaluated for this project is referred to as *mortality*, which is the dropout rate of participants from the pretest to the posttest (Slack & Draugalis, 2001). To increase participation in the study, the presenter of the just culture workshop sent several e-mails and met with managers to encourage them to send employees to the workshop who were interested in attending. The sample size was dependent on the number of employees who attended the workshop, as the study included a convenience sample from workshop attendees. The 2-week timeframe between the pretest and the posttest may

have caused attrition. Participants may have dropped out for reasons of unavailability, lack of continued interest, or other unforeseen barriers. I designed the posttest in a web-based format that made it easier for participants to provide anonymous responses at their designated work computers when convenient, and they were provided a 2-week period to complete the posttest.

Measurement Instrument

For the quantitative questionnaire data, ordinal measurement was appropriate, as it provided measurement of the 5 categories or responses with labels on a Likert scale (*strongly agree to strongly disagree*; Polit, 2010). The pretest and posttest questionnaires were designed to be the same, using the AHRQ HSPSC, which has been widely used to measure patient safety culture perceptions in healthcare. All of the HSPSC survey dimensions were pilot tested by the developers and found to have acceptable reliability (Cronbach's alpha of 0.63 to 0.84) and validity with each dimension (AHRQ, 2008). The dimensions of safety culture that were included in this study were overall perception of safety, nonpunitive response to error, communication openness, teamwork, feedback and communication, hospital management support for patient safety, and frequency of event reporting (AHRQ, 2008).

Interactive Workshop Design

It is essential to tailor interactive workshops to the audience in order for effective learning to occur. "Learning is the act or process by which behavior change, knowledge, skills, and attitudes are acquired" (Boyd et al., as cited in Knowles, Holton, & Swanson, 2005, p. 10). In the adult learner, the desire from within is what motivates one to learn new skills or build on old skills (Conklin, 1995). The just culture model workshop was

offered as an optional course, which allowed participants to choose to attend a learning session.

For the development of the workshop structure, I used the whole-part-whole learning model (WPW learning model). The main elements of WPW learning model provided a structure for rhythmic adult learning by giving the learner an overall framework to grasp new concepts that were introduced (first whole), to convey related concepts that were broken down (parts), and to provide a summation of (second whole) how the “parts” are interrelated (Knowles et al., 2005). Clear objectives and definitions were developed to convey the just culture model message as a “whole” at the start of the workshop. The beginning of the workshop incorporated a short 5-minute video illustrating the effects of medical errors on the patient and family to draw the participants’ attention. The workshop design continued in “parts” by breaking down each concept of a just culture Model and providing opportunities for participation in the form of case studies, video vignettes, discussions, and role playing. Examples provided were built on real scenarios in the healthcare setting to allow the participants to connect to the message being delivered (Conklin, 1995). Toward the end of the presentation, the participants were provided examples of improvement changes and a video illustrating a hospital’s journey from a punitive culture to a just culture model for patient safety to integrate the concepts as a “whole” learned in the workshop.

The participants were provided a 90-minute just culture workshop session in a conference room setting at the urban medical center. The seating was arranged around an oval table to stimulate discussion and group work. The presenter used a projector for

PowerPoint and video presentations. The workshop session had built in time for pretest completion prior to the start of the session and for question and evaluation at the end.

Just culture Workshop Intervention

The intervention was a just culture model interactive workshop using the combined theory of planned behavior (TPB) and structural empowerment theory as a framework for the content delivered. TPB emphasizes the degree to which actual and perceived control, attitude toward behavior, and subjective norms influence an individual's intent to change behavior or perform a task. The just culture model interactive workshop incorporated the TPB concepts in creating awareness of how control, perception attitude, and work unit norms may influence intent to apply the components of a just culture. The participants were introduced to concepts of accountability, risk-taking behaviors, systems analysis, incident reporting, and speaking up to prevent patient harm. Senior leadership support for the just culture model implementation was reiterated several times during the workshop in order to increase employees' perception of empowerment and psychological safety in participating in a just culture model of high reliability and accountability. During the presentation of each of the workshop, participants were encouraged to think about a change they could affect in their work area; overcoming the challenges of TPB.

The workshop incorporated a combination of PowerPoint lecture, video presentations, and case studies. Simulation training techniques were used with actual clinical scenarios in order to engage the participants, provide opportunities to role play, and practice new skills and knowledge (Secomb, Mckenna, & Smith, 2012). Studies have shown significant decreases in the occurrence of errors and the ability of staff to evaluate

their own performance without patient compromise with the utilization of simulation training (Ford et al., 2010; Mullen & Byrd, 2013). The just culture workshop provided participants the opportunity to practice in a safe environment using speak up tools, event investigation with the just culture algorithm tool, peer to peer feedback, and staff accountability in behavioral choices. An interactive learning environment allowed the participants to practice critical thinking skills and communication, which led to understanding of the content (Ford et al., 2010). The video vignettes used in this training were obtained from YouTube and were only used for educational purposes; they will not be distributed without copyright permissions.

I developed the just culture workshop content and material with footnotes and a facilitator guide and reviewed the materials with the presenter. The presenter had the opportunity to practice the presentation prior to the workshop (see Appendix C). The objectives and activities planned for the just culture workshop are listed in Table 2.

Table 2

Just culture Workshop Learning Objectives and Activities

Objectives	Content (Topics)	Time frame
List learner's objectives in behavioral terms	Outline of the content for each objective.	State time frame in minutes for each objective
<i>“The participant will be able to...”</i>		
*Introductions and prequestionnaire	Overview of class session; expectations; ground rules Overview of pre and post questionnaire	15 minutes
1. Describe current prevalence and key definitions related to patient safety.	Patient safety introduction -Prevalence of errors -Reporting culture	10 minutes
2. Describe the concepts and principles of just culture.	Just culture -History of safety culture -Just culture model & core concepts; organizational values -High-reliability organizations	10 minutes
3. Identify type of errors and human behaviors that contribute to near misses or adverse events through use of just culture algorithm.	-Type of errors & mitigation -Type of failures & mitigation -Type of behaviors & mitigation -Factors influencing behaviors - Use of just culture algorithm	20 minutes,
4. Use the three Ws communication tool to stop the line.	Stop the line/speak up strategies -Purpose & tool	15 minutes
5. Describe key components of reporting adverse events and near misses.	Adverse-event reporting -Barriers -Near-miss reporting -Benefits of reporting -Electronic reporting system—ePER Unit-level improvements Organizational-level improvements	10 minutes
*Evaluation wrap up	Review of the main concepts of just culture Complete evaluation form	10 minutes

Protection of Human Subjects and Confidentiality

Permission for the project was obtained from Walden University Institutional Review Board (IRB) and the local urban medical center IRB and Quality Improvement Counsel. After IRB approval, participant recruitment and project announcements took place. I utilized the consent form approved by Walden University IRB with approval number of 05-28-14-0345756. Strategies for participant recruitment and anonymous data collection described in more detail below were applied according to IRB application specifications.

Population and Sampling

The project took place in an urban medical center in the Northeast region of the U. S. The majority of the population served at this medical center is over 65 years old and no care is provided for persons under 18 years old. A convenient sample is an inexpensive way to obtain participants and fit the purpose of this project (Burns & Grove, 2009). The employees of 4 acute care units who provided direct clinical care were the targeted population for the project. Based on an 80% confidence level calculation, the desired sample size was 76 participants from the population of 139 staff members. Based on history of staff participation in patient safety culture events and perception surveys, a low sample size was anticipated. Past patient safety survey culture analysis in this facility showed only 30% staff participation out of the total number of medical center employees; an identified limitation to the project (NCPS, 2011).

The quasi-experimental single sample pretest and posttest design focused on evaluating the impact of a just culture model interactive workshop on safety culture perceptions of clinical care employees working in acute care units. The project did not

have a control group as it was found not feasible and unethical to withhold the workshop from some. All clinical staff of the acute care units were included ranging from novice to expert employees and inclusive of all cultural, gender, and age demographics. The exclusion criteria included all managers and supervisors of the units, all non-clinical staff of the acute care units, and all other employees not working in acute care units. The targeted population was clinical staff members from the acute care units, and managers and supervisors were not allowed to attend the workshop or participate in the project. It was important that managers and supervisors were excluded from the workshop to maintain open and honest discussion with employees without fear of disclosure.

The recruitment of participants began after I obtained approval from Walden University IRB. I provided a just culture project flyer to each of the acute care units. The flyer included explanation of the study purpose and its voluntary nature and a description of the measures used to protect anonymity and confidentiality of the information collected. The flyer also included my contact information to address any further questions staff might have had. I was prepared to attend staff meetings at nurse manager discretion or invitation to discuss the flyer information, but there was none. I did not send out an e-mail message with the consent and pretest online questionnaire prior to the workshop to ensure that participants who filled out the questionnaire attend the workshop session.

Data Collection

Prior to the start of the just culture model interactive workshop sessions, the participants were provided with the consent form (Appendix A) and the HSPSC questionnaire (see Appendix B). I explained the consent and pretest and participants were given 15 minutes to complete the pretest. Those workshop attendees who chose to

participate filled out the HSPSC questionnaire and placed it in a folder. I collected the folder with the pre-workshop questionnaires after 15 minutes, and the presenter started conducting the workshop. The folder was placed in sealed large envelope and kept in a locked file cabinet. I informed the participants there would be a posttest questionnaire provided 2 weeks after the workshop was completed if they wished to continue to participate in the project. The participants were not informed that the posttest posed the same questions as the pretest. I entered the pretest questionnaire data into an Excel spreadsheet with ID numbers starting from one, which was saved in a locked folder only accessible by computer login code issued to me.

The acute care managers received request via email, 2 weeks after the just culture model interactive workshop, to distribute link to an anonymous web-based posttest questionnaire that included the same consent and questions as the pretest questionnaire, for the acute care nurses who attended the workshop to complete. The questionnaire link could not be directly sent to each participant as the project was anonymous without any identifying information including demographic information. The postintervention questionnaire was the same as the pretest questionnaire including the consent form (see Appendices A & B). The postintervention consent and questionnaire link was sent again after a week to the managers of the acute care units to send out to staff to remind those who had completed the pretest and still wanted to continue participating to complete the posttest. The posttest results were collected via web-based application and printed for record keeping and analysis; then stored in a locked cabinet. The web link was closed and discontinued after 15 days. Data were entered into the same Excel spreadsheet as the

pretest on a different worksheet and kept in a secure online folder only accessible by my personal log in code.

Data Analysis

Data were analyzed using statistical analysis tool R version 3.1.1 and Microsoft Excel 2010. Quantitative data analysis included identification of incomplete survey questions, response rates, and frequency of responses. Descriptive statistics was used to analyze the variables included in the questionnaire. Welch's t-test was utilized to rank and analyze the data. This test is appropriate when there is no pairing of pre and posttest data, uneven pre and posttest sample size, and a small sample size. Participant questionnaire scores were measured before and after the training intervention to analyze whether there was a significant increase in perception of safety culture (Polit, 2010). The Excel spreadsheets containing the anonymous data were shared with a statistician to assist with the statistical analysis.

Summary

An organization committed to safety fosters an environment of open communication, trust, continuous improvement, and error and near miss reporting without fear of reprisal. There are significant reasons for studying the effects of a safety culture on employee perception of safety. A just culture allows an organization to achieve a safety culture by clearly defining expectations and shared accountability. Maintaining anonymity and the voluntary nature and security of the project was essential to ensure the integrity, met ethical requirements for research, and gain the trust of employees. Utilizing the quasi-experimental pretest and posttest methodology allowed for evaluation of the effect of the just culture model interactive workshop on acute care clinical staff

perception of safety with considerations of potential threats and limitations of the results. The just culture model interactive workshop can have a great impact on reducing patient harm from errors. The project results, which will be discussed in Section 4, will allow the organization to develop further targeted strategies to address negative perceptions which could lead to a culture change conducive to increased reporting, discussing, and learning from adverse events that occur in the context of providing care.

Section 4: Discussion and Implications

Introduction

The project measured perceptions of patient safety culture for the dimensions of overall perception of safety, nonpunitive response to error, communication openness, teamwork, feedback and communication, frequency of event reporting, and hospital management support for patient safety before and 2 weeks after a just culture model interactive workshop. The discussion in this chapter provides the findings, which include tables and charts for easy reference. The project did not include any demographic data to maintain the anonymity of respondents. The findings include the overall score for perception of safety and individual score comparisons for the pretest and posttest on each of the dimensions listed above. The results allow for formulating implications and conclusions as well as suggestions for further research needs on this topic.

Discussion of Findings

In the current literature, there is limited research on the effect or impact of a just culture model on employee perceptions of patient safety culture. This project highlighted the changes in perception of patient safety culture before and after exposure to a just culture model interactive workshop. From an acute care clinical staff population of 139 at the urban medical center, 44 employees participated in the just culture model interactive workshop. Out of the attendees, 33 employees volunteered to participate in the project and completed the pretest patient safety culture perception questionnaire (Appendix B). Two pretest questionnaires were removed from the project for having a significant amount of missing data, over 10%. 2 weeks after the workshop, 24 of the participants completed the posttest questionnaire (Appendix B). Convenience sampling was used;

therefore, there was no randomization, and normalization could not be assumed. The demographic characteristics of the sample were not collected to increase anonymity of an expected small sample size. Welch's *t* test was chosen to analyze the data collected for this quasi-experimental project with small sample size, unknown variability, and unequal sample sizes. The null hypothesis was tested to determine whether the data showed no significant difference in safety culture perception scores pre and postintervention. Welch's *t* test allowed for testing regardless of whether there was a significant difference in scores and whether the differences were positive or negative.

The *t* test results showed that the total patient safety culture perception pretest mean and posttest mean differed significantly ($t = 2.7, p < 0.01$). Posttest overall scores ($\mu=3.7$) were significantly higher than pretest scores ($\mu=3.5$; see Table 3). This was confirmed through a power analysis of 94% ($n=631, \text{delta}=0.2, \text{type}=\text{"two sample"}$). These findings refuted the null hypothesis that overall patient safety culture perception scores would not show significant improvement after participation in a just culture model interactive workshop. This finding is supported by a previous similar study indicating significant improvement in overall safety climate and safety culture scores after implementation of training related to teamwork and communication (Weaver et al., 2013).

Table 3

Welch's t Test Total Safety Perception Score

	Mean pretest	Mean posttest	95% CL lower	95% CL upper	T	<i>df</i>	P-value
Overall score	3.5	3.7	-0.284	-0.045	-2.7028	1244.813	0.006969

The overall percentage of positive results was analyzed for the safety dimensions pretest and posttest (see Figure 5). Percentages for each of the dimensions were calculated by dividing the total positive responses to the questions in each dimension by the total number of responses. Appropriate determinations of positive responses were made for the questionnaires that were reversely worded. The results showed an increase in percentage of positive responses in the dimension of overall perception of safety (pre 55%, post 68%), teamwork within hospitals(pre 60%, post 88%), communication openness (pre 68%, post 75%), and frequency of event reporting (pre 72%, post 92%). Interestingly, nonpunitive response to error (pre 60.2%, post 59.7%) and feedback and communication about errors (pre 90.3%, post 90.2%) showed no difference, while hospital management support (pre 70%, post 61%) showed a slight decrease from pretest to posttest scores. While the increase in percentage of positive responses indicated a change in participants' perceptions on these dimensions, further detailed analysis was conducted to support the significance and accept or deny the null hypothesis associated with each dimension.

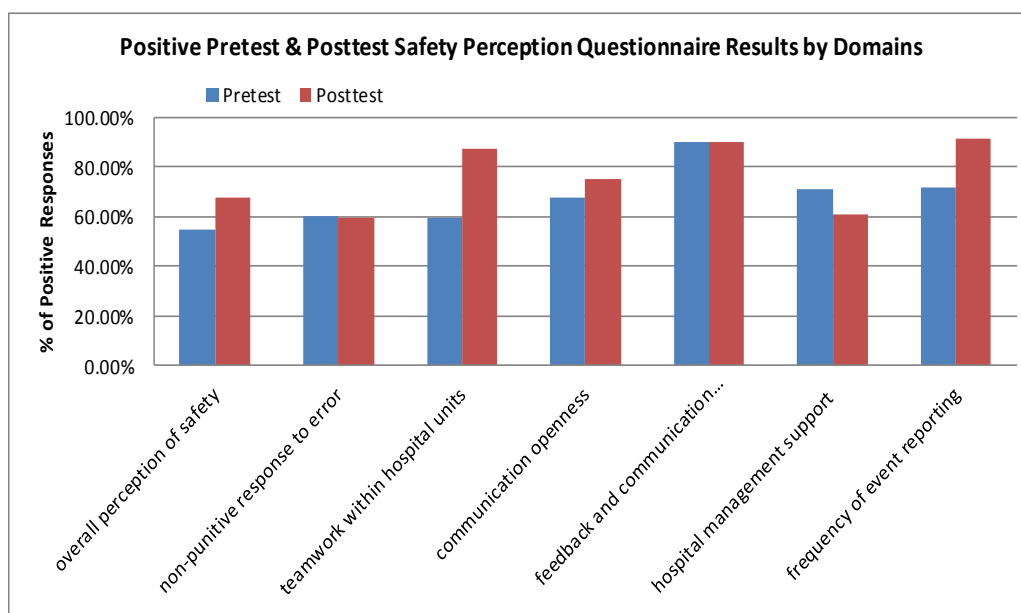


Figure 5. Safety culture dimension pre and post measures.

Furthermore, Welch's t test was conducted for each dimension pretest and posttest on the safety perception dimensions of nonpunitive response to error, communication openness, teamwork, feedback and communication, and hospital management support for patient safety and outcome related measures of overall perception of safety and frequency of event reporting. The 24 questions were divided into the appropriate dimension, with each dimension having 3 to 4 questions. Composite scores of the mean of each of the questions were computed for each dimension after reverse coding for appropriate questions in accordance with AHRQ—Hospital Survey on Patient Safety Culture Survey Guide (AHRQ, 2008). Each domain was analyzed using Welch's t test. The results showed which dimension had higher, lower, or unchanged perception scores postintervention from pretest scores. The p value was computed to determine whether to accept or reject the null hypothesis and whether there was significant negative or positive

difference in pretest and posttest scores. A significant Welch's *t* test finding does not determine direct correlation between variables tested but does provide information regarding which variables show the strongest possible relationship with the intervention conducted (Polit, 2010).

Welch's *t* test results showed a significant difference in mean scores related to Dimensions 3, 4, and 7, which were teamwork, communication openness, and frequency of event reporting, respectively, before and after the just culture workshop intervention (see Table 4). However, the increase in mean scores related to the dimension of overall safety perception was not found to be statistically significant; therefore, the null hypothesis was accepted. The data for each of these dimensions are explained in more detail below.

Table 4

Welch's t Test for All Safety Dimensions

	Mean pretest	Mean posttest	95% CL lower	95% CL upper	T	df	p-value
Overall perception of safety	3.232	3.379	-0.1416746	0.4365812	1.005	211.26	0.32
Nonpunitive response to error	3.357	3.505	-0.1627373	0.4592043	0.941	158.93	0.348
Teamwork	3.50	3.86	0.6049033	-0.124263	-2.990	209.15	0.00311
Communication openness	3.17	3.54	-0.71147574	-0.027771	-2.135	156.73	0.03426
Feedback about errors	3.87	3.97	-0.4234337	0.2209247	-0.620	153.55	0.5356
Hospital management support	3.66	3.88	-0.5615858	0.1234137	-1.263	159.73	0.2083
Frequency of event reporting	3.50	3.92	-0.77329094	-0.060042	-2.307	159.86	0.02231

It was predicted that there would be a relationship between a just culture model interactive workshop and perception scores related to teamwork. The questions that made up the composite score for the teamwork measure included the following:

- In my hospital work area/unit, people support one another.
- In my hospital work area/unit, when a lot of work needs to be done quickly, we work together as a team to get the work done.
- In my hospital work area/unit, people treat each other with respect; and in my hospital work area/unit, when one area in this unit gets really busy; others help out (AHRQ, 2004).

The mean perception score related to teamwork increased in the posttest ($M=3.86$) results as compared to the pretest ($M=3.50$). The difference in the mean score was statistically significant from pretest to posttest, ($t = 2.99, p < 0.05$). The increase in positive responses indicates potential influence of the just culture model interactive workshop in changing perceptions of the participants related to the strength of teamwork between the unit staff. Although no other studies were found that measured the relationship between implementing a just culture model and improved teamwork, studies using CRM training for enhancing teams and communication found a positive correlation between CRM training implementation and improvement in teamwork and communication scores (3.7 to 4.4, $p < .05$) using the CTS Likert scale measurement tool (Paull et al., 2013). The significant finding in increased teamwork scores is important, as most failures in healthcare have been shown to be associated with nontechnical cultural factors such as breakdown in communication and teamwork (Khatri et al., 2009).

There was a statistically significant difference in the fourth dimension (see Table 4), which is communication openness scores from pretest ($M = 3.17$) to posttest ($M = 3.54$), ($t = 2.14, p < 0.05$). The questions that pertained to this domain were as follows: In

my hospital work area/unit, staff will freely speak up if they see something that may negatively affect patient care; in my hospital work area/unit, staff feel free to question the decisions or actions of those with more authority; and in my hospital work area/unit, staff are afraid to ask questions when something does not seem right (AHRQ, 2004). Studies have shown that empowerment from managers and supervisors promoting open communication positively affect employee perception of feeling safe to speak up (Garon, 2012). The ability to communicate openly promotes safe patient care and reduces organizational incidents and liability. Skills such as situational awareness and speaking up are important for prevention of adverse events and communication failures (Polito, 2013; Reid, 2012). Leaders are not able to address organizational issues and system failures when there is a lack of open communication and transparency (Garon, 2012). The workshop emphasized the role of effective communication providing the participants the NCPS 3 W tool, which stands for “What I see, What I’m concerned about, and What I want,” with opportunity to role play and practice using the tool during the workshop (NCPS, n.d.).

There was a statistically significant difference in frequency of error reporting dimension scores from pretest ($M = 3.50$) to posttest ($M = 3.92$), ($t = 2.31$, $p < 0.05$). The questions under this dimension included the following: When a mistake is made in your hospital work area/unit but it is caught and corrected before affecting the patient, how often is it reported? When a mistake is made in your hospital work area/unit but has no potential to harm the patient, how often is it reported? When a mistake is made in your hospital work area/unit and it could harm the patient but does not, how often is it

reported? (AHRQ, 2004). According to Ajzen's theory of planned behavior (TPB), staff perceptions can be used to predict actual behavioral choices, and the higher the perception, the more likely the individual will carry out the behavior (Ajzen, 1991). Therefore, a positive change in the frequency of error reporting mean perception scores may indicate an increase in willingness to report errors and near-miss events. An increase in error reporting will be significant for improved organizational learning and change, as current literature shows that only 4% to 50% of adverse events are reported every year (Breathnach et al., 2011; Sarvadikar et al., 2010).

Similar results were achieved in a study that demonstrated the effects of a targeted intervention, where incident report data showed a 5-times increase in near-miss reporting compared to adverse events during an 18-month period post intensive error reporting training (Frankel et al., 2006). Literature showed that training alone cannot sustain behavioral change such as increased reporting of events. Organizational leadership commitment to safety and acknowledgment of the high-risk nature of healthcare are essential to provide employees with highly reliable systems and a psychologically safe environment in order to sustain a just culture, manage errors, learn as an organization, and improve the delivery of quality and safe care (Kagan & Barnoy, 2013; Singh et al., 2013; Starvrianopoulos, 2012).

In the safety perception dimensions of overall perception of safety, there were no significant changes in perception scores from the pretest ($M=3.23$) to the posttest ($M=3.38$), ($t=1.0$, $p=0.35$). In addition, there were no significant changes in scores for the domains of feedback and communication, from pretest ($M=3.87$) to posttest ($M=3.97$),

($t=0.62, p=0.54$) and hospital management support from pretest ($M=3.66$) to posttest (3.88), ($t=1.26, p=0.21$). Interestingly, while there was a significant increase in mean perception scores of frequency of error reporting, similar results were not found in mean perception scores of nonpunitive response to error from pretest ($M = 3.36$) to posttest ($M = 3.51$), ($t = 0.94, p = 0.35$). Research has shown correlations between nonpunitive response to error and the error reporting patterns of staff. In one study, team psychological safety was found to be positively related to reported errors ($\beta=0.28, p < 0.05$; Leroy et al., 2012). Similarly, in another study, significant relationships were discovered between willingness to report and nonpunitive response to error and the number of reported events ($p<0.01$; Smits et al., 2012).

In this current project, nonpunitive response to error perception scores was similar pre and postintervention, even though perception scores related to error reporting frequency increased. The results may be explained by the new knowledge and skills participants gained during the workshop related to the importance of error reporting, especially near-miss events to prevent harm from reaching the patient. Unfortunately, the increase in error reporting perception scores may not be sustained unless employees truly feel that the current culture supports and allows for open reporting of errors without fear of reprisal or punishment.

Culture change takes time, and it is not surprising that feedback and communication, hospital management support for patient safety, and overall perception of safety scores did not show significant change in a 2-week period postintervention. Time, commitment, patience, and trust are required for an organization to unravel

unhealthy behaviors that have become the norm and refocus management and employees toward its mission, core beliefs, and values (Marx, 2001; Sheard, 2014). Employees may still feel that the safety culture is punitive and not just or fair until management begins to role model the just culture principles in everyday interactions with their employees. A positive safety culture is promoted through senior management commitment to safety; shared concern and accountability between staff and management for risks; having reliable systems; and continual organizational learning through monitoring, analysis, and feedback (El-Jardali et al., 2011). Managers need to provide real-time feedback and communication continually about errors using the just culture algorithm and support for patient safety through process improvement, creating opportunities for employees' professional growth and involvement in the organization. Nurse Managers play a key role in modeling safety behaviors and cultivating nurses' roles in the delivery of evidence-based safe care (Mantynen et al., 2014). Over time, it is expected that employees will feel psychologically safe to participate in teamwork, report errors, speak up to prevent risks, effectively communicate with colleagues, and trust that management will provide the necessary support (Kohn et al., 2000).

In summary, the project supported continual employee and management training using the just culture model interactive workshop with further emphasis on topics such as senior leadership engagement and empowerment for nonpunitive response to errors related to human errors and at-risk behaviors. Analysis of the data indicated that introduction of the just culture model through staff engagement in an interactive workshop produced some significant changes in safety culture perceptions and that

further research in this area is warranted. The project has also helped to indicate the need to augment the intervention to produce more positive results in all the dimensions studied.

Implications

The intent of the just culture model is to guide hospital leaders and employees in responding to errors and near misses appropriately by creating environments of trust and psychological safety to prevent patient harm. The just culture model emphasizes errors can be reduced or eliminated in healthcare through actions including:

- always anticipating risks and errors,
- being a learning and proactive culture;
- being accountable for one's actions;
- building high reliable systems and
- Building monitoring systems monitor drifts in practices (Marx, 2001).

For this reason, it is important for healthcare facilities to evaluate their current patient safety culture perceptions through ongoing surveys. The results of this project provide management greater understanding regarding organizational and unit level culture in the dimensions that are associated with just culture principles as the hospital continues the journey towards the just culture model for patient safety operations.

The just culture model has potential for becoming the gold standard for patient safety across the nation. North Carolina and Minnesota have demonstrated how to achieve a greater impact in reducing harm to patients through their statewide collaborations on just culture initiatives. In order for the just culture model to have

maximum impact, all of the four main concepts of just culture should be referred to as “the bundle” that must be implemented together. These concepts include establishing a psychologically safe environment, using a just culture algorithm, speaking up to prevent risks, and reporting events need to be operationalized. The majority of the current studies were focused on examining punitive versus nonpunitive culture, teamwork and communication strategies, and the impact on patient safety. There is minimal research on the impact of a just culture model (“the bundle”) on employee perceptions of safety, error reporting patterns, and reduction in events causing patient harm. This project has laid the foundation for future studies to build on.

Recommended future research includes conducting qualitative and quantitative studies related to implementation of a just culture model and the relationship or impact on practice change measuring variables such as use of the just culture algorithm, trends in error reporting, staff behavioral choices, risk taking behavior, safety culture perceptions, and speaking up. Studies can also be implemented on examining specific safety practices such as analyzing the impact of a just culture model on hand hygiene compliance behaviors of staff.

Lastly, it is recommended that future studies collect demographical data, which were lacking in this project. The availability of demographical information could assist in further analyzing the data for groups with lower scores in order to target interventions as well as identifying groups with higher scores for learning opportunities. Organizational culture is built on sub-cultures; therefore, each unit culture within the organization would be expected show differences.

Project Strengths and Limitations

The strengths of this project included utilization of a reliable instrument in measuring pre and postintervention data. The project was based on a sound theoretical framework that addressed four strong factors that influence the adoption of a culture change in the organization. The just culture model interactive workshop was developed using current evidence-based resources and a learning model to enhance the adult learning experience. The interventions are easily transferable and the education plan and materials can be utilized to teach just culture to other settings including healthcare students. Although the sample size was small, there were significant findings in this project that can be utilized in developing future studies related to just culture implementation. There is currently limited research conducted on this topic and this project provides a framework for future study designs on patient safety culture change.

Limitations of this quasi-experimental design included the unknown variability within the sample. There may be limitations as to whether the sample was a true representation of the targeted population of acute care staff. It was not possible to randomize the population of acute care nurses; therefore, a convenience sample was used for subject identification. There was a threat to validity due to mortality of participants from the pretest to the posttest time frame creating unequal sample sizes in the pretest and posttest groups. Lastly, the absence of a control group and attrition rate may have contributed to the significant findings in the data.

Analysis of Self

In this section, I will highlight the significant positive gain I have experienced in my knowledge, competency, and practice through my Doctor of Nursing Practice program in each of the following domains of leadership, Advance Nursing Practice, Promoting Quality Improvement, Improving Health Outcomes, and Informing Health Policies.

Leadership

I was afforded multiple opportunities to apply advance leadership skills gained through my courses in settings of my practicum experience and through my capstone project completion journey. I learned characteristics of an effective leader, particularly a transformational leader. Transformational leaders are influential through their ability to inspire willing followers; create synergy between the leaders and followers where both parties uplift the other's motivation, ethics, and human conduct (Best, 2010; Thompson, 2012). I was accepted to participate in a facility's leadership development program and attended various leadership classes including 7 Habits of Highly Effective People, Crucial Conversations for Leaders, Human Resources for Leaders, Yellow Belt training, and Dynamic and Effective Presentations. I have utilized these skills in my daily practice as well as my practicum setting.

I had opportunities to assume a leadership role in initiating my project by fostering collaborative relationships with stakeholders, communicating effectively both through oral presentations and writing, seeking leadership education, and participating in professional organizations. I organized a half day patient safety conference for executive leadership of multiple medical centers (directors, associate directors, nurse executives,

and others) including a national director for patient safety as key note speaker focused on high reliability organization and the just culture model. After I presented key points of the just culture model and benefits, I gained full support to move forward with the implementation of just culture in the project organization. Although I was focused on one urban medical center for the application of my project, all 8 medical center leaders who were present agreed they would make just culture a priority for implementation in their organization.

Foster Collaboration

I collaborated with multidisciplinary team members to oversee just culture implementation, including chief nurse executive, patient safety, human resources, director of education, and union representatives to ensure that guidelines are followed with implementation of change. I provided information on the just culture model and the project plan, and solicited discussion and feedback. I have also demonstrated collaboration in other areas during my DNP practicum experiences.

Effective Communication

I have conducted multiple presentations on my project topic to Senior Leadership. Presentations were also provided to senior service leaders, managers, and supervisors. I have evaluated the effectiveness of my presentation through engaging the audience throughout the presentation to participate and ask questions. I have received appropriate questions and feedback that indicated the presentation objectives were met. In addition, I have demonstrated excellent writing and critical analysis skills throughout my DNP courses by presenting in-depth analysis of multiple topics as required for course completion.

Advanced Nursing Practice

I was able to apply advanced nursing practice skills through my practicum experiences and course work assignments. I had opportunities to provide leadership in translating knowledge into practice, lead practice inquiry, disseminate evidence from inquiry, and analyze evidence-based practice guidelines, and assume a leadership role in initiating my DNP project practice change. The examples below illustrate the competencies I have gained in advanced nursing practice.

I developed just culture model interactive workshop training materials including a facilitator guide. The training will be published as an online course for employees. In addition, I developed a simulation learning tool with goal of providing clinicians the ability to demonstrate critical thinking skills in early recognition of adverse events and near miss events; learn, practice, and demonstrate appropriate and timely response to adverse events and team work in a safe environment.

I developed an abstract of the just culture project, which was accepted and presented at a Hospital 17th annual poster session celebrating Nursing Research. I shared information about my project with nurses, nursing students, and other professionals who attended the conference. I shared the tools such as the just culture algorithm, which I had developed for this project.

Promoting Quality Improvement

Promoting ongoing quality improvement is essential in healthcare. In my practicum and coursework, I have gained competencies such as using evidence-based research to lead quality improvement; the impact of access, cost, and safety on quality;

quality improvement methods and tools; and how policy decisions impact quality. The examples below illustrate the competencies I have gained in advanced nursing practice.

I sought opportunity to increase my skills in lean quality improvement process. After attending yellow belt certification training, I volunteered to join an improvement team to practice my skills. I took a leadership role in the data collection design, analysis, and presentation, and facilitated the team progress. The project had regional impact affecting the revenue process, eliminating waste and inaccurate billing at medical centers across 5 states. The lead project was completed on time despite the virtual nature of this team adding complexities with use of remote technology such as conference calls and live meetings.

Improving Health Outcomes

I have gained competencies in applying knowledge of complex systems in improvement; impact of healthcare system on patients and providers; organizational structure (physical, partnerships, and resources) and impact on care delivery; and collaboration across disciplines. Through conducting my project in just culture model implementation, I have gained the understanding of the impact of complexity of the healthcare system on culture change. The knowledge and skills that I gained from the Organizational and System Leadership course afforded me the opportunity to analyze a system issues within an organization and lead an improvement team to improve patient outcomes through evidence-based practices. I reviewed the literature related to culture change and discovered any change must start from leadership. In my first round of introduction of the just culture model, I focused on educating and gaining buy-in from leadership. I learned how information flows from top to bottom and bottom to top in this

complex healthcare system. I was able to identify key stakeholders in leadership positions to endorse and support the roll out of the just culture model.

Informing Healthcare Policy

I have demonstrated knowledge of the relationship between policy and practice; how to analyze ethical, legal, and social factors in policy development; how to review and revise policies based on current evidence; and implications of health policy implementation. In the Health Policy and Advocacy course, I explored and evaluated the impact of key partnerships between nursing and other professionals on nursing practice, retention, competency, skills, and visibility. Developing nurses' leadership skills and competencies is essential to act as full partners in redesign and reform efforts across the health care system. This opportunity gave me insight into how I want to practice and present myself as a leader, through continual development of leadership competencies and professional relationships, and taking the initiative to assert myself when appropriate.

In exploring national policies and mandates related to the just culture project, I analyzed the PSQI Act of 2005 and evaluated its impact on patient safety and made recommendations to strengthen the intent of this Act. I reviewed current gaps and barriers related to the PSWP use, which guided my recommendation to enhance the use of PSWP in order to improve patient outcomes through using reported data. My recommendations included developing national programs to assist organizations in adapting just culture, creating a standardized taxonomy for event reporting to compare/share data across facilities, and to develop nurse and physician champions to improve use of this reporting tool.

I used the DNP essentials to guide me in conducting the above self-assessment of the domains of leadership, Advance Nursing Practice, Promoting Quality Improvement, Improving Health Outcomes, and Informing Health Policies. I have accomplished my goals of each DNP essential element and plan to continue to develop and refine my competencies as I move forward in my career. I will use opportunities such as this one to reflect on practice and conduct a self-assessment based on the DNP essentials annually. To continually improve my skills and grow as an effective leader, I have started conducting 360 degree feedback surveys to obtain input from colleagues, peers, and supervisors.

Summary

An organizational committed to safety fosters an environment of open communication, trust, continuous improvement, and error and near miss reporting without fear of reprisal. The project showed significant increase in the dimensions of teamwork, communication openness, and error reporting frequency perceptions after participation in a just culture model interactive workshop. All three of the above dimensions are essential for adopting just culture model. This project also showed critical areas such as nonpunitive perception of culture and management support for patient safety that need to be further addressed in order to develop trust and shared accountability between employees and leadership or management. These areas are key to effective implementation of the just culture core concepts or bundle, which includes using the algorithm to manage behaviors, speaking-up to prevent risks, reporting adverse events, and providing an environment that supports psychological safety. Further studies are

needed to understand the effects of the just culture on employee perception of safety and safe practices. Future studies may provide an avenue for leadership to gain information about staff members' ability and willingness to recognize, recover, and report adverse events that occur in the context of providing care. Particular to nursing, this project and similar studies have the potential to empower nurses to create and/or revise policies and protocols related to patient safety best practices, as well as establish a culture that enhances the nursing profession and practice such as Magnet designation. Understanding the effects of a just culture will lead organizational culture change conducive to increased reporting, enhanced teamwork and communication, leader-employee partnerships, increased accountability and trust, and organizational learning from events that occur in the context of providing patient care. Ultimately, the goal of a just culture model is to prevent adverse events and significantly reduce the number of deaths from preventable medical errors each year.

Section 5: Scholarly Product

Enhancing Nurses' Perceptions of Patient Safety Culture

Through the Just culture Model

Abstract

Problem

Preventable medical errors cause between 44,000 and 98,000 deaths per year in the U. S. An organization's patient safety culture has a significant influence on the behaviors, attitudes, and performance of leadership and employees. An organizational culture that supports individual blame creates feelings of fear and shame to speak up and report when errors occur and often results in an increased number of medical errors. Studies have shown a correlation between an organization's safety culture, including safety sub-cultures within the organization, and risk reporting behaviors. Organizational leaders are unable to perform system changes if risks are unknown or hidden. The just culture model, which is a balance between nonpunitive and accountable culture, is supported by national organizations such as World Health Organization, the American Nurses Association, and the Institute of Medicine as a patient safety culture framework.

Purpose

The purpose of this project was to explore the influence of a just culture model interactive workshop on employee safety culture perceptions on dimensions of overall perception of safety, nonpunitive response to error, teamwork, communication openness, feedback and communication, hospital management support for patient safety, and frequency of event reporting, measured pre and postintervention. The just culture model should be utilized to create a psychological safe environment where staff members feel

empowered to speak up, staff members are able to recognize and prevent at risk behaviors, and where shared accountability exists between leadership and employees. The essential components of the just culture model are using a just culture algorithm for error reporting and supporting a psychologically safe environment to empower employees to speak up to prevent risks and to report adverse events and near misses. The project had three main objectives: (1) To explore acute care unit clinical staff perceptions of the patient safety culture at an urban medical center, pre just culture model interactive workshop intervention (time 1) and 2 weeks postintervention (time 2); (2) To compare the difference in the total perception scores between time 1 and time 2; (3) To explore differences in scores for each of the selected dimensions for the project: nonpunitive response to error, teamwork, communication openness, feedback and communication, hospital management support for patient safety, and frequency of event reporting between time 1 and time 2.

Evidence-Based Practice Question

The project question was: Will patient safety culture scores show significant difference in staff members' perceptions on safety dimensions of overall perception of safety, nonpunitive response to error, communication openness, teamwork, feedback and communication, frequency of event reporting, and hospital management support for patient safety after participation in just culture model interactive workshop?

Method

Design

The design of the project involved three stages (see Figure 4): (a) Pre-intervention patient safety culture quantitative questionnaire, (b) Face to face interactive workshop session, and (c) Postintervention patient safety quantitative questionnaire. A quasi-experimental one group pretest intervention posttest design was utilized to analyze cause and effect between a just culture model interactive workshop and employee perceptions of patient safety culture from the Hospital Survey on Patient Safety Culture Instrument (HSPSC) questionnaire tool that was used to measure staff perceptions on safety culture dimensions using a Likert scale, pre just culture model interactive workshop implementation and 2 weeks postimplementation. The questionnaires were administered anonymously with no collection of personal identifiers or demographic information. For this project, it was not possible to utilize randomization within units and between units, as patient safety culture change requires synergy work among all unit teams and there is variability in unit level cultures. Confounding factors such as maturation, lack of randomization, mortality and sample selection were identified as threats to internal validity in utilizing a one-group pretest-intervention-posttest quasi experimental design.

Setting

The project took place in an urban medical center in the Northeast region of U. S. The majority of the population served at this medical center was over 65 years old and no care was provided for persons under 18 years old. Employees of the acute care units who

provided direct clinical care were the targeted population for the project and a convenience sample was utilized.

Data Collection

Prior to the start of the just culture model interactive workshop sessions, the participants were provided a consent form and the HSPSC questionnaire. Project volunteers were given 15 minutes to complete the pretest. Participants were informed there would be a posttest questionnaire provided 2 weeks after the workshop if they wished to continue to participate in the project. 2 weeks after the just culture model interactive workshop, the participants were invited by e-mail using a web-based link to complete a posttest with the same questions as the pretest questionnaire, which also included the consent form. I entered both data sets into an Excel spreadsheet. Data were kept secure and anonymous.

Outcomes

The *t* test results showed that the total patient safety culture perception pretest mean and posttest mean differed significantly ($t = 2.7, p < 0.01$). Posttest overall scores ($\mu=3.7$) were significantly higher than pretest scores ($\mu=3.5$). Among the safety dimensions tested, the results showed significant increase in mean scores related to teamwork ($t = 2.99, p < 0.05$), communication openness ($t = 2.14, p < 0.05$), and frequency of event reporting ($t = 2.31, p < 0.05$) after the just culture workshop intervention. The increase in positive responses indicated the potential influence of the just culture model interactive workshop on changing perceptions of the participants

related to the strength of teamwork between the unit staff, ability to speak up, and incident reporting patterns.

The mean scores in the dimensions of overall perception of safety ($t=1.0$, $p=3.5$); feedback and communication ($t=0.62$, $p=0.54$); nonpunitive response to error ($t = 0.94$, $p=0.35$); and hospital management support ($t=1.26$, $p=0.21$), were not found to be statistically significant. These findings may indicate that managers will need to provide support, real time feedback, and communication continually about errors and role model utilizing the just culture algorithm and error reporting in order to increase staff perceptions of safety in all dimensions.

Conclusion

The intent of the just culture model is to guide hospital leaders and employees in responding to errors and near misses appropriately by creating environments of trust and psychological safety to prevent patient harm. The just culture model emphasizes errors can be reduced or eliminated in healthcare through actions including: always anticipating risks and errors, being a learning and proactive culture; being accountable for ones actions; building high reliable systems; and building monitoring systems to correct practice or policy drifts in the work place. Culture change takes time and it is not surprising that some of the dimensions tested such as feedback and communication and overall perception of safety scores did not show significant change in a 2-week period of time postintervention.

The just culture model has potential for becoming the gold standard for patient safety across the nation. Time, commitment, patience, and trust is required for an

organization to unravel unhealthy behaviors that have become the norm and refocus management and employees toward its mission, core beliefs, and values. Empowering staff to embrace a just culture model requires leadership modeling, support, and resources. It is predicted that with leadership engagement and provision workshops focused on changing behaviors and perceptions, employees' paradigm will begin to shift from fear of a punitive culture toward embracing the new fair and just culture. In turn, this change will enhance behaviors of reporting near miss and adverse events and avoidance of at-risk behaviors. Through the just culture model workshops, staff will begin to understand the use of the just culture algorithm as an evidence-based tool in error investigation and response to objectively, fairly, and justly treat each incident to ensure repeated patient safety issues do not occur. Social change toward elimination of preventable medical errors is more likely to emerge due to changes in staff members' accountability in applying evidence based practice and avoiding risk behaviors.

Therefore, it is recommended that further research should focus exploring the relationship between just culture model and improvement in patient safety indicators or outcomes.

Recommended future research also includes conducting qualitative and quantitative studies related to implementation of a just culture model and the relationship or impact on practice change measuring variables such as use of the just culture algorithm, trends in error reporting, staff behavioral choices, risk taking behavior, safety culture perceptions, and speaking up. Further research is also indicated to explore barriers to just culture implementation from the microsystem level where patient care occurs.

References

- Agency for Healthcare Research and Quality. (2004). *Appendix A. Pilot study for the Hospital Survey on Patient Safety Culture: A summary of reliability and validity findings*. Retrieved from: <http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/hospital/userguide/hospapps.html>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Ajzen, I. (2000). *TPB diagram. The theory of planned behavior*. Retrieved from <http://people.umass.edu/aizen/tpb.diag.html>
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32, 665-683.
- Ajzen, I., Joyce, N., Sheikh, S., & Gilbert Cote, N. (2011). Knowledge and the prediction of behavior: The role of information accuracy in the theory of planned behavior. *Basic and Applied Social Psychology*, 33(2), 101-117.
- American Nurses Association. (n.d.) *Just culture position statement*. Retrieved from <http://nursingworld.org/psjustculture>
- Anderson, D. J., & Webster, C. S. (2001). A systems approach to the reduction of medication error on the hospital ward. *Journal of Advanced Nursing*, 35(1), 34-41. doi: 10.1046/j.1365-2648.2001.01820.x
- Armstrong, K. J., & Laschinger, H. (2006). Structural empowerment, magnet hospital characteristics, and patient safety culture: Making the link. *Journal of Nursing Care Quality*, 21(2), 124-134. doi = 10.1097/00001786-200604000-00007

- Barden, A. M., Griffin, M. T., Donahue, M., & Fitzpatrick, J. J. (2011). Shared governance and empowerment in registered nurses working in a hospital setting, *Nursing Administration Quarterly*, 35(3), 212-218. doi = 10.1097/naq.0b013e3181ff3845
- Bashaw, E. S., & Lounsbury, K. (2012). Forging a new culture. *Nursing Management (Springhouse)*, 43(10), 49–53. doi:10.1097/01.numa.0000419492.49675.25
- Best, C. K. (2010). Assessing leadership readiness using developmental personality style: A tool for leadership coaching. *International Journal of Evidence Based Coaching & Mentoring*, 8(1), 22–33. ISSN: 17418305.
- Bogner, M. S. (2009). Revisiting To Err Is Human a Decade Later . *Biomedical Instrumentation & Technology*, 43(6), 476–478. doi:10.2345/0899-8205-43.6.476
- Bradley, B. H., Postlethwaite, B. E., Koltz, A. C., Hamdani, M. R., & Brown, K. G. (2012). Reaping the benefits of task conflict in teams: The critical role of team psychological safety. *Journal of Applied Psychology*, 97(1), 151-158. doi:10.1037/a0024200
- Breathnach, O., Cousins, G., Dunne, D., Ryan, K., Smith, D., & O'Byrne, J. (2011). A review of adverse event reporting in Irish surgical specialties. *Clinical Risk*, 17(2), 43-49. doi:10.1258/cr.2010.010070
- Brown, S. J. (2009). *Evidence-based nursing: The research-practice connection*. Sudbury, MA: Jones and Bartlett.
- Burns, N., & Grove, S. K. (2009). *The practice of nursing research: Appraisal, synthesis, and generation of evidence* (6th ed.). St. Louis, MO: Saunders Elsevier.

- Cohoon, B. (2011). Causes of near misses: Perceptions of perioperative nurses. *AORN Journal*, 93(5), 551-565. doi:10.1016/j.aorn.2010.02.017
- Conklin (1995). Continuing education corner: Principles of adult learning: How can they help? *New Jersey Nurse*, 25(7), 7.
- Côté, F., Gagnon, J., Houme, P. K., Abdeljelil, A. B., & Gagnon, M. (2012). Using the theory of planned behaviour to predict nurses' intention to integrate research evidence into clinical decision-making. *Journal of Advanced Nursing*, 68(10), 2289-2298. doi:10.1111/j.1365-2648.2011.05922.x
- Despins, L. A., Scott-Cawiezell J., & Rouder J. N. (2010). Detection of patient risk by nurses: A theoretical framework. *Journal of Advanced Nursing*, 66, 465-474. doi:10.1111/j.1365-2648.2009.05215.x
- Dimitrov, D. M., & Rumrill, P. D. (2003). Pretest-posttest designs and measurement of change. *Work*, 20, 159-165.
- Durbin, J., Hansen, M. M., Sinkowitz-Cochran, R., Cardo, D. (2006). Patient safety perceptions: A survey of Iowa physicians, pharmacists, and nurses. *American Journal of Infection Control*, 34(1), 25-30. doi:10.1016/j.ajic.2005.08.008
- El-Jardali, F., Dimassi, H., Jamal, D., Jaafar, M., & Hemadeh, N. (2011). Predictors and outcomes of patient safety culture in hospitals. *BMC Health Services Research*, 11, 45. doi:10.1186/1472-6963-11-45

- Elliott, M., Page, K., & Warrall-Carter, L. (2012). Reason's accident causation model: Application to adverse events in acute care. *Journal for the Australian Nursing Profession, 43*(1), 22-28. doi:10.5172/conu.2012.43.1.22
- Ellis, P., & Abbott, J. (2013). Leadership and management skills in healthcare. *Nurse Prescribing, 11*(5), 251-254. doi:10.12968/npre.2013.11.5.251
- Espin, S., Rehehr, G., Levinson, W., Baker, G. R., Biancucci, C., & Lingard, L. (2007). Factors influencing perioperative nurses error reporting preferences. *AORN Journal, 85*(3), 527-543. doi: S0001209207601252
- Ford, D. G., Seybert, A. L., Smithburger, P. L., Kobulinsky, L. R., Samosky, J. T., & Kane-Gill, S. L. (2010). Impact of simulation-based learning on medication error rates in critically ill patients. *Intensive Care Medicine, 36*(9), 1526-1531. doi:10.1007/s00134-010-1860-2
- Frankel, A. S., Leonard, M. W., & Denham, C. R. (2006). Fair and just culture, team behavior, and leadership engagement. The tools to achieve high reliability. *Health Services Research, 41*(2), 1690-1709. doi:10.1111/j.1475-6773.2006.00572.
- Frankel A., Leonard, M., Simmonds, T., Haradan, C., & Vega, K. (2009). *The essential guide for patient safety officers*. Oakbrook Terrace, IL: The Joint Commission on Accreditation of Healthcare Organizations.
- Garon, M. (2012). Speaking up, being heard: Registered nurses' perceptions of workplace communication. *Journal of Nursing Management, 20*(3), 361-371. doi:10.1111/j.1365-2834.2011.01296.x

- Goldfield, N., Kelly, W. P., & Patel, K. (2012). Potentially preventable events: An actionable set of measures for linking quality improvement and cost savings. *Quality Management in Health Care, 21*(4), 213-219.
doi:10.1097/qmh.0b013e31826d1d3a
- Gorini, A., Miglioretti, M., & Pravettoni, G. (2012). A new perspective on blame culture: An experimental study. *Journal of Evaluation in Clinical Practice, 18*(3), 671-675. doi:10.1111/j.1365-2753.2012.01831.x
- Grant, M. J. C., Donaldson, A. E., Larsen, G. Y. (2006). The safety culture in a children's hospital. *Journal of Nursing Care Quality, 21*(3), 223-229.
doi:10.1097/00001786-200607000-00006
- Grant, M. J., & Larsen, G. Y. (2007). Effect of an anonymous reporting system on near-miss and harmful medical error reporting in a pediatric intensive care unit. *Journal of Nursing Care Quality, 22*(3), 213-221.
doi:10.1097/01.ncq.0000277777.35395.e0
- Henneman, P. L., Marquard, J. L., & Fisher, D. L. (2012). Bar-code verification: Reducing but not eliminating medication errors. *Journal of Nursing Administration, 42*, 562-566. doi:10.1097/naa.0b013e318274b545
- Institute of Medicine (IOM). (2010). *The future of nursing: Leading change, advancing health*. Retrieved from
<http://www.iom.edu/~media/Files/report%20Files/2010/The-FUTURE-of-NURSING/FUTURE%20of%20Nursing%202010%20Report%20Brief.pdf>

- Joolae, S., Hajibabae, F., Peyrovi, H., Haghani, H., & Bahrani, N. (2011). The relationship between incidence and report of medication errors and working conditions. *International Nursing Review*, 58(1), 37-44. doi:10.1111/j.1466-7657.2010.00872.x
- Kagan, I., & Barnoy, S. (2013). Organizational safety culture and medical error reporting by Israeli nurses. *Journal of Nursing Scholarship*, 45(3), 273-280. doi:10.1111/jnu.12026
- Khatri, N., Brown, G. D., & Hicks, L. L. (2009). From a blame culture to a just culture in health care. *Health Care Manager Review*, 34(4), 312-322. doi:10.1097/hmr.0b013e3181a3b709
- Kaufman, G., & McCaughan, D. (2013). The effect of organisational culture on patient safety. *Nursing Standard*, 27(43), 50-56. doi:10.7748/ns2013.06.27.43.50.e7280
- Knowles, M., Holton, E., & Swanson, R. A. (2005). *The adult learner, Sixth Edition*. New York, NY: Butterworth-Heinemann.
- Kohn, K. T., Corrigan, J. M. & Donaldson, M. S. (2000). *To err is human: Building a safer health system*, Washington, DC: National Academy Press.
- Larkin, M., Cierpial, C., Stack, J., Morrison, V., & Griffith, C. (2008). Empowerment theory in action: The wisdom of collaborative governance. *The Online Journal of Issues in Nursing*, 13(2).
- LaSala, C.A., & Bjarnason, D., (2010). Creating workplace environments that support moral courage. *The Online Journal of Issues in Nursing*, 15 (3). Retrieved from:

<http://www.nursingworld.org/MainMenuCategories/EthicsStandards/Courage-and-Distress/Workplace-Environments-and-Moral-Courage.html>

Latimer, A. E., & Ginis, K. A. M. (2005). The importance of subjective norms for people who care what others think of them. *Psychology & Health, 20*(1), 53-62.

doi:10.1080/08870440412331300002

Legg, J. S., Dempsey, M., & Aaron, L. (2013). Patient safety perceptions among U.S. radiation therapists. *Radiation Therapist, 22*(1), 9-20. Retrieved from:

<http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2012051715&scope=site>

Leroy, H., Dierynck, B., Anseel, F., Simons, T., Halbesleben, J. R., McCaughey,

D.,...Sels, L. (2012). Behavioral integrity for safety, priority of safety, psychological safety, and patient safety: A team-level study. *Journal of Applied Psychology, 97*(6), 1273-1281. doi: 2012-25105-001

Liang, B. A. (1999). Error in medicine: Legal impediments to U.S. reform. *Journal of Health Politics, Policy & Law, 24*(1), 27-58. doi:10.2139/ssrn.141861

Mantynen, R., Vehvilainen-Julkunen, K., Partanen, P., Turunen, H., Miettinen, M., Kvist, T. (2014). Changes in transformational leadership and empirical quality outcomes in a Finnish Hospital over a 2-year period: a longitudinal study. *Nursing Research and Practice*. Retrieved from:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4070428/>

Martowiriono, K., Jansma, J. D., van Luijk, S. J., Wagner, C., Bijnen, A. B. (2012).

Possible solutions for barriers in incident reporting by residents. *Journal of*

Evaluation in Clinical Practice, 18 (1), 76-81. doi:10.1111/j.1365-2753.2010.01544.x

- Marx, D. (2001). Patient safety and the “just culture”. A primer for health care executives. Retrieved from:
<http://www.safer.healthcare.ucla.edu/safer/archive/ahrq/FinalPrimerDoc.pdf>
- Mayer, C. M., & Cronin, D. (2008). Organizational accountability in a just culture. *Urologic Nursing*, 28(6), 427-430.
- McGuire, M. J., Noronha, G., Samal, L., Yeh, H. C., Crocetti, S, Kravet, S. (2013) Patient safety perceptions of primary care providers after implementation of an electronic medical record system. *Journal of General Internal Medicine*, 28 (2), 184-192. doi:10.1007/s11606-012-2153-y
- Meadows, S., Baker, K., & Butler, J. (2005). *The incident decision tree: Guidelines for action following patient safety incidents*. Retrieved from:
<http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/advances-in-patient-safety/vol4/Meadows.pdf>
- Morris, S. (2011). Focus: patient safety and the medical laboratory. just culture-changing the environment of healthcare delivery. *Clinical Laboratory Science*, 24(2), 120-124. Retrieved from:
<http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2011061796&scope=site>
- Mullen, L., & Byrd, D. (2013). Using simulation training to improve perioperative patient safety. *AORN Journal*, 97(4), 419-427. doi:10.1016/j.aorn.2013.02.001

- National Center for Patient Safety. (n.d.) *Publications*. Retrieved from www.patientsafety.gov/
- North Carolina Hospital Association. (2012). North Carolina 2012 just culture. Retrieved from: <https://www.ncqualitycenter.org/engage-providers/collaboratives-learning-networks/north-carolina-2012-just-culture/>
- Office of Health Promotion and Disease Prevention. (2009). National action plan to prevent healthcare associated infections: Road map to elimination. Retrieved from: http://www.health.gov/hai/prevent_hai.asp
- Page, A. H. (2007). Making just culture a reality: One organizations approach. Agency for Healthcare Research and Quality. Retrieved from: <http://webmm.ahrq.gov/perspective.aspx?perspectiveID=50>
- Paull, D. E.; DeLeeuw, L. D., Wolk, S., Paige, J. T., Neily, J., & Mills, P. D. (2013). The effect of simulation-based crew resource management training on measurable teamwork and communication among interprofessional teams caring for postoperative patients. *Journal of Continuing Education in Nursing*, 44(11), 516-524. doi:10.3928/00220124-20130903-38
- Peltomaa, K. (2012). James Reason: Patient safety, human error, and Swiss cheese. *Quality Management in Health Care*, 21(1), 59-63.
doi:10.1097/qmh.0b013e3182418294
- Pepe, J., & Cataldo, P. J. (2011). Managing risk, build a just culture. *Health Progress*, 92(4), 56-60.

- Perneger, T. V. (2005). The Swiss cheese model for safety incidents: Are there holes in the metaphor? *BMC Health Services Research*, 5(71). Retrieved from:
<http://www.biomedcentral.com/content/pdf/1472-6963-5-71.pdf>
- Polit, D. F. (2010). *Statistics and data analysis for nursing research* (2nd ed.). Upper Saddle River, NJ: Pearson Education Inc.
- Polito, J. M. (2013). Effective communication during difficult conversation. *Neurodiagnostic Journal*, 53(2), 142-152. Retrieved from:
<https://meded.duke.edu/practice/wp-content/uploads/2014/01/Effective-Communication-during-Difficult-Conversations.pdf>
- Pronovost, P. J., Weast, B., Holzmueller, C. G., Rosenstein, B. J., Kidwell, R. P., Haller, K. B., ... Rubin, H. R. (2003). Evaluation of the culture of safety: Survey of clinicians and managers in an academic medical center. *Quality Safety Health Care*, 12(6), 405-410. doi:10.1136/qhc.12.6.405
- Reason, J. T. (1997). *Managing the risks of organizational accidents*, Aldershot, England: Ashgate Publishing.
- Rideout, D. (2013). 'Just culture' encourages error reporting, improves patient safety. *OR Manager*, 29(7), 13-15. Retrieved from:
<http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2012167903&scope=site>
- Sammer, C. E., James, B. R. (2011). Patient safety culture: The nursing unit leader's role. *ANA Periodicals*, 16 (3). Retrieved from:

<http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2011394305&scope=site>

Sammer, C. E., Lykens, K., Singh, K. P., Mains, D. A. & Lackan, N. A. (2010). What is patient safety culture? A review of the literature. *Journal of Nursing Scholarship*, 42(2), 156-165.

doi:10.1111/j.1547-5069.2009.01330.x

Sarvadikar, A., Prescott, G., & Williams, D. (2010). Attitudes to reporting medication error among differing healthcare professionals. *European Journal of Clinical Pharmacology*, 66(8), 843-853. doi:10.1007/s00228-010-0838-x

Secomb, J., Mckenna, L., & Smith, C. (2012). The effectiveness of simulation activities on the cognitive abilities of undergraduate third-year nursing students: a randomised control trial. *International Journal of Clinical Nursing*, 21 (23/24), 3475-3484. doi:10.1111/j.1365-2702.2012.04257.x

Sexton, J. B., Berenholtz, S. M., Goeschel, C. A., Watson, S. R., Holzmueller, C. G., Thompson, D. A., ... Pronovost, P. J. (2011). Assessing and improving safety climate in a large cohort of intensive care units. *Critical Care Medicine*, 39(5), 934-939. doi:10.1097/ccm.0b013e318206d26c

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.

Sheard, D. (2014). Achieving culture change: A whole organization approach. *Nursing & Residential Care*, 16(6), 329-332. doi:10.12968/nrec.2014.16.6.329

- Sine, D. M., & Northcutt, N. (2008). Interactive quality assessment of patient safety culture. *Journal of Patient Safety, 4*(2), 78-83.
doi:10.1097/pts.0b013e3181730322
- Singer, S., Meterko, M., Baker, L., Gaba, D., Falwell, A., & Rosen, A. (2007). Workforce perceptions of hospital safety culture: development and validation of the patient safety climate in healthcare organizations survey. *Health Services Research, 42* (5), 1999-2021. doi:10.1111/j.1475-6773.2007.00706.x
- Singh, B., Winkel, D. E., & Selvarajan, T. T. (2013). Managing diversity at work: Does psychological safety hold the key to racial differences in employee performance? *Journal of Occupational and Organizational Psychology, 86*(2), 242-263.
doi:10.1111/joop.12015
- Sirota, R. L. (2005). Error and error reduction in pathology. *Archives of Pathology & Laboratory Medicine, 129*(10), 1228-1233. Retrieved from:
<http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009611451&scope=site>
- Sirriyeh, R., Lawton, R., Armitage, G., Gardner, P., & Ferguson, S. (2012). Safety subcultures in health-care organizations and managing medical error. *Health Services Management Research, 25*(1), 16-23. doi:10.1258/hsmr.2011.011018
- Slack, M., K., & Draugalis, J. R. (2001). Establishing the internal and external validity of experimental studies. *American Journal of Health-System Pharmacy, 58*(22), 2173-2181. Retrieved from: <http://www.ncbi.nlm.nih.gov/pubmed/11760921>

- Smits, M., Wagner, C., Spreeuwenberg, P., Timmermans, D., van der Wal, G., & Groenewegen, P. (2012). The role of patient safety culture in the causation of unintended events in the hospitals. *Journal of Clinical Nursing, 21* (23/24), 3392-3401. doi:10.1111/j.1365-2702.2012.04261.x
- Sorra, J., Nieva, V., Fastman, B. R., Kaplan, H., Schreiber, G., & King, M. (2008). Staff attitudes about event reporting and patient safety culture in hospital transfusion services. *Transfusion, 48*(9), 1934-1942.
- Stavrianopoulos, T. (2012). The development of patient safety culture. *Health Science Journal, 6*(2), 201-211. Retrieved from:
<http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2011579995&scope=site>
- The Joint Commission (2009). Leadership committed to safety. Sentinel Event Alert. Issue 43. Retrieved from:
http://www.jointcommission.org/sentinel_event_alert_issue_43_leadership_committed_to_safety/
- The Joint Commission. (2012). Improving patient and worker safety. Retrieved from:
<http://www.jointcommission.org/assets/1/18/TJC-improvingPatientAndWorkerSafety-Monograph.pdf>
- Thompson, J. (2012). Transformational leadership can improve workforce competencies. *Nursing Management - UK, 18* (10), 21-24. doi: 10.7748/nm2012.03.18.10.21.c8958

- Tigert, J. A., & Laschinger, H. K. (2004). Critical care nurses' perceptions of workplace empowerment, magnet hospital traits and mental health. *Dynamics*, 15(4), 19–23.
Retrieved from:
<http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2005041426&scope=site>
- Timmins, F., & McCabe, C. (2005). Nurses' and midwives' assertive behaviour in the workplace. *Journal of Advanced Nursing*, 51(1), 38–45. doi: 10.1111/j.1365-2648.2005.03458.x
- Tinkham. (2013). The road to Magnet: Implementing new knowledge, innovations, and improvements. *AORN Journal*, 97(5), 579-581. doi:10.1016/j.aorn.2013.02.004
- Tran, D. T., & Johnson, M. (2010). Classifying nursing errors in clinical management within Australian hospital. *International Nursing Review*, 57(4), 454-462.
doi:10.1111/j.1466-7657.2010.00846.x
- Vincent, C., Stanhope, N., & Crowley-Murphy, M. (1999). Reasons for not reporting adverse incidents: An empirical study. *Journal of Evaluation in Clinical Practice*, 15(1), 13-21. doi:10.1046/j.1365-2753.1999.00147.x
- Wears, R. L., Janiak, B., Moorhead, J. C., Kellermann, A. L., Yeh, C. S., Rice, M. M., ... Woolard, R. J. (2000). Human error in medicine: Human error in medicine: Promise and pitfalls, Part 1. *Annals of Emergency Medicine*, 36(1): 58-60.
doi:10.1067/mem.2000.aem36158
- Weaver, S., J., Lubomksi, L. H., Wilson, R. F., Pfoh, E. R., Martinez, K. A., Dy, S. M. (2013). Promoting a culture of safety as a patient safety strategy: A systematic

review. *Annals of Internal Medicine*, 158(5), 369-374. doi:10.7326/0003-4819-158-5-201303051-00002

Wenstock, M. (2013). The art and science of evidence based care. *Hospitals and Health Networks*, 87(3), 60. Retrieved from:
<http://ezp.waldenulibrary.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2012050687&scope=site>

Westphal, J. (2009). Basic concepts of a Just culture. Federation Forum. Retrieved from:
https://www.fsbpt.org/download/Forum_Winter09_JustCulture.pdf

Wilson, A. R., Fabri, P. J., & Wolfson, J. (2012). Human error and patient safety: Interdisciplinary course. *Teaching & Learning in Medicine*, 24(1), 18-25.
doi:10.1080/10401334.2012.641482

World Health Organization. (n.d.). *Patient safety curriculum guide*. Retrieved from:
<http://www.who.int/patientsafety/education/curriculum/en/>

Walker, C., Esquieres, E., Fowler, S. B., & Tennaro, S. (2013). The perioperative Magnet journey at one specialty hospital. *AORN Journal*, 98(5), 525-531.
doi:10.1016/j.aorn.2013.08.007

Yang, J., Liu, Y., Huang, C., & Zhu, L. (2013). Impact of empowerment on professional practice environments and organizational commitment among nurses: A structural equation approach. *International Journal of Nursing Practice*, 18, 44-55.
doi:10.1111/ijn.12016

Appendix A: Informed Consent

Thank you for participating in this study. Your feedback is important. Please answer the following questions as honestly as possible.

This study involves measuring the effects of the just culture model as a patient safety culture framework. Just culture model implementation was selected for the study topic because it is a model that has been embraced by the Executive Leadership of the Medical Center to be applied in redesigning the patient safety program in the near future. The purpose of this study is to determine if introducing the just culture model to staff members will change their perceptions of safety related to safety culture, nonpunitive response to error, communication openness and shame, teamwork, feedback about errors, and senior management actions in promoting patient safety. The benefit of data collected during this study is to learn more about the effectiveness of the just culture model.

I am conducting the study as part of my Doctoral student requirements. I am currently in the Doctor of Nursing Practice Program at Walden University. I am also newly hired in the Risk Management/Patient Safety Program at your organization.

I do not anticipate that taking this pretest and posttest questionnaire will contain any risk or inconvenience to you. Furthermore, your participation is strictly voluntary and you may withdraw your participation at any time without penalty. There will be no compensation provided for participating in this research.

This questionnaire is anonymous as there is no identifiable information collected. All information collected will be used only for my research and will be kept confidential. There will be no connection to you specifically in the results or in future publication of the results. Once the study is completed, I will be happy to share the results with you if you desire. In the meantime, if you have any questions please ask or contact: Aida Solomon at 503-754-9777 or at aida.solomon@va.gov

Additionally, if you have any concerns about your treatment as a participant in this study, please call or write:

Walden Research Participant Advocate

Phone number: 612-312-1210

Email: IRB@waldenu.edu

Walden University's approval number for this study is **05-28-14-0345756** and it expires on **May 27, 2015**.

Appendix B: Research Project Questionnaire Instrument

By answering and turning in this questionnaire you are verifying that you have read the explanation of the study, and that you agree to participate. You also understand that your participation in this study is strictly voluntary. You may keep a copy of this consent form. By answering and turning in this survey questionnaire you are verifying that you have read the explanation of the study, and that you agree to participate. You also understand that your participation in this study is strictly voluntary. You may keep a copy of this consent form.

Questionnaire Instructions: This questionnaire was developed by the Agency for Healthcare Research and Quality (AHRQ) and is designed to ask your opinions about patient safety culture. You will be asked to complete this survey once before the just culture Workshop begins and 2 weeks after taking the 2 hour just culture workshop. Each survey will take 10-15 minutes to complete. Your participation is completely voluntary, your response will be confidential and anonymous and only group results will be reported. (That is, answers from an individual will not be reported or revealed to anyone.)

In this questionnaire, think of your “work area” as the unit, department, or area of your facility where you spend most of your time or provide most of your services. If you typically work in many different areas, answer the questions considering all of those areas.

For any question, please choose the answer that most closely matches your opinion or experience.

Please indicate your level of agreement or disagreement with the following statements.

<i>Statements</i>	Please indicate your level of agreement or disagreement with the following statements by placing an X in the appropriate box.				
<i>Your Work Area/Unit</i>	1=	2	3	4 =	5=Strongly
	Strongly	=Disagree	=Neither	Agree	Agree
	Disagree				
Patient safety is never sacrificed to get more work done					
Our procedures and systems are good at preventing error from happening.					
It is just by chance that more frequent errors do not happen around here.					
We have patient safety problems in this unit.					

Staff feel like their mistakes are held against them.
 When an event is reported, it feels like the person is being written up, not the problem.
 Staff worry that mistakes they make are kept in their personnel file.
 People support one another in this unit.
 When a lot of work needs to be done quickly, we work together as a team to get the work done.
 In this unit, people treat each other with respect.
 When one area in this unit gets really busy, others help out.

Communication: how often do the following things happen in your work area/unit

Staff will freely speak up if they see something that may negatively affect patient care.

Staff feel free to question the decisions or actions of those with more authority.
 Staff are afraid to ask questions when something does not seem right.
 We are given feedback about changes put into place based on event reports.
 We are informed about errors that happen in this unit.
 In this unit, we discuss ways to prevent errors from happening again.

1= Never	2 =Rarely	3 = Someti mes	4 = Most of the time	5=Always
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<p>Your Hospital – Please indicate your agreement or disagreement with the following statements about your hospital</p> <p>Hospital management provides a work climate that promotes patient safety..</p>	<p>1= Strongly Disagree</p>	<p>2 =Disagree</p>	<p>3 =Neither</p>	<p>4 = Agree</p>	<p>5=Strongly Agree</p>
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Actions from top management show that patient safety is top priority.

Hospital management seems interested in patient safety only after adverse event happens.

<p>Frequency of Events Reported – In your hospital work area/unit, when the following mistakes happen, how often are they reported?</p>	<p>1= Never</p>	<p>2= Rarely</p>	<p>3= Someti mes</p>	<p>4= Most of the time</p>	<p>5= Always</p>
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When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?

When a mistake is made, but has no potential to harm the patient, how often is this reported?

When a mistake is made that could harm the patient, but does not, how often is this reported?

Appendix C: Just culture Model Workshop Presentation

Patient Safety Culture – A Just Culture of Shared Accountability

Aida Solomon, RN, MS

Key Points

- S = Stop the Line
- A = Algorithm of Just Culture
- F = Fix the System
- E = Expect Accountability

Apply **SAFE** – in a Just Culture

Do You Know?

- _____ HAI's (2011) and _____ deaths a year related medical care a year.
- _____ percentage of errors are reported a year.
- If only low # of errors get reported, how well do you think we are able to fix systems issues?

By the end of this presentation you will be able to:

- Describe current prevalence and key definitions related to patient safety.
- Describe the concepts and principals of Just Culture.
- Identify type of errors and human behaviors that contribute to near misses or adverse events through use of Just Culture Algorithm.
- Utilize the 3 Ws communication tool to Stop the Line
- Describe key components of reporting adverse events and near misses

The IOM Study



Improving Patient Safety - Josie King Story



- <http://youtu.be/JeVcXhvPvbU>

Patient Safety Culture

"Every system is perfectly designed to achieve exactly the results it gets." Dr. Don Berwick

"Management must 'manage' for patient safety just as they manage for efficiency and profit maximization. Safety must become part of what a hospital or health care organization prides itself on." Dr. Lucian Leape

Other Definitions

Adverse event or error: "untoward incidents, therapeutic misadventures, iatrogenic injuries" or other negative events (including commission and omission) associated with care or services provided

Sentinel Event: is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Serious injury specifically includes loss of limb or function.

Near Miss or Close Call: events that could have resulted in patient accident, injury, or illness but was prevented by chance or staff interventions

Preventable event: an event due to errors or system failures leading to previously unnecessary or unplanned services and negative patient outcomes. These events are preventable when they could have been mitigated prior to causing error

Just Culture

David Marx, Founder Just Culture

<http://youtu.be/2UzdKkLTphE>

What are your thoughts about Just Culture

Definition of Patient Safety

- Freedom from injury or illness resulting from the processes of care (NCPS)
- Patient safety is the avoidance and prevention of patient injuries from the processes of healthcare delivery (AHRQ)



History of Safety Culture

- Paradigm shift in 1990's
- Learning from Aviation
- Systems thinking
- NCPS – Established 1999
- effort to shift from a blame to a none-blame culture



Just Culture



Definition of Just Culture

An environment of trust and shared accountability in which employees feel safe and are encouraged to report safety-related information.

Employees trust that they will not be held accountable for system failures; but, also take accountability for their behavioral choices.

High Reliability and Just Culture



Key Points

- S = Stop the Line
- A = Algorithm of Just Culture
- F = Fix the System
- E = Expect Accountability

Apply **SAFE** – in Just Culture

Core Concepts of Just Culture



Reliability

- Prevent
- Mitigate
- Redesign

Errors

- How many of you have made an error in the last week?
(e.g. forgot keys, cell phone, to send document/email)
- What are patient safety issues you have encountered in your practice setting?

Errors due to Systems

- Studies showed large % of errors are due to system/process failures; not recklessness
- System Analysis Theory

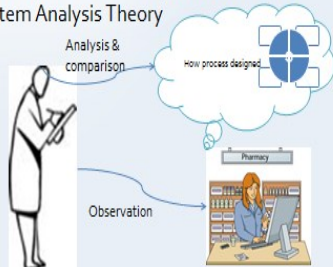
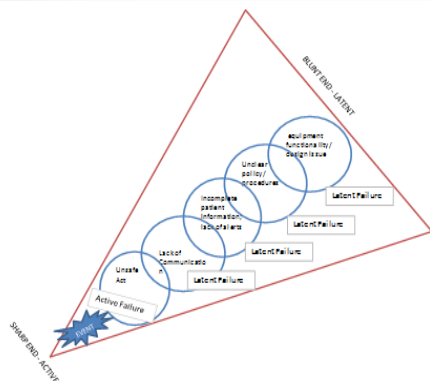


Illustration of Failures



Just Culture Concepts Related to Human Behaviors

Human Behaviors	Characteristics	Appropriate Response
Human Error	Recognizes that competent individuals make mistakes.	System review/process improvement Redesigning systems, environment Education/training
At Risk Behavior	Acknowledges that even competent professionals will develop unhealthy norms. Behavioral choices are shortcuts, "routine rule violations". Risk is not recognized or believed to be justified.	Coaching Incentivize Correct Behaviors Ongoing leadership walk-about, system reviews Education- situational awareness Remedial Action
Reckless Behavior	Has zero tolerance for conscious reckless behavior. Behavioral choice to consciously disregard a substantial and unjustifiable risk.	Disciplinary Action

Active Failures & Latent Failures

- James Reason
- Active failures are errors made at the point of care
- Latent Failures are due to less apparent failures of the organizational design that contribute to the error and contributed to the error occurring.
- High reliable organizations anticipate failures in their system; striving to minimizing latent failures that lead to active failures and cause harm.

Back to High Reliability

- Errors do occur in healthcare
- Focus on System Approach
- Focus on Human Factors (Human-System Interaction)



Human Errors

- Just Culture Concept:
 - Humans Make Mistakes
- Error Types:
 - Knowledge based
 - Rule based
 - Skill based

Post Completion Errors

- Failure to complete a step after main goal has been accomplished

System Design Solution to Human Error

- Systems approach as a more effective means of preventing error than approaches focused on the individual

<http://youtu.be/zeldVu-3DpM>

AidaSolomon-RNIMS 28

What is the Challenge?

- Human Errors Occur due to
 - Human cognition and limitation of memory
 - Slips, mistakes, or relapses
 - Distractions
 - Multitasking or deviation from routine activity
 - Knowledge based thought process that borrows from past experience

At-Risk Behaviors

St Mary's Patient Safety and Education Department – are you smarter than a fifth grader vignettes

http://youtu.be/coLGwO86E_s?t=47s

http://youtu.be/coLGwO86E_s?t=9m52s

What are at risk behaviors you identified in the video?

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Mindfulness and Accountability

Accountability includes: Being risk aware, reporting incidents/events/near misses, speaking up to prevent risks, applying rules/policy/procedures in practice

“To be mindful is to have an enhanced ability to discover and correct errors that could escalate into a crisis.” Weick

Factors Influencing Behaviors

Reckless Behavior

- Behavioral choice to consciously disregard a substantial and unjustifiable risk.
- Disciplinary Action taken for reckless behaviors
- What are some examples of reckless behaviors?



Aida Solomon-RNIMS

Just Culture Algorithm



Open Communication Objective



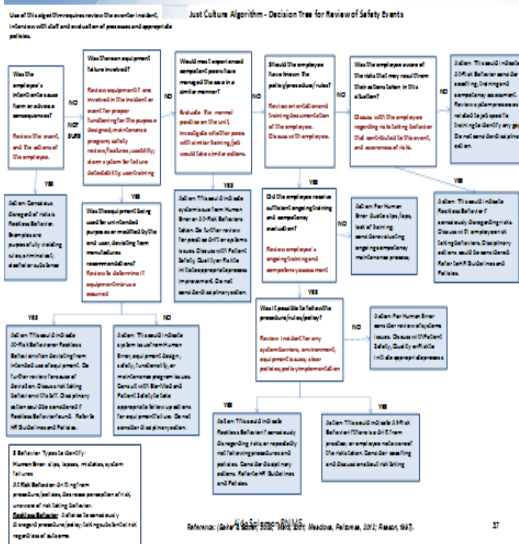
© Jim Crispino/CORBIS

Exercise Using Algorithm

- Scenarios on page 8 of the handout

Organization Mission Influencing Behaviors

- Just Culture Concept: Organizational Values Should Drive Behaviors
- What is VA mission statement?
- What are our values?



Stop The Line

- <http://vaww.oqsv.med.va.gov/stophtheline/>
- (3 min video)
- Empowering staff to Speak Up when risks anticipated and observed
- 3 W NCPs Model (Specific, Direct, Concise)
 - What I see
 - What I'm concerned about
 - What I want

VitalSmarts, AORN, & AACN present:

The Silent Treatment

Why Safety Tools and Checklists Aren't Enough to Save Lives

David Maxfield, Joseph Grenny, Ramón Lavandero, and Linda Groah



Silence Kills was conducted immediately before AACN's national standards for healthy work environments were released¹. It identified seven concerns that often go undiscussed and contribute to avoidable medical errors. It linked the ability of health professionals to discuss emotionally and politically risky topics in a healthcare setting to key results like patient safety, quality of care, and nursing turnover, among others.

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Stop the Line Practice





Role Play using scenarios and using the 3 W's to Stop the Line

Safety Culture Improvements

-  Providing Teamwork Training
-  Addressing Culture of Safety Perception Scores
-  Enhancing Communication = Speak up/Stop the line, RRT, SBAR
-  Quality Improvement Processes = RCA, HFMEA, LEAN, Unit level safety initiatives
-  Engaging in Executive Safety Walk Rounds

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Using the 3 W's

Some providers do not wash hands in between seeing patients

RN doesn't use electronic barcode system in place to give meds

Forgetting to put wet sign after mopping

Surgeon refuses to cover beard fully despite OR policy

Which behaviors would you assign each one?

- Human error
- At Risk behavior
- Reckless behavior

Only the 2nd scenario had negative patient outcome, does that influence your decision?

Event Reporting

- **To Medically Err is Human - What the Health? Episode 5 (1:37)** <http://youtu.be/cl3W-bB6J-I>

Measuring a Culture of Safety

- Generally it is measured by doing a survey of staff at all levels
- TJC requires accredited hospitals to do a safety culture survey
- NCPSS Patient Safety Culture Survey was conducted on June 9–30th results will be shared with staff when it becomes available.

In Summary

- Remember these key points
- S = Stop the Line
- A = Algorithm of Just Culture
- F = Fix the System
- E = Expect Accountability

Senior Leadership supports Just Culture and are committed to creating a **SAFE** environment where all staff are empowered to engage in safety activities.

Q&A



Just Culture
Jeopardy

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We Start our Just Culture Journey Now

- The North Carolina Experience:
<http://youtu.be/RYNafYUHhTI>



References

- Agency for Healthcare Research and Quality. (n.d.). Appendix A. Pilot Study for the Hospital Survey on Patient Safety Culture: A Summary of Reliability and Validity Findings. Retrieved from: <http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/hospital/userguide/hospapps.html>
- American Nurses Association (n.d). *Just Culture position statement*. Retrieved from <http://nursingworld.org/ajpsjustculture>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32, 665-683.
- Bashaw, E. S. & Lounsbury, K. (2012). Forging a new culture: Blending magnet principals with Just Culture. *Nursing Management*, 43(10), 49-53.
- Centers for Disease Control and Prevention. (2014). Healthcare Associated Infections. Retrieved from: <http://www.cdc.gov/hai/surveillance/>

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Reference Cont.

- Coombes, I., D., Stowasser, D. A., Coombes, J. A., Mitchell, C. (2008). Why do interns make prescribing errors? A qualitative study. *Medical Journal of Australia*, 188 (2), 89-94.
- Goldfield, N., Kelly, W. P., & Patel, K. (2012). Potentially preventable events: An actionable set of measures for linking quality improvement and cost savings. *Quality Management in Health Care*, 21(4), 213-219.
- Hoffmann, B., Rohe, J. (2010). Patient safety and error management: what causes adverse events and how can they be prevented? *Deutsches Aerzteblatt International*, 107 (6), 92-9. 1
- Khatri, N., Brown, G. D., & Hicks, L. L. (2009). From a blame culture to a Just Culture in health care. *Health Care Manager Review*, 34(4), 312-322.
- Kohn, K. T., Corrigan, J. M. & Donaldson, M. S. (1999). *To Err is Human: Building a Safer Health System*, Washington, DC: National Academy Press.
- Morris, S. (2011). Focus: patient safety and the medical laboratory. *Just Culture-changing the environment of healthcare delivery. Clinical Laboratory Science*, 24 (2), 120-124.
- Quigley, P. A., White, S. V. (2013). Hospital-Based Fall Program Measurement and Improvement in High Reliability Organizations. *Online Journal of Issues in Nursing*, 18 (2).

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Reference Cont.

- Rideout, D. (2013). 'Just Culture' encourages error reporting, improves patient safety. *OR Manager*, 29(7), 13-15.
- Rothschild, J. M., Landrigan, C. P., Cronin, J. W., et al. (2005). The Critical Care Safety Study: the incidence and nature of adverse events and serious medical errors in intensive care. *Critical Care Medicine*, 33, 1694-1700.
- Sarvadikar, A., Prescott, G., & Williams, D. (2010). Attitudes to reporting medication error among differing healthcare professionals. *European Journal of Clinical Pharmacology*, 66(8), 843-853.
- Smits, M., Wagner, C., Spreuwenberg, P., Timmermans, D., van der Wal, G., Groenewegen, P. P. (2012). The role of patient safety culture in the causation of unintended events in the hospitals. *Journal of Clinical Nursing*, 21 (23/24), 3392-3401.
- Sorra, J. (2008). Staff attitudes about event reporting and patient safety culture in hospital transfusion services. *Transfusion*, 48 (9), 1934-1942.
- The Joint Commission. (2012). *Improving patient and worker safety*. Retrieved from: <http://www.jointcommission.org/assets/1/8/TJC-ImprovingPatientAndWorkerSafety-Monograph.pdf>
- Tran, D. T., & Johnson, M. (2010). Classifying nursing errors in clinical management within Australian hospital. *International Nursing Review*, 57(4), 454-462.

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Curriculum Vitae

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EDUCATION

In Progress	Doctorate of Nursing Practice, Walden University\
2005	Masters of Science, Clinical Nurse Specialist, Oregon Health & Science University
1996	Bachelor of Science in Nursing, Linfield College-School of Nursing

EMPLOYEMENT

2014 – Current	Risk Manager & Patient Safety, Medical Center Facility
2012- 2014	Utilization Review Nurse Facility Program Manager, Regional Office Oversight of Multiple Medical Centers
2009- 2012	Patient Safety Officer, Multiple North West Integrated Medical Centers
2008-2009	Risk Manager, Health Care System
2005-2009	Quality Consultant and Risk Manager, Healthcare System Center
1996- 2005	Staff Nurse & Charge Nurse, Acute Oncology/Medicine, Health Care System

LICENSURE & CERTIFICATION

Oregon State Registered Nurse Licensure; CNS Licensure, Current

American Heart Association, Healthcare Provider Basic Cardiac Life Support

AHA: CPHRM - Certified Professional in HealthCare Risk Management; Current

Dartmouth Improvement Advisor, Team Coach Training; 2011

Certified Trainer for Franklin Covey 7 habits of highly effective people
workshop; 2011

SPD International Association of Healthcare Central Service Material
Management; 2010

NCPS: Patient Safety Improvement & Healthcare Failure Mode Effect Analysis;
2006

Basic & Advanced Management of Data Principles & Measurement, VA; 2006

Oncology Certified Nurse, ONCC; 2006-09; Med/Surgical Nursing, ANCC;
2003-2007

Computer training: Microsoft Office, HTML, Access; OHSU, 2004-2005

HONORS & AWARDS

North West Integrated Service Network Excellence Recognition Award 2012

OHSU Graduate Student Award: Dorothy L Johnson for innovation, creativity
insight in nursing practice, OHSU 2005

NNEI Full Scholarship Award, Graduate Education, 2003-2005

CEO Excellence in Action Award, Healthcare Center, 2002

MEMBERSHIPS

American Society for Healthcare Risk Management