A Critical Review: Moral Injury in Nurses in the Aftermath of a Patient Safety Incident

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Abstract

Background: To date, there has been no published work towards understanding or classifying patient safety incidents (PSIs) or their aftermath as potential morally injurious experiences (pMIEs). A morally injurious experience is one that violates deeply held moral values and beliefs, and can put an individual at risk for burnout, post-traumatic stress disorder, and other trauma-related problems. This can also set the stage for moral injury, which can occur when there has been a betrayal of what is right by someone in a position of legitimate authority, or by one's self, in a high-stakes situation.
Objective: The objective of this review of nurse second victim literature is to describe symptoms of moral injury empirically observed in nurses in the aftermath of a PSI.
Methods: A critical review using a SALSA (search, appraisal, synthesis, analysis) method commenced with a search of electronic data base–indexed original evidence between 1980 and December 2018, focusing on registered nurses involved with a PSI.
Results: The nurse empirical literature reviewed included qualitative (n = 10), quantitative (n = 7), and mixed-methods (n = 4) studies (total n = 21). Core moral injury symptoms included guilt (67%), shame (71%), spiritual-existential crisis (9%), and loss of trust (52%). Secondary symptoms of moral injury included depression (33%), anxiety (57%), anger (71%), self-harm, (19%), and social problems (48%).
Implications: Moral injury better describes what historically has been called the nurse second victim phenomenon. Through identification of pMIEs and symptoms of moral injury, nurses and organizations can be empowered to advance training and intervention programs addressing pMIEs that affect nurses' safety and retention in the aftermath of a PSI.
Clinical Relevance: By describing the experiences associated with a PSI as potentially morally injurious, we set the stage to describe the potential consequences associated with the aftermath of the PSI. Furthermore, this language avoids victimizing those involved by more accurately reflecting the pMIEs of the aftermath.

Frontline hospital nurses are often described as working in the trenches, language associated with war theatres. Hospital nurses walk daily through minefields of inadequate or unsafe staffing (Rees et al., 2019); complex and often suboptimal technology (Schulte & Fry, 2019); organizational culture difficulties (Aiken et al., 2018); and blatant violence, laterally and horizontally from colleagues (Christie & Jones, 2013; Spence Laschinger & Nosko, 2015) and even from patients, families, and the public (World Health Organization [WHO], 2018, 2019). While some of these systemic failures may be anticipated, they still betray individuals and groups of nurses on a daily basis and are rooted in organizational, environmental, and cultural or relational circumstances.

On hospital battlegrounds, nurses are keenly aware they are the last line of defense for patient safety.

Holding the duty to protect the patient as sacred, a nursing perfectionism imperative becomes normative. By definition, perfectionists have a strong commitment to unrealistically high standards for accomplishment and an inability to accept one's own mistakes (Frost, Marten, Lahart, & Rosenblate, 1990). New nurses, that is, those with less than 3 years of experience—cite perfection as being an integral component of their personal identity and a critical responsibility that has been reiterated professionally, but one grown out of their nursing school encounters with instructors (Deppoliti, 2008). Students of nursing have demonstrated 30% higher perfectionism than seen in the general population (Kelly & Clark, 2017). While nurses may strive for perfection, the functioning of hospitals, the provision of medical care, and the human condition are fraught with imperfections. A nurse striving for perfection in an imperfect environment will find himself or herself experiencing moral distress.

Jameton (1984) originally defined moral distress in nursing as knowing the ethically appropriate action, but being constrained from acting accordingly. Most recently, moral distress has been defined as actively doing or partaking in something ethically wrong, but having little power in the situation to enact change (Epstein, Whitehead, Prompahakul, Thacker, & Hamric, 2019). Epstein and Hamric (2009) produced a model of the crescendo effect of moral distress (Figure S1) that opened a new paradigm. In this model, a uniquely distressing circumstance happens (e.g., poor staffing or technology that creates unsafe conditions, or even a medical error), causing a crescendo effect. The accumulation of these morally distressing events and environments on the nurse may result in a crescendo of moral distress. While the nurse may find resolution to the morally distressing circumstance, or the situation may simply move into history without resolution, the nurse will carry a memory of the experience, which is the moral residue (see Figure S1).

Nurses have morally distressing encounters in their day-to-day practice. In some work environments, these morally distressing experiences may be more frequent or anticipated than in others. The evidence suggests that an escalation in baseline moral residue will lead to increasingly high crescendos, and can evoke stronger reactions from nurses when awakening prior memories and negative emotions (Epstein & Hamric, 2009). To do no harm is a core principle of nurses, and violating this principle will leave many nurses feeling significant moral distress (Santos, Silva, Munari, & Miasso, 2007). Medication errors specifically have been shown to have moral implications for nurses at the personal, institutional, and professional levels (Schelbred & Nord, 2007). Nurses involved with patient safety incidents (PSIs) routinely cite perfectionism imperatives as a source of distress in the aftermath of the event (Coli, dos Anjos, & Pereira, 2010; Crigger & Meek, 2007; Jones & Treiber, 2010; Rassin, Kanti, & Silner, 2005; Scott et al., 2009; Treiber & Jones, 2010).

Building upon Epstein and Hamric's premise, with repeated morally distressing exposures and increasing moral residue, we propose that the cumulative crescendos of betrayals that occur in the context of healthcare environments can be potentially morally injurious. Morally injurious experiences (MIEs) are those, such as perpetrating, failing to prevent, or bearing witness to acts, that transgress deeply held moral beliefs and expectations (Litz et al., 2009). Violations of moral values and beliefs can put an individual at risk for burnout, post-traumatic stress disorder (PTSD), and other trauma-related problems (Currier, McCormick, & Drescher, 2015). Exposure to MIEs, or even potential morally injurious experiences (pMIEs), are associated with poor mental health outcomes (e.g., PTSD, depression, anxiety, suicidal thinking) and seem to influence behaviors such as hostility in both military and non-military contexts (Williamson, Stevelink, & Greenberg, 2018). This can also set the stage for moral injury, which can occur when there has been (a) a feeling of betrayal of what is right; (b) either by someone who holds legitimate authority (Shay, 1991, 2014) or by one's self (Litz et al., 2009); (c) in a high-stakes situation. Moral injury has most commonly been associated with war veterans.

Purpose

The purpose of this critical review is to describe symptoms of moral injury empirically observed in nurses in the aftermath of a PSI. A critical review presents, analyzes, and synthesizes material from diverse sources and is unique in that it provides an opportunity to "take stock" of the evidence (Grant & Booth, 2009). Sources from military medicine, psychiatry, and philosophy have contributed to this review of moral injury. This work is timely and significant to nursing science because it provides an overview that embodies the second victim phenomenon in a new manner, using language that is more responsive to the nurse descriptions of their lived experience.

Background and Significance

According to the WHO (2009), a PSI is defined as an event or circumstance that resulted, or could have resulted, in unnecessary or unanticipated harm to a

Journal of Nursing Scholarship, 2020; 0:0, 1–9.

patient. Henceforth, PSI will be an umbrella term for medical (including medication) errors, unanticipated adverse events, or any other care incidents related to patient safety. PSIs occur in the routines of daily healthcare practices (Conway, Federico, Stewart, & Campbell, 2011). Despite patient safety initiatives over the past two decades, medical errors continue to be the third leading cause of U.S. hospital deaths (James, 2013; Makary & Daniel, 2016).

As previously noted, new nurses particularly cite perfection as an integral component of their personal identity (Deppoliti, 2008). The PSI and events thereafter (herein considered pMIEs) may deliver a devastating blow to a nurse's deontological core—a potential violation of his or her duty ethic (Berlinger, 2005). Scott and colleagues' oft cited (2009) study found, regardless of gender, professional type (e.g., nurse, physician, pharmacist), or years of experience, that healthcare providers traumatized after involvement with a PSI determined it to be a life-altering event that left a permanent imprint on most individuals.

PSIs most often result from multisystem breakdowns in areas such as policy, organization, equipment, technology, and communications (Reason, 2000). Yet, nurses often blame themselves for these breakdowns, and feel guilty regardless of whether or not the PSI resulted in harm (Treiber & Jones, 2010). Nurses whose actions, or inactions, led to a PSI can devastate such nurses, leading them to question their own competency and skill (Scott, 2015; Scott et al., 2009). Perceptions of mistakes as deficits in character or competence make nurses reluctant to divulge errors when made or observed (Crigger, 2005). With evidence of self-blame, guilt, and changes in reporting behaviors, we believe the PSI and the circumstances in the aftermath may be pMIEs. Exposure to pMIEs can lead to negative long-term outcomes—that is, long-term emotional, psychological, behavioral, spiritual, and social symptomology (Litz et al., 2009). When applying Jinkerson's (2016) concept of moral injury as a syndrome, core symptoms of moral injury will include guilt, shame, spiritual-existential conflict, and loss of trust. Depression, anxiety, anger, re-experiencing, self-harm, and social problems are secondary symptoms of moral injury (Jinkerson, 2016).

Betrayal trauma involves a social dimension of psychological trauma, independent of PTSD reactions, and occurs when the people or institutions on which the nurse depends for surviving in the workplace significantly violate that nurse's trust and well-being (Freyd, 2008). This work is the first to classify pMIEs in the context of a PSI and in healthcare, and is the first to intentionally explore symptoms of moral injury in nurses involved with a PSI.

Methods

The researchers performed the critical review using a SALSA (search, appraisal, synthesis, analysis) method (Grant & Booth, 2009) commencing with a search of electronic data base–indexed original empirical articles (in MEDLINE, PsycINFO, Scopus, and the Cumulative Index to Nursing and Allied Health Literature) from 1980 to December 2018 (Figure S2). Medical errors were not explicitly acknowledged prior to 1980 and would not be objectively captured in empirical literature reliably, thus the limiting date (Sirriyeh, Lawton, Gardner, & Armitage, 2010). Articles were delimited to the English language and published in peer-reviewed journals focusing on the following MeSH terms: [medical errors or patient safety incident or adverse event or second victim] AND [psychological stress or emotions or psychological adaptation or occupational accidents or occupational diseases or posttraumatic stress disorder or PTSD] AND [nurses or nurse's role or nursing care or nursing staff] applying Boolean logic. Since mistakes are a universal human experience, international studies were included. Excluded works were those focused on error cause or prevention or those that did not report the individual nurse response. No limits were applied by practice setting, level of education, or definition of medical error. Specific aims, tools, and results of the evidence were reviewed, eliminating studies focusing exclusively on organizational, team, or patient outcomes. Next, we read entire articles to further rule out evidence that, when further scrutinized, had not met earlier inclusion or exclusion criteria. Limiting studies to those with nurse-only samples, 21 articles were identified (Arndt, 1994; Chard, 2010; Coli et al., 2010; Crigger & Meek, 2007; de Freitas et al., 2011; Delacroix, 2017; Jones & Treiber, 2010; Kable, Kelly, & Adams, 2018; Kao et al., 2015; Karga, Kiekkas, Aretha, & Lemonidou, 2011; Lewis, Baernholdt, Guofen, & Guterbock, 2015; Maiden, Georges, & Connelly, 2011; Meurier, Vincent, & Parmar, 1997; Quillivan, Burlison, Browne, Scott, & Hoffman, 2016; Rassin et al., 2005; Santos et al., 2007; Schelbred & Nord, 2007; Taifoori & Valiee, 2015; Treiber & Jones, 2010, 2018a, 2018b).

Results

Registered Nurse Symptoms of Moral Injury in Aftermath of PSI

Twenty-one empirical studies met our search criteria. First, studies were evaluated by design methods, then

by error definition. Next, each study measure or tool was evaluated. Finally, each study was systematically evaluated extracting our symptoms of interest (guilt, shame, spiritual-existential conflict, loss of trust, depression, anxiety, anger, re-experiencing, self-harm, and social problems). With the first reviews, only exact matches of descriptive words (i.e., "guilt") coded by the empirical results were used for coding our results. With later reviews of the empirical literature, close reading allowed for interpretive coding of our themes of interest. See each section below for a detailed description of the coding and extraction (Table S1).

Qualitative Critical Review

Qualitative designs. Of the 10 qualitative studies, one used a grounded theory approach (Crigger & Meek, 2007), and one used a purely descriptive approach (Kable et al., 2018). Four used descriptive phenomenological approaches (Coli et al., 2010; Rassin et al., 2005; Santos et al., 2007; Schelbred & Nord, 2007), and four used interpretive phenomenological approaches (Arndt, 1994; de Freitas et al., 2011; Delacroix, 2017; Treiber & Jones, 2010).

Qualitative definition of error. Five studies explicity focused on medication errors as the type of nursing error (Arndt, 1994; Rassin et al., 2005; Santos et al., 2007; Schelbred & Nord, 2007; Treiber & Jones, 2010). Five studies allowed the nurse to decide what constituted the error of significance in their nursing practice (Coli et al., 2010; Crigger & Meek, 2007; de Freitas et al., 2011; Delacroix, 2017; Kable et al., 2018).

Qualitative methods. Most of the semi-structured qualitative interviews posited the same line of questioning and thus elicited a similar discussion from the study participants (Crigger, 2005; de Freitas et al., 2011; Delacroix, 2017; Kable et al., 2018; Rassin et al., 2005; Santos et al., 2007; Schelbred & Nord, 2007). One open-ended guide allowed further and deeper interviews, thus eliciting a wider range of responses from participants (de Freitas et al., 2011).

Qualitative data coding and extraction. In 9 of the 10 studies, guilt was explicitly described. While one study did use the word "guilty," the investigators also clearly described a participant as stating,

> I suggested that the doctor use this special type of endotracheal tube for hard-to-intubate patients. … Immediately there was blood everywhere. … I have always felt that if I hadn't suggested that he use that tube, the patient wouldn't have died. (Crigger & Meek, 2007, p. 180).

We agreed this would be coded as feelings of guilt. One study did not explicitly use the word "guilt," but assigned a main theme as "primacy of responsibility" and chose to use the words "fallibility," "responsibility," and "fault" throughout the text instead of "guilt" (Delacroix, 2017). This same method applied to the symptoms of interest, including shame, spiritual-existential conflict, loss of trust, depression, anxiety, anger, re-experiencing, self-harm, and social problems.

Moral injury symptoms in qualitative literature. Critically analyzing the 10 qualitative studies, guilt was identified in 90% of the evidence (Arndt, 1994; Crigger & Meek, 2007; de Freitas et al., 2011; Delacroix, 2017; Kable et al., 2018; Rassin et al., 2005; Santos et al., 2007; Schelbred & Nord, 2007; Treiber & Jones, 2010), shame in 80% (Arndt, 1994; Crigger, 2005; de Freitas et al., 2011; Delacroix, 2017; Kable et al., 2018; Rassin et al., 2005; Santos et al., 2007; Schelbred & Nord, 2007), spiritual-existential crises in 10% (de Freitas et al., 2011), and loss of trust in 70% (Arndt, 1994; Crigger, 2005; de Freitas et al., 2011; Delacroix, 2017; Kable et al., 2018; Rassin et al., 2005; Schelbred & Nord, 2007). These qualitative studies did not specifically set out to measure or intentionally explore these symptoms, yet three of the four core moral injury symptoms emerged in more than 70% of the evidence. Secondary symptoms of moral injury were also frequently identified, including symptoms of depression (30%; de Freitas et al., 2011; Kable et al., 2018; Schelbred & Nord, 2007), anxiety (70%; Crigger, 2005; de Freitas et al., 2011; Delacroix, 2017; Kable et al., 2018; Rassin et al., 2005; Santos et al., 2007; Treiber & Jones, 2010), as well as anger (80%; Coli et al., 2010; Crigger & Meek, 2007; de Freitas et al., 2011; Kable et al., 2018; Rassin et al., 2005; Santos et al., 2007; Treiber & Jones, 2010), re-experiencing (70%; Crigger & Meek, 2007; de Freitas et al., 2011; Kable et al., 2018; Rassin et al., 2005; Santos et al., 2007; Schelbred & Nord, 2007; Treiber & Jones, 2010), self-harm (30%; de Freitas et al., 2011; Kable et al., 2018; Schelbred & Nord, 2007), and social problems (50%; de Freitas et al., 2011; Delacroix, 2017; Kable et al., 2018; Rassin et al., 2005; Schelbred & Nord, 2007). Anger was seen as self-directed or towards others. Self-harm was broadly defined as abusing alcohol or other substances (including overeating) or suicidal ideations. Other symptoms in the analysis potentially associated with moral injury included a change in worldview (60%; Crigger & Meek, 2007; de Freitas et al., 2011; Delacroix, 2017; Kable et al., 2018; Schelbred & Nord, 2007; Treiber

Journal of Nursing Scholarship, 2020; 0:0, 1–9.

& Jones, 2010), consideration of leaving a job or the profession (30%; de Freitas et al., 2011; Delacroix, 2017; Schelbred & Nord, 2007), hyperarousal (50%; de Freitas et al., 2011; Delacroix, 2017; Kable et al., 2018; Santos et al., 2007; Schelbred & Nord, 2007), physical symptoms (30%; de Freitas et al., 2011; Delacroix, 2017; Schelbred & Nord, 2007), and attempts at making meaning of the PSI and the aftermath (50%; Arndt, 1994; Delacroix, 2017; Kable et al., 2018; Santos et al., 2007; Treiber & Jones, 2010) (Table S2).

Quantitative Critical Review

Quantitative designs. Six of the seven quantitative studies used descriptive correlational study methods (Chard, 2010; Kao et al., 2015; Karga et al., 2011; Lewis et al., 2015; Meurier et al., 1997; Quillivan et al., 2016). One used purely descriptive methods (Taifoori & Valiee, 2015).

Quantitative definition of error. One quantitative study explicity used medication errors as the type of nursing error (Kao et al., 2015). Five quantitative studies allowed the nurse to decide what constituted the error of significance in their nursing practice (Chard, 2010; Karga et al., 2011; Lewis et al., 2015; Quillivan et al., 2016; Taifoori & Valiee, 2015). And one quantitative study specified an error definition that was not medication related (Meurier et al., 1997).

Quantitative measures. Six of the seven quantitative studies used unique measures with their study population. Lewis et al. (2015) used the Maslach Burnout Inventory plus the Agency for Healthcare Research and Quality Hospital Survey on Patient Safety Culture. Chard (2010) created the Perioperative Nurse Questionnaire, which Taifoori and Valiee (2015) translated and reproduced in their assessment of Iranian operating room nurses. Meurier and colleagues (1997) modified a 1991 22-item questionnaire that Wu et al. (1991) had developed to assess house officer mistakes. Karga et al. (2011) then modified Meurier's tool. Kao and colleagues (2015) created the Inventory for Perceptions of Medication Administration Errors in Taiwan. Lastly, Quillivan et al. (2016) used the Second Victim Experience and Support Tool, which measures both personal and organizational outcomes.

Moral injury symptoms in quantitative literature. Critically analyzing the seven qualitative studies, guilt and shame were measured in 57% of the studies (Chard, 2010; Karga et al., 2011; Meurier et al., 1997; Taifoori & Valiee, 2015) and loss of trust in 43% (Karga et al., 2011; Meurier et al., 1997; Taifoori & Valiee, 2015); spiritual-existential crisis were not measured in any of the seven studies. Depression (43%; Chard, 2010; Karga et al., 2011; Taifoori & Valiee, 2015), anxiety (57%; Chard, 2010; Kao et al., 2015; Karga et al., 2011; Meurier et al., 1997), anger (57%; Chard, 2010; Karga et al., 2011; Meurier et al., 1997; Taifoori & Valiee, 2015), re-experiencing (29%) (Chard, 2010; Meurier et al., 1997), self-harm (14%) (Meurier et al., 1997), and social problems (71%) (Chard, 2010; Kao et al., 2015; Karga et al., 2011; Lewis et al., 2015; Meurier et al., 1997) were also highly prevalent. In this exploration, other symptoms found to be potentially associated with moral injury included a change in worldview (57%; Chard, 2010; Karga et al., 2011; Lewis et al., 2015; Meurier et al., 1997), intention to leave (29%; Kao et al., 2015; Karga et al., 2011), and physical symptoms (14%; Taifoori & Valiee, 2015) see Table S3.

Mixed-Methods Studies Critical Review

Mixed study methodology designs. All four of the mixed-methods studies used descriptive methods for at least one of their main study designs, with two studies using mixed descriptive methods (Treiber & Jones, 2018a, 2018b). One also applied interpretive phenomenology (Jones & Treiber, 2010), whereas Maiden and colleagues (2011) applied correlational statistical methods.

Mixed-methods studies definitions of error. All four studies explicity used medication errors as the type of nursing error (Jones & Treiber, 2010; Maiden et al., 2011; Treiber & Jones, 2018a, 2018b).

Moral injury symptoms in mixed-methods literature. Critically analyzing the four mixed-methods studies, shame was identified in 75% of the evidence (Jones & Treiber, 2010; Maiden et al., 2011; Treiber & Jones, 2018b), while guilt (Jones & Treiber, 2010), loss of trust (Jones & Treiber, 2010), and spiritual-existential crisis (Maiden et al., 2011) were present in 25% of studies. Depression (Jones & Treiber, 2010) and re-experiencing (Treiber & Jones, 2018a) were found in 25% of the evidence. Anxiety (Maiden et al., 2011; Treiber & Jones, 2018a, 2018b) and anger (Jones & Treiber, 2010; Treiber & Jones, 2018a, 2018b) were also common secondary moral injury symptoms in the mixed-methods studies, present in 75% of the evidence. Intention to leave (Maiden et al., 2011) was captured in 25% of these studies, and physical symptoms (Treiber & Jones, 2018a, 2018b) were in 50% of the mixed-methods studies (Table S4).

Potential morally injurious experiences associated with a PSI. To date, there is no published

work examining the degree to which PSIs and the aftermath of such occurrences result in potential moral injury, and this gap limits our understanding of the unique experiencing of nurses after a PSI.

With the evidence presented of core, secondary, and other potential symptoms associated with moral injury in this review of literature of nurses involved with a PSI, we believe the PSI and circumstances in the aftermath are pMIEs. MIEs most often stem from organizational circumstances, environmental circumstances, cultural and relational circumstances, and/or psychological circumstances (Currier et al., 2015). Like moral distress, many of these same pMIE circumstances are rooted in the same minefields that betray nurses in daily practice (organizational, environmental, and cultural or relational circumstances; Hamric, Borchers, & Epstein, 2012).

In the setting of a PSI, established morally distressing hazards can become pMIEs. For example: practicing in high stakes, rapidly dynamic, environments with limited resources (e.g., lack of functional, appropriate, or up-to-date equipment or technologies (Chard, 2010; Jones & Treiber, 2010; Taifoori & Valiee, 2015; Treiber & Jones, 2018b); poor staffing (Arndt, 1994; Maxfield, Grenny, McMillan, Patterson, & Switzler, 2005; Meurier et al., 1997; Taifoori & Valiee, 2015); punitive response to PSIs (negative experiences with harsh or even unjust application of consequences; Arndt, 1994; Jones & Treiber, 2010; Karga et al., 2011); unsupportive leadership or unhelpful and insensitive comments by colleagues (Arndt, 1994; Delacroix, 2017; Schelbred & Nord, 2007), or conversations avoided altogether (Meurier et al., 1997; Schelbred & Nord, 2007); lateral or horizontal bullying or violence in the workplace (i.e., "feeling blamed by physicians" (Schelbred & Nord, 2007, p. 316) or being made a "scapegoat" (Karga et al., 2011; Meurier et al., 1997). Interestingly, even when systems or environments are recognized to contribute to errors, "nurses did little to exonerate or aide the affected (nurse)"; Jones & Treiber, 2010, p. 215), an attestation to the difficulty nurses may encounter in finding support in the aftermath of a PSI, even by their colleagues, adding to the crescendo of distress and pMIE.

Limitations

This literature review stems from a sample size of eligible evidence (n = 21). Two of the four mixed-methods studies appear to be sampled from the same populations (Jones & Treiber, 2010; Treiber & Jones, 2010, 2018a, 2018b). While a critical review may be criticized as compared to more structured approaches of literature reviews, the emphasis of this particular type of review is on the conceptual contribution of the literature. The interpretative elements of a critical review are necessarily subjective, and the resulting product is the starting point for further evaluation, not an endpoint in itself.

Discussion

Nurses involved with PSIs are exposed to MIEs such as staffing letdowns, technology failures, and condemning or nonsupportive work environments (i.e., in which individual clinicians are held accountable for system failings over which they have no control), similar to the betrayals first described herein by frontline hospital nurses. In this review, core moral injury symptoms were prevalent, including guilt, shame, spiritual-existential crisis, and loss of trust. Secondary and other potential symptoms were also documented, including depression, anxiety, anger, self-harm, social problems, leaving a job or the profession, and change in worldview. While neither moral injury nor pMIEs have been explored theoretically or empirically elsewhere in the literature of nurses in the aftermath of a PSI, this work validates the phenomenon as operationalized according to Jinkerson (2016). MIEs are difficult to reconcile, and giving them meaning consistent with one's own worldview can be difficult. In fact, moral injury has been described as "a deep soul wound that pierces a person's identity, sense of morality, and relationship to society" (Silver, 2011).

Clinical Relevance

This moral injury research is aimed at exposing the complex betrayal traumas affecting the safety, retention, and satisfaction of our nursing workforce. Moral injury describes the potential totality of what has historically been referred to as the second victim phenomenon, without the victimization associated with this label. Through identification of pMIEs and the symptoms of moral injury, nurses and organizations can be empowered to advance training and intervention programs addressing pMIEs and moral injury stemming from organizational, environmental, cultural or relational, and psychological circumstances that affect nurses' safety, resilience, and retention in the aftermath of a PSI.

The implications of this work are critical in the broad context of the retention of our nursing workforce. Once we name these moral betrayal traumas, we can begin to reframe them and rebuild our moral community with an aim towards healing and retaining our highly qualified workforce. Creating and advancing nursing knowledge in moral injury research is urgent

for building safe, resilient, and thriving moral nursing communities.

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Clinical Resources

- Moral injury in nurses. https://www.youtube.com/watch?v=M-UUS_a13v4
- Syracuse University. The Moral Injury Project. http://moralinjuryproject.syr.edu/
- Uniformed Services University, Center for Deployment Psychology. Staff perspective: On moral injury. https://deploymentpsych.org/blog/staff-perspective-moral-injury
- Volunteers of America. Moral injury resources. https://www.voa.org/moralinjury-resources

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Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's web site:

Figure S1. Model of Moral Distress Crescendo Effect (Epstein & Hamric, 2009, p. 15).

Figure S2. SALSA search results.

Table S1. Results of Critical Review of Empirical Literature (Nurses Involved With a PSI).

Table S2. References of Critical review of Qualitative Empirical Literature (Nurses Involved With a PSI).

Table S3. References of Critical Review of Quantitative Empirical Literature (Nurses Involved With a PSI).

Table S4. References of Critical Review of Mixed Methods Empirical Literature (Nurses Involved With a PSI).