CLEARINGHOUSE
FOR MILITARY FAMILY READINESS

Secondary Traumatic Stress in Nurses:

Rapid Literature Review

Clearinghouse Technical Assistance Team

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Table of Contents

Executive Summary

We conducted a brief literature review on Secondary Traumatic Stress (STS) for nurses and medical personnel and found that there is limited research available on STS. However, it is evident that there needs to be further research and development of programs to prevent and treat STS to preserve and enhance nurses' interpersonal and empathetic abilities to care and show compassion for their patients (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010). Our goal is that the findings from this literature review can provide some insight into STS practices and strategies that hospitals and agencies can utilize to support nurses and medical personnel.

Risk factors to developing STS include:

- Working closely with clients that have experienced trauma
- Personal stressors
- Interpersonal stressors
- Health care system stressors
- Professional stressors
- Lack of social support
- Lack of stress relief management techniques

The effects of STS include:

- Poor problem solving
- Poor decision making
- Poor concentration
- Difficulty sleeping
- Intrusive thoughts about patients
- Irritability
- Fear for the future
- Diminished activity level

Recommendations for program consideration include:

- Increased support systems
- Stress relief strategies
- Education about the risk factors and symptoms of STS
- Self-care as technique to prevent stress
- Institutional awareness about the risk STS presents to its nurses

Current knowledge about STS indicates that a program looking to address STS should include support systems, stress management, education about risk factors and symptoms, and self-care (Beck, 2011; Dominguez-Gomez & Rutledge, 2008; Duffy, Avalos, & Dowling, 2015; Gates & Gillespie, 2008; Hinderer et al., 2014; James & Badger, 2001; Von Rueden et al., 2010; Witt Sherman, 2004). In addition to the development of programs, institutions need to be aware of the impact of STS so they can support nurses and personnel who interact with those experiencing trauma.

Introduction

Secondary Traumatic Stress (STS) is composed of the emotions and behaviors one experiences after being exposed to someone else's trauma (Von Rueden et al., 2010). The secondary effects of trauma can be as severe as those felt by the person that experienced the trauma, which means that symptoms of Secondary Traumatic Stress Disorder (STSD) are similar or the same as those for Post-Traumatic Stress Disorder (PTSD; Beck, 2011; Gates & Gillespie, 2008; James & Badger, 2001). STS is commonly broken down into three types of symptoms such as intrusions, avoidance, and arousal (Beck, 2011; Dominguez-Gomez & Rutledge, 2008; Duffy et al., 2015). These symptoms can have an acute onset following exposure to a single traumatic event or as the result of repeat exposure to trauma (Dominguez-Gomez & Rutledge, 2008), see Table 1.

Table 1
Definitions and Examples of STS Symptoms

Symptom Type	Definition	Examples of Common Symptoms
Intrusion	Re-experiencing of a traumatic event (Dominguez-Gomez & Rutledge, 2008).	• Intrusive thoughts about clients • Cued psychological distress (Duffy et al., 2015)
Avoidance	Evasion of stimuli related to the traumatic event (Dominguez-Gomez & Rutledge, 2008).	• Feeling discouraged about the future • Feeling emotionally numb (Duffy et al., 2015)
Arousal	Heightened agitation (Dominguez-Gomez & Rutledge, 2008).	• Irritability • Feelings of being easily startled (Duffy et al., 2015)

Researchers have been looking at the prevalence of STS, its symptoms, and predictors by using a variety of research designs and measures, see table 2 for common measures of STS. Research measuring the prevalence of STS in nurses has shown that they are a particularly at-risk population. In a study conducted by Duffy et al. (2015), data was collected from a variety of different types of nurses (i.e., staff nurses, clinical nurse managers, pediatric nurses, and advanced nurse practitioners), of this sample 65% met criteria for STS and all three core diagnostics of PTSD and 36% of the sample met no criteria for STS. This study had particularly high rates of STS, which the researchers attributed to the work environment. In another study by Dominguez-Gomez and Rutledge (2008), 15% of nurses in the sample met no criteria for STS, 32.8% met all 3 criteria, 60% reported at least one symptom of intrusion, and 56% reported at least 2 arousal symptoms. These findings emphasize how common STS can be among this population and why further research is needed.

Table 2
Common Measure of STS

Measure	Outcome	Citation
Professional Quality of Life Scale (ProQOL)	Burnout Compassion Fatigue Compassion Satisfaction	(Crumpei & Dafinoiu, 2012; Hinderer et al., 2014; Hooper et al., 2010)
Penn Inventory	PTSD	(Hinderer et al., 2014; Von Rueden et al., 2010)
The Secondary Traumatic Stress Scale (STSS)	Intrusion Avoidance Arousal	(Beck, 2011; Dominguez-Gomez & Rutledge, 2008; Duffy et al., 2015)

STS can have dire effects on the nurses vulnerable to it as well as the patients in their care. It is important to address STS because it is linked to burnout, compassion fatigue, high levels of turnover, absences from work, distress, and overall diminished work performance (Clark & Gioro, 1998; Dominguez-Gomez & Rutledge, 2008; Duffy et al., 2015; Gates & Gillespie, 2008). If these symptoms go unrecognized and STS is left unaddressed it may develop into STSD (Witt Sherman, 2004).

Findings

Risk Factors for Developing STS

Even though nurses in general tend to be resilient, repeated exposure to trauma can compromise a nurses ability to cope with stress (James & Badger, 2001). Stress can come from a variety of sources such as personal, interpersonal, health care system, and professional stressors (Witt Sherman, 2004).

Personal stressors that put nurses at risk for STS can include grief from witnessing patients die or treating chronically ill patients (Witt Sherman, 2004). A systematic review conducted by Beck (2011) found that participants with higher levels of personal stress experienced more compassion fatigue (CF) in multiple studies. The most frequently reported triggers of CF in a sample of nurses that worked with chronically ill children included painful procedures done to children, high levels of sadness, high number of deaths of children with chronic illness, becoming overly involved with their patients, or crossing professional boundaries (Beck, 2011).

Interpersonal stressors include stress resulting from interactions with clients or their families (Witt Sherman, 2004). Skills needed when responding to patients and families, such as effective communication and psychosocial skills can be a source of interpersonal stress for nurses, as can caring for patients whose families have substance abuse, violence, or depression issues (Witt Sherman, 2004). Medical personnel that interact with victims of traumatic events and clients with PTSD experience a significantly higher level of STS compared to other medical personnel that do not interact with victims of

traumatic events (Clark & Gioro, 1998; Crumpei & Dafinoiu, 2012). For example, one study found that medical assistants working in emergency departments had a significantly higher risk of experiencing STS (Crumpei & Dafinoiu, 2012) and another study found that nurses who worked in an emergency department, critical care, and sexual assault unit were at a higher risk (Clark & Gioro, 1998). Also, Gates and Gillespie (2008) found that nurses that had a history of trauma are at more risk when exposed to clients with trauma.

Professional stressors such as level of self-efficacy and health care system variables also put nurses at risk for the development of STSD (Clark & Gioro, 1998; Witt Sherman, 2004). Greater compassion fatigue scores were associated with more years in direct patient care and more blurring of caregiver boundaries (Beck, 2011; Gates & Gillespie, 2008; Von Reuden et al., 2010). On the other hand, nurses with STS had fewer years in nursing than those without STS (Von Rueden et al., 2010). Heavy workloads and long work hours may also be related to the development of STS (Gates & Gillespie, 2008; Witt Sherman, 2004). Hinderer et al. (2014) found the burnout and CF were related to years in current position, hours per shift, and percentage of time in direct patient care. However, Dominguez-Gomez and Rutledge (2008) found no significant correlation between STS and years in nursing or hours worked.

Nurses lacking social support and stress relief strategies are at particular risk for STS (Clark & Gioro, 1998; Gates & Gillespie, 2008). For example, nurses with burnout reported fewer supports, exercised less, had poorer coworker relationships, and used less meditation. CF correlated negatively with hobbies and coworker relationships. Nurses with higher CF had fewer hobbies and reported weaker coworker relationships. Stress reactions are worse when caring for patients who suffer severe trauma, death, are sexually assaulted, or are injured as a result of heinous crimes or combat. (Gates & Gillespie, 2008). In terms of stress coping, people may not cope well with hearing other people's traumas if they cannot cope well with their own.

There is also some debate about the role that compassion and empathy have in the development of STSD. Researchers, Gates and Gillespie (2008) found that empathetic nurses were at elevated risk for STS. However, Crumpei and Dafinoiu (2012) found that compassion was predictive of STS and not clinical empathy. While compassionate medical workers report more intrusive and avoidant symptoms, there is no relationship between clinical empathy and STS. This suggests that it may be compassion rather than empathy that endangers the nurses (Crumpei & Dafinoiu, 2012).

Effects of STS

The symptoms of STSD may affect a nurses' productivity at work, which may be a safety concern for patients and other medical personnel. Nurses suffering from STS face many consequences in both their personal and work life such as poor problem solving, decision making, and concentration. Nurses may also experience a decrease in nursing productivity and caregiver compassion (Gates & Gillespie, 2008). One study found that participants with STS were more likely to report stress relieving strategies such as change of career, seeking help from a counselor, and using alcohol (Duffy et al., 2015).

The symptoms of STS alone can be extremely disruptive; for example, the most common symptoms reported include difficulty sleeping, intrusive thoughts about patients, irritability, a foreshortened future, and diminished activity level (Beck, 2011; Dominguez-Gomez & Rutledge, 2008). People suffering from STS tend to experience systems that can be categorized into one of three categories including instruction, avoidance, and arousal (Dominguez-Gomez & Rutledge, 2008; Duffy et al., 2015). In terms of intrusion, participants most commonly reported unintentional thoughts of patients and experiencing upsetting reminders of patients (Dominguez-Gomez & Rutledge, 2008; Duffy et al., 2015). The most common avoidance symptoms appear to be avoidance of clients, diminished activity levels, emotional numbing, and feeling discouraged about the future (Dominguez-Gomez & Rutledge, 2008; Duffy et al., 2015). The most commonly reported arousal symptoms were irritability and the feeling of being easily startled.

STS, Burnout, Compassion Fatigue, and Compassion Satisfaction

Many researchers are interested in the relationship between STS, burnout, CF, and compassion satisfaction (CS), see Table 3 for definitions. The literature often refers to STS and CF interchangeably; however, STS appears to be a more evolved definition from what researchers used to label CF. In addition, burnout appears to commonly be comorbid with both CF and STS.

Table 3
Related Definitions

Variable	Definition
Compassion Fatigue	When a nurse loses their ability to nurture their patients (Hinderer et al., 2014).
Burnout	Burnout is the result of chronic emotional and interpersonal stressors on the job (Hooper et al., 2010).
Compassion Satisfaction	The rewarding feeling that comes as a result of caring for an ill or traumatized person that balances out the negative aspects of working with this population (Hinderer et al., 2014; Hooper et al., 2010)

Hinderer et al. (2014) investigated how these variables work together. The researchers found that 35.9% of nurses in their sample had scores suggestive of burnout or high risk

of burnout. In addition, 27.3% of participants reported scores that qualified them for CF. In terms of CS, 78.9% demonstrated above average CS and 21.1% of nurses had a score indicating low CS. Finally, only 7% of nurses' scores indicated STS. When examining the actual relationships between these groups, they found that burnout and CF were positively correlated; however, both were negatively correlated with CS, meaning that higher levels of burnout and CF were associated with lower CS scores. Higher CS scores were associated with lower STS scores. In a linear regression burnout, CF, and CS accounted for 35.9% of the variability and they found that burnout and CS were significant predictors of STS. The higher rate of CF in the study may be explained by the fact that the nurses in the sample worked in an environment that entirely served trauma victims and worked longer hours (Hinderer et al., 2014).

Recommendations

This literature review provides only a brief look at the literature available regarding nursing and STS; however, it is evident that there needs to be more research and development of programs to prevent and treat STS. Programs are needed to preserve and enhance nurses' interpersonal and empathetic abilities to care and show compassion for their patients (Hooper et al., 2010). The findings from these articles can give insight into the areas that may be important for programs to address or steps that hospitals and agencies need to take to protect their nurses.

Support Systems

One commonly identified protective factor across a variety of studies was support systems. In one study, the researchers discovered that nurses with STS were less likely to receive support from family and friends and had significantly fewer support systems (Von Rueden et al., 2010). There are a variety of different types of support systems that nurses could utilize such as informal, therapy, and group support (see table 4; James & Badger, 2001).

Table 4
Types of Support

Type of Support	Example	Citation
Informal Support	Talking with a trusted colleague	(James & Badger, 2001)
Therapy	Cognitive Behavioral Therapy Family therapy	
Group Support	Structured group meeting with a mental health specialist	

Von Reuden et al. (2010) found that the majority of trauma nurses (64.8%) reported their support systems as strong and that family was the most frequently reported

support, followed by friends and coworkers. Duffy et al. (2015) also found that the majority of their participants reported that having a friend or mentor at work helped alleviate stress. STS is less likely to be experienced in nurses that utilize support systems. External support systems and work environment may have an important mitigating effect on the incidence of STS (Von Rueden et al., 2010). Another group of researchers, Hinderer et al. (2014), found that burnout was negatively correlated with supports, which indicates that people with more support available to them are less likely to experience burnout. This same relationship existed between burnout and coworker relationships.

These findings suggest that STS may be prevented through the development of targeted support programs (Duffy et al., 2015). Institutions with nurses should increase the strength of relationships between coworkers and enhance a healthy work environment through organizational team building (Dominguez-Gomez & Rutledge, 2008; Hinderer et al., 2014).

Stress Relief Strategies

Von Reuden et al. (2010) found that nurses are less likely to experience STS if they use coping strategies to manage stress. The researchers also found that exercise and hobbies were the most common coping strategies (Hinderer et al., 2014; Von Reuden et al., 2010). Nurses experiencing STS were less likely to participate in hobbies and more likely to use medicine to cope (Von Rueden et al., 2010). Nurses that used hobbies to cope with stress had lower rates of CF (Hinderer et al., 2014). In addition, burnout was negatively correlated with supports, exercise, and meditation and CS was positively correlated with the use of exercise and meditation to cope. On the other side, nurses using medicine to cope were more likely to have experienced burnout and had lower rates of CF (Hinderer et al., 2014).

Research suggests that coping strategies are necessary to reduce burnout, CF, STS, and increase CS (Hinderer et al., 2014). One common coping strategy is informal or formal debriefings with nurses following exposure to trauma (Dominguez-Gomez & Rutledge, 2008; Gates & Gillespie, 2008). Nurse managers should urge nurses suffering from STS to seek appropriate counseling and use stress management techniques (Dominguez-Gomez & Rutledge, 2008). A program looking to target STS should have some focus on the development of stress relief tactics (James & Badger, 2001).

Education

A common theme across the reviewed articles was that nurses need to be educated about the signs and risk of STS (Beck, 2011; Clark & Gioro, 1998; Crumpei & Dafinoiu, 2012; Dominguez-Gomez & Rutledge, 2008; Duffy et al., 2015; Gates & Gillespie, 2008; Hinderer et al., 2014; Hooper et al., 2010). Some nurses may feel that their training has prepared them to deal with trauma, but they need to be further educated on the existence of STSD and its signs and symptoms (Gates & Gillespie, 2008). In fact, the

rates of STS decreased at one hospital in Colorado after an educational program, covering the risk factors and symptoms of STS, was implemented (Duffy et al., 2015).

Beck (2011) suggests that nurses learn about ways to prevent STS and increase their resilience through continuing education courses. Older nurses with more education and support were more resilient to STS (Beck, 2011). The work by Crumpei and Dafinoiu (2012) supports the idea of advocating for teaching nurse specialist's working with trauma patients on how to show empathy while avoiding compassion and the emotional contagion that may lead to STS. Education about STS appears to be an integral piece in the prevention of STS.

Self-Care

Self-care is often thought of as a way to combat daily stressors (Duffy et al., 2015; James & Badger, 2001; Witt Sherman, 2004). Self-care and the development of self-confidence can act as a buffer between experiencing a stressful event and suffering from the symptoms of stress (Witt Sherman, 2004). It is important that nurses take care of their bodies, emotions, and mind to ensure they can provide the best care for their patients (Witt Sherman, 2004).

An element of self-care may be an important item to look for when choosing a program for STS. The concept of self-care can be taught alone and supplemented with methods to care for oneself. Some self-care methods include self-reflection, self-monitoring, journaling, avoiding negative thoughts, follow basic health principles, meditation, relaxation, and reflecting on the rewards of their work (James & Badger, 2001; Witt Sherman, 2004).

Awareness at the Institutional Level

Nurses can also be assisted if their institutions are aware of STS and understand the consequences it may have. Gates & Gillespie (2008) suggest that if institutions do not recognize the risks associated with STS, then nurses are less likely to seek help, especially if they fear retribution or loss of respect. Institutions will be more likely to implement a STS program or intervention to assist their nurses facing trauma if they are aware of the effect it may have on their employees. This knowledge will also help them understand the symptoms of STSD and provide some explanation to why a nurse is performing poorly (Gates & Gillespie, 2008).

Gate and Gillespie (2008) suggest assistance be provided through staff development regarding trauma therapy (Gates & Gillespie, 2008). Nurse managers should focus on strategies that focus on relationship-centered values and promote a culture of caring that recognizes the extraordinary acts of staff with patients on a day-to-day basis (Hooper et al., 2010). In general, nursing and hospital administrators should advocate for appropriate resources, staffing, and reasonable workloads (Witt Sherman, 2004).

Conclusion

STS is a growing field of research and the development of programs and interventions to prevent STSD should be further researched and pursued. Current knowledge about STS indicates that a program looking to address STS should include: support systems, stress management, education about the risk factors and symptoms, and self-care (Beck, 2011; Dominguez-Gomez & Rutledge, 2008; Duffy, Avalos, & Dowling, 2015; Gates & Gillespie, 2008; Hinderer et al., 2014; James & Badger, 2001; Von Rueden et al., 2010; Witt Sherman, 2004). In addition to the development of programs, institutions need to be aware of the impact of STS so they can support nurses and medical personnel who interact with those experiencing trauma.

Suggested Citation

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