

Secondary Traumatic Stress and Child Welfare

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Abstract

Although secondary traumatic stress (STS) has garnered some attention in related human service fields, it has only recently begun to be investigated in child welfare. In this article I offer a detailed description of the problem of secondary traumatic stress (STS) in child welfare. The focus of this article is on child welfare in the United States; however the ideas and principles may cut across international systems of child protection. First I provide a background to justify a need for a continuing dialogue regarding STS and its impact on workers. I then provide a comprehensive review of the literature including both the current state of research and emerging theory regarding STS. Also, I offer a rationale for more research regarding the impact of STS on child welfare workers. The current state of the existing STS literature provides indicators of future needs, however still is filled with mainly gaps and silences.

Key Words: Secondary traumatic stress, Child welfare, Vicarious trauma, Work stress, Workforce development

In this article I offer a detailed description of the problem of Secondary Traumatic Stress (STS) in child welfare. The focus of this article is on child welfare in the United States; however the ideas and principles may cut across international systems of child protection. First I provide a background to justify a need for a continuing dialogue regarding STS and its impact on workers. I then provide a comprehensive review of the literature including both the current state of research and emerging theory regarding STS. Also, I offer a rationale for more research regarding the impact of STS on child welfare workers. Currently, there is a dearth of empirical research regarding the causes, correlates, incidence, and impact of STS in child welfare. The current state of the existing STS literature provides directions, guidelines, and indicators of future needs, however still is filled with mainly gaps and silences.

Introducing STS: Relevant Background

Trauma is a contributing factor, also called a "co-morbid factor," in many of the mental illnesses identified in the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revised (DSM-IV TR). Theorists and researchers alike have identified the concerns in this area (Figley, 1995a; Herman, 1992; Hudnall-Stamm, 1999; McCann & Pearlman, 1990). Most of the previous trauma research has focused on everyday people who have expe-

rienced traumatic events. Understandably this is and should be the priority. Where human services professionals are concerned, the main priority has been how they can be prepared to intervene effectively with clients suffering from primary trauma.

It is often the case that service providers in therapeutic and psychosocial settings offer services to individuals who have been traumatized in a primary manner. Part of the treatment may involve the client re-experiencing the traumatic event while describing the actual occurrence to the worker. This treatment approach is common in many settings including psychotherapy clinics, domestic violence shelters, and child protection agencies. Workers in these settings can develop symptoms that mirror Posttraumatic Stress Disorder (PTSD). The impact of the symptoms of STS can be devastating to both the individual providing the service and the client.

Study of STS among human services workers is a rather recent phenomenon. For example, the effect of STS on mental health workers is an area of inquiry that has only recently become a focus. Other fields of practice, especially child welfare practice, are finally garnering the attention they deserve because human services professionals confront extraordinary stress in their jobs.

STS is a concern for human service workers in much the same way that PTSD, or primary stress, is for individuals. Disruptions occur in an individual's physical and mental health that can cause difficulty in one's personal, relational, and occupational functioning. For this reason, study interest in this area has increased in recent years. I next define the main terms found in the literature and those that are essential to understanding the impact of STS on child welfare workers.

Conceptualizing and Defining STS

There is a considerable range in the definitions of trauma in the literature and controversy about the various definitions. STS has a distinct definition, which differentiates it from related phenomena. For the purpose of this literature review, I will use the work of Figley to define STS. Figley (1995a) defines STS as "the natural and consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a significant other, the stress resulting from helping or wanting to help a traumatized or suffering person" (p. 7).

Figley's conceptualization of STS is similar to other concepts such as vicarious trauma, compassion fatigue, burnout, and counter-transference. Notwithstanding these similarities, important distinctions remain salient.

For example, although vicarious trauma and STS are related, they are not the same. Vicarious trauma (VT) involves more changes in "cognitive schemas" where STS involves more "post-traumatic symptoms" (Jenkins & Baird, 2002; O'Halloran & Linton, 2000). An individual suffering from STS may experience symptoms that mirror those of PTSD; numbing, hyperarousal, and hypervigilance. Individuals suffering from VT may have a more impacted world view and perceptions.

Burnout is also related to STS. Leiter and Maslach (1988) note that burnout includes "feelings of being emotionally overextended and drained by one's contact with other people" (p. 297). In addition, burnout occurs more slowly over time and is more related to events that continue for an extended period (Maslach, 1998). STS can occur suddenly from one traumatic event (Figley, 1995a). For example, an individual is more likely to experience burnout after working at a child welfare job over and extended period of time. STS can occur from one specific incidence of contact with a traumatized individual at time when all else has been well on the job for the worker.

Counter-transference is a psychodynamic term and defined as the therapist's own internal intra-psychic reaction to the client in the therapy process. Although each of these concepts are intertwined, they are not the same as STS. PTSD is the main trauma disorder identified in the DSM-IV TR. The symptoms of STS can mirror those of PTSD.

PTSD is a mental health disorder in the DSM-IV TR (American Psychological Association, 2000). According to the DSM-IV TR, the diagnosis contains the following:

The essential feature of Posttraumatic Stress Disorder is the development of characteristic symptoms following exposure to an extreme traumatic stressor involving direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate (Criterion A1). The person's response to the event must involve intense fear, helplessness, or horror (or in children, the response must involve disorganized or agitated behavior) (Criterion A2). The characteristic symptoms resulting from the exposure to the extreme trauma include persistent re-experiencing of the traumatic event (Criterion B), persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (Criterion C), and persistent symptoms of increased arousal (Criterion D). The full symptom picture must be present for more than 1 month (Criterion E), and the disturbance must cause clinically significant distress or impairment in social, occupational, or other important areas of functioning (Criterion F) (p. 468) (See Appendix A for full criteria).

PTSD has both behavioral and physical components and affects the central nervous system.

Primary and Secondary Trauma: Causes and Effects

The DSM-IV TR clearly states that events do not need to be experienced in a primary manner to cause traumatic stress. However, thus far, the DSM-IV TR has not specifically included STS as a disorder. Figley (1995a) states that these two phenomena are very much related, but there are also fundamental differences between the sequelae or pattern of response during and following a traumatic event for people exposed to primary stressors and for those exposed to secondary stressors. Further, the *symptoms* of posttraumatic stress and what Figley refers to as "secondary traumatic stress disorder" closely mirror each other.

Traumatic experiences resulting in traumatic stress can affect every part of the central nervous system. All areas of the brain and endocrine system are impacted. The stress on the nervous system disrupts blood pressure, breathing, heart rate, and virtually every other biological function (Everly & Laiting, 1995; Southwick, Krystal, Johnson, & Charney, 1995; van der Kolk, 1996; van der Kolk et al., 1996). Psychophysical effects, neurohormonal, neuroanatomical, and immunological effects are also well documented (van der Kolk, 1996).

Empirical evidence of the effects of trauma in children is also documented (Cohen, Perel, DeBellis, Friedman, & Putnam, 2002; Perry, Pollard, Blakely, Baker, & Vigilante, 1995). Cohen, et al. (2002) state, "There is a limit to the amount of stress that any organism can adapt to while maintaining homeostasis. Beyond that point, the very psychobiological mechanisms that typically allow an individual to function well under stress may act in ways that contribute to, maintain, or even cause disease" (p. 92). Child welfare workers interact with children who have experienced such trauma on a daily basis. The impact that this interaction has on the worker is only beginning to be researched.

Although this is a relatively new field of inquiry, there are studies that exist and show preliminary evidence that STS may be an important and potentially hazardous issue for human service workers inclusive of those working in child welfare. Due to the dearth of literature on STS and child welfare, it is necessary to include the most closely related professions in human services when assessing the current state of the literature on the topic. As the concept of compassion fatigue is most closely related to STS, it will also be included in instances where the study samples are most closely related to child welfare.

Presently STS is under-researched and particularly so in child welfare. Previous studies have identified aspects of particular jobs, including tasks that child welfare workers are responsible for, which create a high degree of risk for STS (Regehr, Hemsworth, Leslie, Howe, & Chau, 2004). Due to the responsibilities that child welfare workers are required to complete on a daily basis they appear to be particularly in harms way and may be at high risk for significant levels of STS. Examples include but are not limited to hearing narratives from children and families about incidence of physical abuse, sexual abuse, abandonment, extreme neglect, domestic violence and the results of extreme circumstances of poverty.

Work Related Stressors Unique to the Child Welfare System

While child welfare services have been part of the social work profession in the United States since the early 1900s, the emphasis on the investigation of child maltreatment reports is fairly recent. It was not until 1967 that all 50 states had child abuse laws (Nelson, 1984). Child abuse reporting systems require states to provide services which receive and investigate reports of child maltreatment 24 hours a day, seven days a week throughout the year. Workers are responsible for carrying out child safety assessments and ensuring the protection of children, while also identifying needed services and linking families to these services. Many of the risk factors that are identified in the current STS literature are found in the demands of the work as well as the organization of the service delivery system in child welfare. Individual stressors, organizational stressors, and critical incidents on the job, all potentially place child welfare workers at risk for suffering STS (Regehr et al., 2004).

Child welfare workers have difficult, stressful jobs that frequently offer little reward. The guiding principles and ideals of child welfare are "child safety and family support, child and family well being, community supports for families, family centered services, and cultural competence" (Pecora, Whittaker, & Maluccio, 2000, p. 5). However, it is apparent that the child welfare system falls short in providing organizational supports which assist workers to meet these goals. "Unfortunately, too many child welfare practitioners work in toxic work environments characterized by unclear organizational missions, overcrowded office space, poor supervision, low salaries, large caseloads, and troubled working relations between co-workers or other program units" (Pecora et al., 2000, p. 431). Further, workers are asked to perform dual roles that are diametrically opposed. They are expected to build trusting and helping relationships with their clients while investigating them and perhaps removing their children (Pelton, 1989). This investigative role causes an antagonistic relationship to develop between clients and workers (Pelton, 1989). Figley (1995a) states that worker empathy is an important factor that may increase the risk of STS. This is a potentially important area for study just beginning to be examined in the empirical literature. Lack of appropriate community services for clients is also a reason why workers cannot meet the goals of their work. Discrepancies in provision of services such as counseling, mental health services, education and housing assistance that would better a client's situation are also often overlooked (Pelton, 1989). Initial research indicates these issues may place child welfare workers at risk for suffering significant levels of STS. The following literature review has been completed with an eye toward future research directions, guidelines, and needs. Due to current gaps and silences within the existing body of research regarding STS and child welfare, review of the most closely related fields and STS is included.

Review of Theoretical Literature

Pearlman (1995) utilized empirical research to further explicate the issues of Vicarious Trauma (VT) a concept related to but distinct from STS. By citing empirical studies completed by her

and others, she has delineated potential causes of VT in therapists and activities that help mitigate what she referred to as the "disruptions" caused by the disorder. Pearlman (1995) has specifically described these disruptions as "a process of change resulting from empathic engagement with trauma survivors. It can have an impact on the helper's sense of self, world view, spirituality, affect tolerance, interpersonal relationships, and imagery system of memory" (p.52). Sabin-Farrel and Turpin (2003) completed a comprehensive literature review of STS, looking at mental health workers, which also differentiates between vicarious trauma, burnout, and STS. Interestingly, they confirm that the literature, inclusive of definitive empirical research, is incomplete in this relatively new field (Sabin-Farrell & Turpin, 2003). Sexton also provided a literature review completed earlier in 1999 with similar results (Sexton, 1999) and Bride (2004), most recently, confirmed the gaps in the literature as including a lack of empirical research. As described previously, the theoretical differentiation between STS and burnout is one that is very important in this study. Two articles, Figley (1995) and O'Halloran and Linton (2000) examined burnout and its relationship to STS and further differentiated and explained the two. Valent (1995) examined the etiology of STS from both a psychological and biological perspective and theorized that this phenomenon can be understood best in terms of individual responses in these two areas. A person who experiences STS may have both physical responses and psychological responses much like those experienced in PTSD. Valent's study is unique in its representation of this model and is a step in the direction of framing STS as a normal response to an abnormal circumstance. The theories that have informed these studies have areas of similarities and differences. There is a dearth of empirical evidence for STS but the small body that exists appears to indicate a distinctive phenomenon.

Review of Relevant Research

Specific Human Service Populations Affected

The literature regarding empirical research on STS is beginning to include more information on the impact of this phenomenon in specific populations. Human service professions, including psychotherapists, domestic violence workers, and the population of interest in this proposed study, child welfare workers, were specifically identified in the literature.

Studies on child welfare workers

STS in child welfare workers and its impact on child welfare services were the focus in six studies (Cornille & Meyers, 1999; Dane, 2000; Nelson-Gardell & Harris, 2003; Regehr et al., 2004; Conrad & Kellar-Guenther, 2006; Perron & Hiltz, 2006; Caringi, 2007)

Caringi (2007) studied the impact of STS on child welfare workers in New York State in order to identify potential mitigating and contributing factors to STS levels of child welfare workers. A cross sectional mixed method research design was utilized. This purposive sample consisted of 103 child welfare workers and supervisors who attended trainings on STS in an eastern region of New York State during the summer and fall of 2006. The Secondary Traumatic Stress Scale was used to measure STS levels. Semi-structured interview questions were utilized to gather data regarding perceived incidence, mitigating, and protective factors related to STS. The results and findings indicate two major themes: first, there is a significant level of STS among New York state child protective workers; and second, child welfare workers with STS perceive that several factors are modifiers or mediators in the level of STS. These modifiers and mediators are subsumed by four major categories of factors that have an impact of STS in child welfare workers: 1) prior personal history of worker trauma; 2) coping style; 3) organizational factors; and 4) workers perceptions of their stress which indicate that dimensions beyond Figley's theory need to be considered for understanding and addressing the problem. The results of the STSS analysis and two major qualitative themes are discussed in detail. In addition, this study outlines practice and policy implications, as well as recommendations for further research.

Conrad and Kellar-Guenther (2006) surveyed child protection workers who were participating in a secondary traumatic stress seminar. They used the Professional Quality of Life Scale developed by Stamm and Figley (1999) to measure the risk of compassion fatigue and burnout and the potential for compassion satisfaction. Approximately 50% of Colorado county child protection staff suffered from "high" or "very high" levels of compassion fatigue. The risk of burnout was considerably lower. More than 70% of staff expressed a "high" or "good" potential for compassion satisfaction. They conclude: "Compassion fatigue is a serious issue for County child protection staff in Colorado and, quite possibly, for thousands of other child protection caseworkers around the country. What was surprising in this study was that despite the high risk of compassion fatigue, many workers had low risk of burnout. Compassion satisfaction may play a key role in mitigating the risk of burnout, indicating "the need to learn more about the relationship between compassion fatigue, burnout, and compassion satisfaction" (p. 1079).

Perron and Hiltz (2006) examined the factors associated with burnout and secondary trauma among forensic interviewers of children. Although the sample did not include child welfare workers, the study was based on an intervention often performed by workers in child welfare. Participants were recruited to complete an on-line survey by obtaining the subjects contact e-mail from their place of employment. A 60% response rate was obtained. The researchers used the Oldenburg Burnout Inventory, the Secondary Traumatic Stress Scale, the Satisfaction with Organization Scale, and the General Self-Efficacy Scale.

The strongest relationship identified in this study was between organizational satisfaction and burnout. Organization satisfaction also had a small but statistically significant relationship with secondary trauma. There was no substantive evidence that personal characteristics or the duties associated with forensic interviewing had a significant relationship with either burnout or STS. The authors explain this finding by stating that the way most forensic interviews are conducted is not conducive to the interviewers developing strong relationships with the victimized children they are interviewing.

Regehr, Hemsworth, Leslie, Howe, and Chau (2004) studied 175 child welfare workers in Ontario, Canada relative to worker levels of PTSD as opposed to STS. However, given the dearth of empirical study and the relationship of PTSD and STS, this study was useful in the development of my rationale and methodology. Individual, organizational, and critical incidents were all found to be related to STS in this study, which used structural equation modeling as a method of analysis. All factors were found to be influential in the protection and mitigation of STS. This study did not seek to find causation. Organizational factors were found to have the strongest mitigating or protective impact on PTSD levels (Regehr et al., 2004).

Nelson-Gardell and Harris (2003) studied the connection between increased evidence of STS with the use of pre and post-standardized measures and a full-day training on STS. Workers (N = 161) were surveyed on both their symptoms of STS and their knowledge of the phenomenon before and after the training. Personal history of trauma was found to be correlated with increased scores on the Compassion Fatigue Scale developed by Figley (1995, 1999). Age and experience were not found to correlate in univariate analysis but were found to be significant in a regression model when controlling for personal trauma history. Also, in the regression model, younger workers appear to have more STS. It is unclear why this is the case, although it is hypothesized that perhaps older workers are more apt to be supervisors and are generally able to deal better with trauma due to life experience.

Dane (2000) utilized focus groups in a study of 10 child welfare workers. In this qualitative study she identified factors related to STS through the use of content analysis. Coping styles, child fatalities, successful and difficult cases, organizational stress and burnout, and spiritual and religious beliefs were all found to influence workers' levels of STS in the focus group. From these findings, a two-day training that specifically addressed the STS was developed. The findings in this study also inform the initial development of the categories I will use in the content analysis of qualitative data in this study.

Cornille and Meyers (1999) examined 161 child welfare workers with standardized measures and found STS to be a significant factor for them. The Brief Symptom Inventory and Impact

of Event Scale (BSIIES) was utilized in their study. Their study differs significantly from my proposed study in that the BSIIES is not related to the DSM IV-TR diagnosis for PTSD. The STSS I will use is related to the DSM-IV TR.

These six studies have begun to identify the potential impact of STS on child welfare workers, but there is much more to learn about the impact of STS on workers and related factors that either contribute to or mitigate this phenomenon. Due to the fact that each child welfare state system is so different, conclusions cannot be drawn about workers in any one system based on those studies performed on other systems. Since there are such a limited number of empirical studies focused on child welfare workers, a review of the most closely related human service professions follows. Most of the participants in STS research are psychotherapists.

Studies on psychotherapists

Several articles, mostly empirical studies, examine STS in psychotherapists (Adams, Motto, & Harrington, 2001; Brady et al., 1999). Brady et al. (1999) examined the impact of STS in a survey of 1000 female psychotherapists. Their study found a larger number of symptoms of trauma in those therapists who had more trauma cases, but did not find evidence of different cognitive schemas that are generally associated with vicarious trauma. They also found spiritual well-being to be higher in clinicians who had more trauma cases. They reported that spirituality may be a mitigating factor for the cognitive disruptions that can occur with symptoms of STS (Brady et al., 1999). However, it is unclear if this is the case or the opposite; perhaps psychotherapists with more trauma cases become more spiritual. Although these findings indicate potential areas for further research, the limited description of the methodology makes it unclear as to whether the findings provide any information about cause and effect, even though the authors state this as one of their results. Brady et al. based their study on the constructivist self-development theory of Pearlman. In contrast, the study design I developed is based on the work of Figley and uses a measure that is related to the DSM-IV TR.

Kassam-Adams (1999) examined the impact of trauma in 100 graduate level therapists and found evidence that gender, personal history, and number of trauma cases were predictive of higher STS. This study supports the need to examine caseload type and size, personal history of trauma, and demographics of workers in future studies of STS. I will examine these areas in my proposed study.

Chrestman (1999) examined the impact of STS on therapists in a survey of members of the International Society for Traumatic Stress Studies. She found that a respondent who had a history of previous trauma treatment was a predictor of both higher STS levels and interpersonal relationship issues for the therapists studied. This indicates the difficulty of separating symptoms of STS and PTSD and underlines the need to determine a respondent's personal history of traumatic experiences in order to know whether primary trauma, not secondary, is what is causing symptoms. Implications of these findings indicate a clear need to assess for personal experience of trauma. To this end, I have added questions regarding a respondent's individual history of trauma as suggested by Bride (2004).

Kassam-Adams et al. (1999) examined clinical social workers by utilizing the Traumatic Stress Institute Belief Scale and found contradicting results to other studies and a lack of distinction between burnout and STS. Neither convergent nor discriminant validity were found and it is unclear what this scale is actually measuring. This underlines the difficulty and clear need to differentiate between STS and other concepts such as burnout. Again, this is a reason my design utilized the STSS which is the only measure shown by structural equation modeling to be related directly to the DSM-IV TR.

Ortlepp and Friedman (2002) examined non-professional trauma counselors in a study in South Africa. Models of resiliency were examined to see if any particular factors had an impact on mitigating STS. Their study is unique in that they found that a "sense of coherence" was influential in participants experiencing lower levels of STS.

This study is also unique in operationalizing personality predisposition with an individual sense of coherence from a salutogenic perspective. This theory explains health issues from a per-

spective of promotion of well-being as opposed to the traditional deficit-oriented pathogenic model. The authors use the Compassion Satisfaction Self Test developed by Stamm and Figley (1999), which is based on the combined theories of the two researchers. Sense of coherence was measured by the Orientation to Like Questionnaire. Results did not indicate that a sense of coherence was a mitigating factor in an individual's "compassion fatigue" symptoms. Again, although this finding is potentially significant and useful, it is clear the authors are not measuring STS. In fact, their instrument is meant to measure compassion fatigue and satisfaction and also measures burnout. The authors point out that due to the relatively new nature of this line of inquiry, this is unavoidable.

As previously discussed, Pearlman and MacIan (1995) examined and identified a theory regarding the effect that working with incest survivors has had on psychotherapists. They utilize constructivist self-identity theory to create a picture of what the impact of vicarious trauma is and how it might be treated. Domestic violence workers were also examined in the literature.

Domestic violence workers

A number of studies identify STS in those who work with victims of domestic violence (Baird & Jenkins, 2003; Schauben & Frazier, 1995). One study in particular focused on those working with the criminally victimized (Salston & Figley, 2003). In a mixed methodological study, Schauben and Frazier (1995) examined the effects that trauma work had on domestic violence workers. They found that workers with higher caseloads filled with domestic violence victims and survivors of sexual abuse had a higher incidence of vicarious trauma, but not other mental health issues (e.g., depression, anxiety). The study was inconsistent with other studies by not finding an association between a personal history of trauma for the therapist and STS. This study was also unique in its use of mixed-method design.

Baird and Jenkins (2003) examined 101 domestic violence workers and also found no relationship between workers' general mental health and trauma work, but found different results in workers who were "paid versus volunteering," "younger versus older," and "educational level" (p. 79). Paid workers, younger workers, and those with less education were all shown to experience higher levels of STS in this study. Because child welfare workers are frequently new to the field and in many systems their education is not necessarily related to the work, this study has important implications.

Salston and Figley (2003) presented a review of the current literature and gave recommendations for further research for those who work with the criminally victimized, a broader category but related to domestic violence. From the literature they identified important correlates to STS with this population; including training specific to trauma work, a personal history of trauma, and the interpersonal resources of the worker. As many human service professions require a graduate degree, the impact of STS on graduate students is an area that could inform how to explain and mitigate STS across human service professions.

Graduate students in human service fields

Interestingly, one article was found on graduate students in the field of human services. O'Haloran and O'Haloran (2001) examined the need for and proposed a means to assist those training in the graduate fields of the human services to be better educated in the area of STS. It would appear that the graduate curriculum might be an excellent time to educate new practitioners in the field regarding STS, including those preparing to become child welfare workers.

There are other specific populations examined that do not relate closely enough to child welfare workers and are beyond the scope of this review. Most of the affected professions identified in the literature involve work in non-profit or public human service organizations. Although the research does not show organizational factors as causal in nature, the relationship of organizational factors in increasing risk or acting as a mitigating factor on STS level is an important area to consider. Child welfare organizational issues in STS are at the beginning stages of investigation.

STS issues related to child welfare organizations

Researchers are beginning to examine organizational issues in STS. I identified two articles in this area (DePanfilis, 2006; Bell, Kulkarni, & Dalton, 2003; Catherall, 1995). Catherall (1995) examined the STS literature and proposed an explanation for why some organizations appear to better attend to STS in their workers while others do not. Issues related to the "hierarchical nature of the organization, impersonal nature of the bureaucracy, the mission statement of the institution, and group dynamics" were all identified as related to the level of STS experienced by the workers of the organization. He also offered recommendations on how to better work with this issue at the systemic level including "educating staff members, projecting and predicting STS exposure in workers, initiating a preparedness structure, and evaluating the effectiveness of the program" (p. 242).

DePanfilis (2006) examines the results of the Conrad and Kellar-Guenther (2006) study and its implications for retention of social workers. She concludes that it is "important to explore the specific connections and pathways between emotional exhaustion, compassion fatigue, compassion satisfaction, burnout, and retention in child protection work" (p. 1068).

Bell et al. (2003) examined agency culture, workload, work environment, education, group support, and supervision and recognized that, as more is learned about STS, there is increasing evidence that agency culture can play a role in reducing the incidence of STS, and must play a role in the treatment and prevention of it in workers. Normalizing STS, providing support, encouraging vacations and self care, were all identified as key aspects of agency culture that could mitigate STS. The results of this study also indicate a need to further study organizational factors and how they may contribute to the vulnerability or protection against the impact of STS in child welfare workers. Supervision is another organizational area that is beginning to gain attention in the STS literature that may impact child welfare workers' levels of STS (Bell et al., 2003).

Quality supervision has shown to be an effective protective feature in child welfare agencies. In examining related literature on worker stress and turnover, the impact of inadequate supervision is well documented (Child Welfare Training Institute, 1997; Collins, 1994; Conway, Shaver, Bennett, & Aldrich, 2002; Cyphers, 2001; Dickinson & Perry, 2002; Fleischer, 1985; Fox, Miller, & Barbee, 2003; Gansle & Ellett, 2002; Mor Barak, Nissly, & Levin, 2001; Rauktis & Koeske, 1994). Further study on child welfare turnover has demonstrated that adequate supervision was found to decrease worker stress and burnout, concepts different from but related to STS, again in studies on worker turnover (Wayne, Shore, & Liden, 1997).

Given the recent evidence of worker turnover and attention to system improvement needs found in the aforementioned studies, there may be significant implications in terms of identification, treatment, and prevention of STS in the workforce of child welfare workers nationwide. Although there are few published empirical studies directly on STS and child welfare supervision, Pearlman and MacIan (1995) suggested in a theoretical paper that, in general, adequate supervision could mitigate the effects of STS. Agencies could clearly have a strong influence as protectors or "mediators." From the related literature it seems that further study of the impact of STS on child welfare workers should include an exploratory examination of organizational and supervisory factors that may relate to workers' levels of STS.

This literature review has revealed significant gaps in the overall body of research conducted on STS. More specifically, the gaps in the area of STS and child welfare workers are even more apparent. As mentioned previously, six studies were identified on child welfare workers in different geographic areas. These studies have contributed to the body of knowledge of this subject, but also have exhibited limitations and gaps. Also, child welfare systems vary from state to state and from county to county. It is not known if STS is a factor for child welfare workers in one particular system more than another based on the unique aspects of the work of child welfare.

Implications

Much of the literature reviewed reflects anecdotal narratives or theoretical work, and not empirical studies. Providing further empirical evidence could help workers and supervisors advocate for the resources to deal with STS. Overall, the literature seems to rely more on practice wisdom and professional knowledge; there is little empirical data to actually support this. At this juncture, although valuable, practice wisdom and anecdotal information do not tend to be enough to influence institutional policies and change. What is particularly apparent is the lack of research on the impact of STS on child welfare workers. Given the realities of the work requirements to accomplish the work of protecting children and unifying families, it is equally apparent child welfare workers could be at risk for high levels of STS. Further empirical research is needed in all areas of STS of child welfare workers in different geographic areas. As preliminary research indicates the potential of significant levels of STS in individual child welfare workers, there must be more such studies to better clarify the level and types of STS symptoms workers experience. As these workers are often times performing their work tasks in teams, it is also indicted more research be conducted at the mezzo or group level. Finally, as empirical research is growing regarding the impact organizations can play in STS levels, further systems level research is needed to indicate potential moderating and mitigating factors child welfare organizations can play in helping their workers prevent and recover from STS.

On an international level there is much to be gained by studying the impact of STS in different national and cultural systems of child welfare. It is possible STS contributing, mitigating, and moderating factors are different based on the individual system needs, interventions, and the day to day requirements of the job. The possibilities for cross-system learning from an international study of the impact of STS are tremendous.

Summary

It is possible that no other human service occupation comes with so much responsibility and so much personal health risk to the worker, often times with limited training. Preliminary research indicates that child welfare workers may suffer significant levels of STS. In addition, it appears that more research could identify potential causes and correlates of STS as well as potential mitigating and moderating factors. Because of this, more research regarding STS and child welfare is essential. This research could lead to improved working conditions for child welfare. Most importantly, what is truly at risk without such research is the outcome of child welfare work, the safety of children and the unification of families worldwide.

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