Secondary Traumatic Stress Among Child Welfare Workers in the United States

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Abstract

This study investigates secondary traumatic stress (STS) in child welfare workers, using a mixed method design to identify mitigating and contributing factors in child welfare workers (N = 103) who attended STS trainings in New York State, USA. This study also adds to the qualitative research literature on social work practice by shedding light on the lived experiences of child welfare workers, and by demonstrating both deductive and inductive techniques used in identifying key themes in qualitative content analysis. Findings from the quantitative portion of the study indicate significant levels of STS among New York state child protective workers. Findings from the qualitative data suggest that child welfare workers with STS perceive several factors modifying or mediating level of STS, categorized in the following areas: 1) prior personal history of worker trauma; 2) coping style; 3) organizational factors; and 4) worker perceptions of their stress.

Keywords: secondary traumatic stress, child welfare, vicarious trauma, work stress, workforce development

Introduction

The delivery of child welfare services is a highly complex endeavor, with workers, supervisors, and administrators charged with both identifying abuse cases and removing children from families, then acting as "helpers" to the same families in either reuniting them or legally terminating parental rights. The tension resulting from such competing demands often leads to worker stress and dissatisfaction that can hinder effectiveness. Most studies examining child welfare have utilized either solely quantitative or qualitative approaches. Quantitative studies offer valuable correlational information and increased scientific rigor, yet fall short in exploring the fuller context necessary to understand the work related environment of child welfare services. Qualitative studies provide a richer, more nuanced picture of the work stressors, yet can lack analytic rigor.

In this study we utilize a concurrent mixed methods approach that both reveals potential levels and contributing factors to one type of work stress, secondary traumatic stress (STS) and sheds light on the lived experiences of child welfare workers, revealing key themes in what contributes to and helps prevent STS (Luzzo, 1995). Inductive and deductive approaches are used in an integrated manner in the qualitative analysis. Both the existing literature and

quantitative findings provide a basis to deductively confirm the qualitative categories that emerged. As mixed methods research is not well represented in the social work literature on child welfare, this study makes a significant contribution to the knowledge base of that profession.

Background

Trauma is a contributing or comorbid factor in many of the disorders identified in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV TR) (Figley, 1995a; Herman, 1992; Hudnall-Stamm, 1999; McCann & Pearlman, 1990). However, the effect of secondary traumatic stress (STS) on human service workers is an area of inquiry that has only recently become a focus in mental health. 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). STS can be an issue for human service workers in much the same way that post-traumatic stress disorder (PTSD) affects individuals. Disruptions occur in an individual's physical and/or mental health that can cause difficulty in personal, relational, and occupational functioning.

Although vicarious trauma and compassion fatigue are related to Figley's conceptualization of STS, they are not the same. Vicarious trauma (VT) is a similar concept to STS but involves more "cognitive schemas" where STS involves more "posttraumatic symptoms" (Jenkins & Baird, 2002; O'Halloran & Linton, 2000). Burnout, also related, is thought to occur slowly over time and is a reaction to events that continue for an extended period. STS can occur suddenly from exposure to a single traumatic event (Figley, 1995a). The symptoms of STS can mirror those of PTSD, including hypervigilance, hyperarousal, and numbing (American Psychological Association, 2000).

Figley and Pearlman introduced the concept of STS and led the way in its development (Figley, 1995a, 1995b; McCann & Pearlman, 1990; Pearlman & MacIan 1995). Figley proposed a new diagnosis of "secondary traumatic stress disorder" influenced by and based on the DSM IV- TR diagnosis of PTSD. Other researchers are beginning to follow the work of Pearlman and Figley by studying the impact of STS on specific populations within human services (Bride, 2004; Jenkins & Baird, 2002; Kassam-Adams, 1999; Nelson-Gardell & Harris, 2003). At this time no studies establish the prevalence, related factors, cost to agencies, or other basic statistics regarding specific types of workers.

Issues Unique to the United States Child Welfare System

While child welfare services (including but not limited to child protection) have been part of the social work profession since the early 1900s. 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 services. For this study, we examined child welfare workers and supervisors working in child protection, foster care, adoption, and prevention services. Many of the risk factors 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 STS (Regehr, Hemsworth, Leslie, Howe, & Chau, 2004; Caringi, 2008).

Child welfare workers have stressful jobs frequently offering little reward (Caringi, et al., 2008; Strolin-Goltzman, McCarthy, Smith, Lawson, Bronstein, & Caringi, 2008). 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, child welfare systems, policies, and organizational structures fall short in providing agency-based supports which assist workers to meet these goals, instead offering "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 inherently and diametrically opposed, balancing the development of trusting and helping client relationships with the demands of the investigative role and the potential threat of child removal (Strolin-Goltzman, 2008; Caringi, Lawson, Strolin, McCarthy, Lawson, 2007; Pelton, 1989).

This study examines the presence of STS among public child welfare workers in New York State and looks at specific individual and organizational factors that protect, mitigate, or contribute to secondary traumatic stress.

Methods

To address the complexities of the child welfare system and identify the prevalence and correlates of STS, a mixed method research design was employed, with quantitative data collected to examine the presence and extent of secondary traumatic stress in a sample of public child welfare workers (N = 103), and qualitative data collected from a smaller subset (N = 12) to explore child protective workers perceptions of work-related situations that contribute to STS. Retaining flexibility within theoretical styles rather than rigidly maintaining one approach can allow for the integration of quantitative and qualitative interpretations of the data (PlanoClark & Creswell, 2008). The mixed methods approach of this study follows a concurrent/triangulation mixed methods approach (Luzzo, 1995).

Quantitative measures are appropriate when attempting to establish the existence of a phenomenon from a static hypothesis (Fortune & Reid, 1999). We used a validated measure, the Secondary Traumatic Stress Scale, or STSS (Bride, 2003), to answer the first research question – "Do public child welfare workers in New York State experience significant levels of secondary traumatic stress related to their work?" Quantitative data, including a short demographic survey and question measuring the presence of an individual's prior history of trauma, were also used to address the second research question – "If child welfare workers do experience STS, can specific individual and organizational factors that protect, mitigate, or contribute to secondary traumatic stress be identified?" There was however a need to more fully understand the lived experiences of child welfare workers facing STS, and thus the quantitative measures were supplemented with qualitative data.

In order to more fully answer the second research question regarding individual and organizational level factors, we used qualitative content analysis (Fortune & Reid, 1999; Marshall & Rossman, 1999; Maxwell, 2005; Mayring, 2000). According to Mayring, this technique provides rules of analysis, categories used in the analysis, and criteria for reliability and validity. "Classic content analysis techniques may be used to find dominant patterns and co-occurrences, followed by the use of qualitative retrievals to complete a 'fine grained' analysis of frequent and rare responses" (Plano Clark and Creswell, 2008, p. 405). The process can be both inductive and deductive allowing for the design flexibility needed to answer the second research question.

The quantitative portion of this study utilized the Secondary Traumatic Stress Scale (STSS) (Bride, 2004) in order to test for an individual's level of STS, a demographics survey, and three Likert-type questions assessing the presence of personal experience of trauma (if any).

All participants (N = 103) were invited to complete the surveys. Based on the scores of these measures, 12 individuals were invited to participate in face-to-face interviews.
The qualitative portion of this study utilized a subset of workers (n = 12) completing the survey, semi-structured, face-to-face interview questions were asked, with a focus on the four areas that may protect or mitigate against child welfare workers experiencing significant levels of STS. These areas were derived from Figley's theory as well as the existing research and literature.

Population and Sample

Site and participant selection. In order to capture geographic and population differences in New York State we utilized a purposive sample of convenience. Purposive sampling is an appropriate method to obtain data from a desired group of individuals who have expertise in a particular area. Individuals are selected who have particular desired qualities that fit the needs of the study design and research questions (Patton, 2001; Maxwell, 2005). In this study the sampling frame consisted of child welfare workers in the eastern region of New York State. This sample is appropriate because it is a reasonable representation of various-sized upstate counties.
In the months of May 2006 and October 2006 in Upstate New York four voluntary trainings regarding STS were given by Laurie Ann Pearlman, a leading researcher, theorist, and therapist in the area of STS. All participants for this study were recruited from individuals attending these trainings. A total of 103 workers and supervisors participated in the quantitative measurement. Individuals for follow-up interviews were selected from the survey participants. Twelve individuals participated in these interviews (four each from small, medium, and large sized counties). Individuals interested in participating in interviews were chosen among those who scored high, average, and low on the STS.

Data Management, Analysis Plan, Validity

Stage 1: Gaining informed consent and survey administration. On the morning of the training the primary author explained the study and invited those who were interested to stay after the training for the provision of informed consent. All study information, including risks and benefits of participation were detailed, and signed consent forms collected in sealed envelopes. It took participants an average of 15-20 minutes to complete all the surveys.
After each training, individuals willing to be interviewed for the qualitative data collection were put in a pool of potential interviewees. Participants were then chosen from the pool based on county size and STS score in order to obtain the desired purposive sample. Confidentiality was maintained by pre-coding consent forms and surveys and including no identifying information on the surveys. Access to the consent forms was restricted to the primary author, and storage was separate from the survey data.
Stage 2: Surveys, scoring and analysis. Demographic information collected from respondents included marital status, cultural background and work unit. Three questions assessed personal trauma experience as recommended by Bride (2004). Because the literature indicates that a personal history of trauma may increase an individual's likelihood of experiencing STS, these questions assessed correlation between personal trauma history and current STS scores. The STSS is a 16-item survey that takes approximately three to five minutes to complete. Examples of questions are; "I felt emotionally numb" and "I had disturbing dreams about my work with clients" (Bride, 2003, p. 1). The STSS was designed to be scored in three ways, all utilized here: (1) use of an indicated cut-score to measure dichotomous presence of STS; (2) use of mean score to indicate three levels – low, medium, or high; and (3) use of scores on individual question groupings correlated to the three major symptom areas of PTSD: hypervigilance, hyperar-

ousal, or numbing (PTSD criteria). We also analyzed whether certain workers were more prone to high scores in certain clusters of PTSD symptoms.

Stage 2a: Qualitative data collection and analysis. Sixty-three of the 103 participants volunteered to be interviewed, a pool from which twelve qualitative interviews were conducted by the primary author face-to-face in private places mutually agreeable to the respondent. All but one interviewee was female. Three were supervisors, all others workers representing either child protection, foster care, adoption, or prevention. This sample was chosen to mirror the characteristics of the overall workforce of this area of the state. No interviews performed were excluded from the study. Interviews were audio taped and transcribed verbatim. The interview guide was developed from a pilot study and from a review of the literature in this area.

This study used a combined deductive/inductive approach not only in its overall methodology, but also *within* the qualitative analysis process. Although it is increasingly more common, qualitative research is generally thought of as "inductive and relativist" only (Luzzo, 1995). Using both inductive and deductive analysis allows for rich description of findings but also provides assurances in the strength in credibility and trustworthiness of those findings. Content analysis was used to identify themes in the data. A deductive approach was used with initial conceptual decisions and research questions guided by the theories of STS. Atlas TI was used to help store and organize the data.

In a deductive manner, initial coding categories were developed based on existing theory from the literature. Then, as suggested by Mayring (2000), coding categories were reviewed and adjusted after analyzing 50 percent of the data. Inductive reasoning was then employed to allow for new findings. Keeping with the congruent/triangulation model of the study, using deductive analysis, the categories were confirmed by reviewing findings from the quantitative data.

Stage 3: Establishing validity and triangulating data. Use of the previously validated STSS increased content, face, and criterion validity in the quantitative portion of this study (Fortune and Reid, 1999). The STSS was validated in a sample of "licensed social workers (N = 287) who completed a mailed survey containing the STSS and other relevant survey items. Evidence was found for reliability, convergent and discriminant validity, and factorial validity" (Bride, 2003, p. 2).

To address validity of the qualitative findings, we used multiple methods to achieve credibility and trustworthiness. Methods included the collection of "rich data", data triangulation, respondent validation (i.e. member checking), and searching for discrepant evidence and negative cases. Richness of data was achieved through in-depth interviews and the use of clarifying questions to assure validity. Member checking and respondent validation was used to assure reliability of the coding scheme and validity of data analysis (Maxwell, 2005; Seidman, 1998). We also searched for discrepant evidence and negative cases by looking for cases that did not fit into our established criteria and analytic categories. All data were examined to find explanation for discrepant cases, and where appropriate, categories and coding schema were adjusted. Finally we addressed both face validity and content validity via review of existing STS theory and literature. Use of these techniques assured the highest possible validity and reliability of this study.

Human Subjects Issues

The study of STS is one of a sensitive nature. The impact of traumatic stress can have both physiological and psychological dimensions (Everly & Laiting, 1995; Herman, 1992; Southwick, Krystal, Johnson, & Charney, 1995; van der Kolk, 1996; van der Kolk, McFarlane, & Weisaeth, 1996). The sole interviewer in this study was a licensed psychotherapist with over 10 years of experience in working with individuals suffering from traumatic stress. All participants were fully informed of the risks and benefits of participation, and given a list of local resources should they experience distress. Participants were also allowed to contact the researchers for up to 6 weeks after the interview to remove their material from the study.

Findings

The purpose of this study was to assess levels of secondary traumatic stress in New York state child protective workers, and to explore worker perceptions about the emergence of secondary trauma in relation to work-related situations. Our findings indicate strong evidence that New York State child protective workers experience significant levels of secondary traumatic stress. Second, child welfare workers with STS perceive that several factors either contribute to, or mediate their level of STS. These contributing and mediating factors are subsumed within four major categories, which will be discussed later.

Based on the suggested overall STSS score of 38, or the lower threshold of the moderate range, 74.7% (77) respondents qualify as experiencing some level of STS. The STSS also indicates the level of stress experienced by each respondent. An analysis of the collective levels of response as well as the patterns of the most frequently occurring responses to items in the measurement uncovered important information regarding the nature and experience of STS in the workers. First, the fact that moderate to high levels of STS were experienced by the sample as a whole indicates that the workers are experiencing job-related STS. Although pre-existing or non-work related STS may explain for the presence of positive symptoms, it is unlikely that 74.7% of the current sample would meet these criteria. There is no other research available for comparative analysis with use of the STSS and child welfare workers. However, comparing the results in this sample of New York State child welfare workers with results in different samples supports the use of both inductive and deductive processes in analyzing our data. In a study utilizing the STSS with MSW clinicians, only15.2% of respondents reported secondary traumatic stress symptoms at a level that met the diagnostic criteria for PTSD (Bride, 2007).

Cornille and Woodward-Meyers (1999) examined 161 child welfare workers in a southern state, using the Brief Symptom Inventory (BSI) (Derogatis, 1975) and the Impact of Event Scale-Revised (IES-R) (Weiss & Marmar, 1997). Findings indicated up to 37% of the child welfare workers in their sample may have experienced STS-related symptoms. The difference in STS prevalence rate when compared to our study might be explained by differences in methodological approach, measurement, and sampling.

PTSD Criteria

An additional lens for considering the STSS scores in the current sample is through the use of the Post-traumatic Stress Disorder diagnosis. Figley (1995a) defines STS as mirroring the symptoms of PTSD. The STSS is unique since it is derived from the DSM-IV TR definition of PTSD and the three cluster symptoms of intrusion, hyperarousal, and numbing (Bride, 2004). It thus allows for a prediction of whether a respondent is likely to experience symptoms similar to those of PTSD. Given this interpretation, 79 respondents (76.7%) in this study are likely to be experiencing symptoms of PTSD. In relation to published studies on similar populations, this percentage is extremely high. The lifetime prevalence of PTSD in the general population is estimated to be 7.8% (Kessler, Sonnega, Bromet, & Nelson, 1995). Qualitative analysis also confirmed that respondents perceived that they were experiencing symptoms similar to those of PTSD.

Symptoms

Many respondents described symptoms of STS in qualitative interviews. Worker perceptions corresponded to the symptoms evident from STSS analysis correlating with the 3 sub-areas of PTSD. Workers described symptoms from all 3 cluster areas of PTSD: hypervigilance, numbing, and hyperarousal, which are supported by Figley (1995a). It was beyond the scope of this

study to determine an accurate incidence rate or level of STS in child welfare workers. It was, however, a goal to determine if STS is experienced by child welfare workers in New York State. In this regard, the qualitative data support the quantitative findings.

Modifiers and Mediators in the level of STSS

Several factors that were potentially related to STS levels emerged from the qualitative findings. From these factors, four categories became evident: (a) new factors beyond Figley's theory that may influence STS levels in child welfare workers, (b) a prior history of trauma, (c) coping style, and (d) organizational factors.

New factors

Factors not included in Figley's theory were identified in interviews that appear to be important influences on the general stress of child welfare workers in this sample, and thus potentially having an effect on STS levels. Absent from the current literature or theory regarding STS, these factors offer new insight into the potential sequelae of STS in child welfare workers. One of the most intriguing findings in this study relates to worker pathways to child welfare work. When asked how they got into child welfare, all twelve participants reported entering the field haphazardly, without specific intent. Given the challenging nature of child welfare work (Caringi, et al., 2007; Pecora, et al., 2000; Pelton, 1989; Caringi, 2008) and the finding that so few workers have advanced or professional degrees, workers may be set up for failure through lack of proper preparation.

The complicated nature of child welfare work involves several professional skills that require advanced knowledge of social work approaches. Workers must be forensic investigators, build rapport with families that are also being investigated, show empathy and understanding of complex social problems such as oppression and poverty, and offer solutions to families in order to work toward unification. These skills are usually acquired in work done for a bachelor's degree and often for a graduate degree such as a master's degree in social work. It is unlikely that individuals who intended to work in child welfare have such degrees, a fact borne out in the current sample where the vast majority of workers did not have a bachelor's degree in a field related to child welfare, and few had completed any graduate work. This may offer insight into why workers in this sample might have been unprepared to deal with cases encountered in this field, and may also explain the high levels of STS. In addition, the lack of professional preparation among applicants for child welfare positions may be at the core of the child welfare system's recruitment, retention, and training difficulties.

Other issues outside of existing STS theory were also identified as being "stressors" for workers, including paperwork, computer problems, and physical work space. The workers believe that if these clerical areas were not going smoothly, they were at greater risk for STS. Ongoing and increasing paperwork requirements, inefficient computer systems, and lack of safe, clean, and comfortable work spaces were consistently identified by the workers as contributing factors in STS.

Workers also consistently identified "lack of respect" from administrative and organizational leadership as a stressor in dealing with case practice and policy issues that govern their day to day work. Most workers identified the *top-down* leadership style as problematic. Respondents also perceived that leadership in the agency did not understand what they went through as workers, citing an overall lack of empathy for the stresses of fieldwork. Most respondents identified concerns regarding policy formation and implementation at the local and state level that did not fit the realities of child welfare work. In turn, child welfare workers perceived that this increased their overall stress and put them at higher risk for STS. There is no current research on these potentially related issues and their effect on STS, yet the findings here suggest avenues for future study.

Prior History of Trauma

The current STS literature suggests that individuals who have experienced trauma in their lifetime may be at increased risk to experience STS (Figley, 1995a). However, McCann and Pearlman (1990) suggest that is it is the individual's subjective perspective that matters most in the development of VT, rather than STS. In the qualitative portion of this study, respondents identified perceiving a prior history of trauma in other workers as problematic, but not in themselves. Respondents reported that they felt workers with such issues were negatively impacted. There was little empathy expressed for these workers and complaints were voiced about how others have to "pick up the slack for them" and how they should "deal with it" and not bring it to work. Individuals who expressed having a trauma history in themselves saw this as being difficult at times, but also as positive since it led to increased empathy for client experiences, a finding echoed in the work of McCann and Pearlman (1990). This theory represents one possible explanation for the relationship between STS and workers' world views. Perhaps workers are so personally impacted by dealing with traumatized populations that they experience an inability to empathize with their coworkers. Ironically, these coworkers are the same individuals identified as those whom child welfare workers rely on for support in dealing with STS.

Coping Style

Worker empathy. Figley (1995a) identifies worker empathy as one of the key factors that may influence whether an individual experiences STS. Essentially, workers who are able to view clients in a positive way and have a world view that encompasses an understanding of their struggles are less likely to experience STS. In our study, a coherent factor did not emerge relating worker empathy to STS levels. In fact, our findings indicated a reverse effect, with STS seemingly influencing the empathy and world view of the worker. Workers' STS symptoms appear to have altered the way respondents viewed the world and thought of their clients. It was the perception of respondents in this sample that STS symptoms impacted their daily lives. Specifically, they described not being able to trust baby-sitters for fear they would hurt their children, thinking suspiciously about individuals for no good reason, and developing more negative views of their clients.

Methods of coping. Factors regarding methods of coping with STS on the job also emerged. All workers identified one commonality in their responses; they identified peer support from coworkers as being most helpful in dealing with their symptoms of STS. At this time there is no evidence in the literature to support the idea that coworkers are most helpful in mitigating STS. In the qualitative sample it was clear that in practice, child welfare workers are in fact using informal peer support to attempt to get relief from STS symptoms.

Supervision was also identified as helpful, but in a more indirect manner. Workers reported that good supervision helped them do their work overall, which in turn helped mitigate against overall stress level. A desire for quality supervision was universally acknowledged, however workers were also clear that even "good" supervisors did not directly address STS. As in the larger organization, workers perceived that supervisors did not acknowledge the existence of STS. The qualitative findings here are consistent with Pearlman & MacIan, (1995) who has suggested that supervision may be helpful in the prevention and mitigation of vicarious trauma.

Organizational Factors

Respondent work unit. Though not identified in the literature, type of respondent work unit emerged here as a potential factor on STS level, as supported by both quantitative and qualita-

tive analyses. All respondents perceived that working in the child protective unit was likely to be directly related to their STS levels. All respondents interviewed felt that working in foster care, adoption, prevention, or other county specific units in the agency placed them at less risk for STS than if they worked in CPS. Further study is necessary to improve our understanding of work setting and STS.

Case type. According to Figley (1995a), case type is an important factor determining how individuals experience STS. It is logical that since CPS workers are the front lines they could be at a higher risk for STS. It is also possible they see more of the "case types" that are potential contributing factors to STS. Increased exposure to traumatized clients within child protective units may constitute an additional risk factor for both STS and criteria "A" of the DSM-IV TR diagnosis of PTSD.

Our qualitative results support the centrality of case type as a contributing factor in worker STS. In particular, abuse cases and, high profile cases seem to impact STS level, according to respondents. The majority indicated that extreme abuse cases and sexual abuse cases were the most difficult and had the strongest influence on their experience of STS. As child welfare workers spend a significant amount of time with children, it is logical that they would hear about both current childhood trauma and previous trauma experienced by adult family members. Hearing about the parents' traumatic experiences may also exacerbate a worker's STS level. In addition, if case type matters, it is then understandable that child protective workers are more vulnerable to STS than workers in other units.

High profile cases involve extreme levels of abuse in which there is high media attention. Often there is an intense scrutiny that develops regarding the conduct of individual workers and relevant agencies. As workers are bound by confidentiality, they are unable to speak publicly to defend their actions. High profile cases were identified in by respondents in the interviews here as directly affecting STS level.

It was also apparent that individual workers had specific case types that affected them but which do not fit into the factors described above. These case types are also not currently found in the literature as being related to STS. Other types of cases that multiple respondents mentioned were those involving developmental disabilities, substance abuse, domestic violence, and those where the parents had as many difficulties as the children. For some, it was the combination of issues on a case that seemed to prove most powerful. Although some common factors emerged as to case type, there were still many individual responses regarding which type of case were most related to STS for workers.

Caseload size. The majority of respondents agreed that when caseloads were higher they were more likely to experience higher levels of STS. Although not specifically identified in the theory or research literature, the likely correlation between caseload size and worker stress levels is expected. Whether this stress causes an increased propensity to experience STS or related concepts such as burnout or countertransference remains unclear.

Lack of acknowledgement. A major factor that emerged regarding workers' organizations is that respondents do not believe their agencies acknowledge the existence of STS. All 12 respondents expressed the belief that STS was not acknowledged by their agency, and does not exist in the eyes of their supervisors and administration. Workers' perceptions were clear; they do not believe that their child welfare agencies deal with STS, leaving them adrift without the benefits of agency-based supports.

Limitations

A few distinct limitations should be considered in this study. First and foremost, the recruitment of participants from a training dealing with secondary traumatic stress presents a potential sample bias. Individuals experiencing STS may have been more likely to self-select to attend

the training. Moreover, because individuals completed the STSS and other surveys *after* the training, they more clearly understood the concept of STS. Although this may not be negative, it does suggest a potential response bias. The use of volunteers, rather than randomly selected participants, may have impacted observed STS levels, resulting in levels or even types of symptoms not representative of participating agencies or the larger state population of child welfare workers. Since it was not our intent to generalize or determine exact incidence levels, the findings of this study are not generalizable. They are descriptive and informative only of this particular group of workers.

In terms of internal validity, without any control factors for assessing related concepts of vicarious trauma, burnout, and countertransference, it is not possible to say that STS is the only phenomenon being measured. Although the STSS was found to be reliable and valid in previous studies, it is not clear without a control group if other factors influenced the STS level reported by respondents.

It is also not possible to determine if individuals' STS levels and symptoms are due to work related issues or other life factors. Only a longitudinal study controlling for influences outside the workplace could address this limitation. Additionally, the lack of published empirical research in STS and child welfare necessitated the examination of related populations in the literature such as psychotherapists and domestic violence workers. Child welfare workers are unique and have very different challenges than other populations represented in the literature.

As this study relied on interview data, it is possible there were inaccuracies in data analysis due to limitations in the interview process. Patton (2001) suggests that issues such as response distortion, reactivity bias, and recall error may interfere with data drawn from individual interviews. It is also possible workers had incidents on the day of the interview influencing their responses. The emotional nature of the work, coupled with discussing stressful reactions during an interview could have influenced the data collection. Finally, the hectic nature of child welfare work may have impacted the interview process, with workers pressed for time and fitting interviews into busy schedules.

Efforts were made to maximize credibility and trustworthiness of the qualitative data. Most importantly, data triangulation was achieved through use of multiple sources of data. One technique used to achieve credibility was member checking, with nine of twelve respondents able to participate in the process. The remaining three had left their jobs before they could be contacted.

Implications for International Policy and Practice

Although this study has only begun to address the multifaceted issue of STS in child welfare workers, implications for policy and practice at the state, agency, and worker level are abundant. Although many recommendations would require systemic and costly change, our findings suggest that others are potentially simple, inexpensive, and effective. If future studies confirm the high prevalence of STS in child welfare workers, it will be important for state leaders to address this issue. Workers suffering from STS are likely to experience the same symptoms as someone with PTSD. States could require workers to attend trainings regarding the incidence and prevention of STS. One major city in New York has developed an online training module for addressing the factors identified here. Such training might also alleviate concerns from respondents that top-level leadership is not acknowledging their experience of STS. In addition, child welfare leaders should also have a trauma team available to workers and supervisors in high trauma or high profile cases. These would be logical first steps in any intervention designed to address STS.

Another area for intervention and prevention is through addressing organizational factors in child welfare agencies. Paperwork, computer systems, physical work space, and caseload size are all impacted by state policies. If child welfare organizations worldwide acknowledged STS in

an effort to improve worker health and agency environments, they would need to consider the elimination of redundant paperwork, improving cumbersome computer systems, and reducing caseload sizes that currently do not allow for enough time for workers to address safety needs of children.

Our findings that peer support was the first method of coping with STS by all twelve respondents in this study suggest that this practice method might also effectively mitigate existing STS. Peer support is also an area that could be addressed directly at the agency level by the formation of formal opportunities for peer support (e.g. groups or teams). Programs offering structured peer support would need to be evaluated for effectiveness, but could emerge as a cost-limited and efficient means of supporting distressed workers.

Agency trainings, awareness campaigns, morale and team building are all inexpensive ways to address STS. In addition, agency leaders could encourage or even require workers to use time off and compensatory time before letting it build up. Agencies could also offer ways to minimize paperwork, address work space issues, and issues of case practice. A participatory action research intervention called "design teams" (Caringi, et al., 2007) was not designed to specifically deal with STS levels, but has implications here. , But in Teams of front line workers, supervisors, and top level management have successfully addressed issues of STS as well as related concepts of VT and burnout by coordinating training and changing agency policy.

Perhaps the most important area for mitigation, prevention, and treatment of STS lies at the micro level, with workers themselves. As suggested by Pearlman and MacIan (1995), awareness, balance, and connection are all elements of combating VT and STS that are within reach of workers. Attending trainings and educational seminars, obtaining life-work balance through non-work related activities, and having clear professional boundaries, as well as building and maintaining a connection with others through spirituality, or other such endeavors, can offer relief from symptoms of STS. Regardless of state and system support, workers should be encouraged and supported to address STS on their own.

Although this study was conducted in the United States it is our belief that there are implications for policy and practice in other parts of the world. Replication in other countries and child welfare systems could positively impact our knowledge of the incidence of STS in child welfare settings, and most importantly would contribute to the development of prevention and mitigation efforts to reduce the impact of STS.

Recommendations for Future Research

Drawing from our findings, several recommendations for future international research emerge. First, a longitudinal study incorporating a randomized sample would increase generalizability. If it could be feasibly designed and funded, this would be an important step in addressing the limitations of this study, allowing for examination of causal relationships for STS. Replication in different countries would help determine the actual prevalence of STS among child welfare workers globally thus pointing to potential contributing and mitigating factors. In addition, the use of other measures that look at VT and burnout measurement, in addition to STS, could help assure content validity of future studies. Replication in other systems would also provide more data on contributing and mitigating factors for STS. Use of a qualitative component in any study is recommended based on the unique and unpredictable factors present in this work.

Although many of the premises of Figley's theory of STS were supported in our findings, the existence of external modifying and mediating factors indicates the need for other theories and related concepts to be considered. The flexible study design here also resulted in factors and categories outside of Figley's theory, thus offering an expansion of it. This would be especially for study replication in other nations.

The impact of culture has not yet been examined relative to the incidence of STS. Our results support the idea that STS level seemed to affect workers' empathy and world view, essentially

in the opposite way that Figley theorized in his model. The dynamic suggested in our results is more in line with constructivist self identity theory (Pearlman & MacIan, 1995). Pearlman's theory, along with the concept of vicarious trauma, may be necessary in addition to the concept of STS to fully understand how child welfare workers are emotionally impacted by their work

This study offers initial support of findings by Bell, Kulkarnie & Dalton (2008) and Catherall (1995) that organizational factors are related to STS in child welfare workers. Further research on organizational factors could provide more information as to the nature of STS and organizational responses. This research is a logical next step and should be extended to include analysis linking workplace environment, worker STS, and child welfare outcomes. Other practice and STS-related research is needed in the areas of caseload size, type, and distribution. If cases of extreme abuse contribute to increased STS, it would be prudent to evenly distribute those cases. Other approaches such as clinical supervision, case weighing, and regular check-ins from supervisors may also prevent or mitigate worker STS levels among workers. Case intensity may necessitate specialized training with content on STS and burnout prevention. Research on different systems of case distribution could provide useful data to help develop new strategies to mitigate and prevent STS in child welfare workers.

Given that a factor inclusive of "high profile cases" emerged during qualitative interviews, this is also an area for further research. Regehr et al. (2004) provide evidence that a similar concept, "critical incidents," is related to child welfare workers' disturbance levels due to potential PTSD symptoms. Should future research demonstrate that such cases influence STS levels, a proactive high profile case policy would be valuable. Peer support as a mitigating component for the prevention of STS in child welfare workers also needs further research. Peer support strategies may offer effective and cost-efficient resources for individuals dealing with STS and its impacts. Evaluation of peer support strategies could offer insights into the effectiveness of peer support in reducing or preventing STS among child welfare workers.

In any profession whose core mission involves helping others in need, the health of the individuals doing the work is an essential ingredient for success. Perhaps no other area of social work internationally has a more important mission than that of child welfare: the protection of children and families. This study provides preliminary evidence that United States child welfare workers do in fact experience significant secondary traumatic stress. Potential factors influencing STS levels are also evident from these data. The findings validate the current theories and literature on STS in child welfare workers as well as suggest important new avenues for future research in other countries.

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