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## Secondary traumatic stress in public school teachers: contributing and mitigating factors

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Although research has examined secondary traumatic stress (STS) among mental health workers, child welfare workers, and other human service professionals, such examination among public school teachers has only recently begun. This study represents the first investigation to examine the factors that influence STS levels in public school teachers. Qualitative methods were utilized to develop a thick description of the experience of educators relative to their STS level in public school settings. Themes that were explored included characteristics of students, class load size, and a personal history of trauma. Additional themes emerged during data analysis. The assessment also included extrapolation on the quantitative measures that were described in a previous study. Implications and recommendations for such programs are discussed.

**Keywords:** secondary traumatic stress; trauma informed systems; teachers; public schools; qualitative research

Until 2012, no research had been completed addressing the impact of secondary traumatic stress (STS) in public school teachers. Borntrager, Caringi, and colleagues (2012) identified STS as a potential concern for educators and administrators. Although this study identified levels of STS, compassion fatigue (CF), compassion satisfaction, and burnout in teachers, it did not address potential contributing and mitigating factors to the levels of these phenomenon. This study is an attempt to do so. The research question is: What are the contributing and mitigating factors to levels of STS in public school teachers?

Research demonstrates that professional helpers, such as social workers, counselors, and psychologists, who provide support to youth who experience trauma may be at risk for the negative consequences of trauma exposure symptoms (Borntrager et al., 2012; Bride, Jones, & Macmaster, 2007; Pearlman & Caringi, 2008; Figley, 1995, 1999, 2002). Continued exposure to their client's trauma narratives may contribute to the development of CF or STS in helping professionals. The phenomenon of STS is defined as 'the natural consequence emotions and behaviors resulting from hearing and knowing about traumatizing events experienced by significant others ... the stress resulting from helping or wanting to help a traumatized or suffering person' (Figley, 1995, p. 7, 2002). Reactions may mirror symptoms found in post-traumatic stress disorder (PTSD) as defined by the *Diagnostic and Statistical Manual of Mental Disorders*,

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*Fifth Edition* (DSM-V; American Psychiatric Association [APA], 2013). For instance, individuals may experience numbing, avoidance, hyperarousal, and the re-experiencing of intrusive thoughts, imagery, and/or nightmares. Individuals may have difficulty regulating emotions and experience depression and other anxieties. Consistent with a diagnosis of PTSD, these difficulties can impact functioning across multiple domains (Figley, 1995).

The secondary effects of working with trauma-exposed individuals are increasingly viewed as ‘occupational hazards’ of working in the mental health field (Figley, 1999; Pearlman, 1999). Factors such as a personal trauma history, organizational stressors, and ‘critical incident’ stressors occurring on the job were all found to increase individuals’ risk of developing issues related to poor mental health in child welfare workers (Regehr, Hemsworth, Leslie, Howe, & Chau, 2004, p. 338). For individuals working in these fields, trauma exposure, whether primary or secondary, has the potential to negatively affect morbidity, overall health, quality of life, and workplace failure. Thus, assessing trauma levels in helpers while preventing and mitigating trauma resulting from workplace exposure has the potential to impact public health as a whole and workplace productivity (Bell, Kulkarni, & Dalton, 2003; Pearlman & Caringi, 2008).

Recent research has examined the effect of STS in populations not traditionally studied including general health care workers, emergency first responders, and other professionals who work directly with traumatized clients. For instance, one study examined the effects of STS on school personnel (Borntrager, et al., 2012). Given that youth spend on average 7–8 h in school per day and a national longitudinal study found that at least one quarter of American children experience one high magnitude traumatic event by the age of 16 (Borntrager et al., 2012; Costello, Erkanli, Fairbank, & Angold, 2002), it becomes not only relevant but necessary to assess trauma among school personnel in order to protect the workforce so intricately involved in children’s development. The Borntrager and colleagues (2012) study revealed that school personnel reported alarmingly high levels of STS, which were equivalent to levels of STS found among mental health workers.

Research has established that high teacher stress is associated with various psychological distress symptoms (Chan, 1998). For instance, large class sizes, problems with classroom management, poor relationships with colleagues and workload have all been associated with poor mental health outcomes, high stress levels, burnout, and low teacher self-efficacy (e.g. Nishizaka, 2002; Trendall, 1989; Wang & Guo, 2007). While there is a small, but growing, quantitative literature on the effect of work stress on teachers and school personnel, there exists even less qualitative research literature on the topic. At present, a majority of the teacher stress quantitative literature uses structured rating scales, with a few options for open-ended responses (Kyriacou, 2001; Shernoff, Mehta, Atkins, Torf, & Spencer, 2011). The limited qualitative research that has been conducted on the topic of teacher work stress, CF, burnout, and STS has been in the United States (Blasé, 1986; Shernoff et al., 2011) and in Ireland (e.g. Kerr, Breen, Delaney, Kelly, Miller, 2011). Most of the teacher-stress qualitative studies published to date have been semi-structured, in-depth, tape-recorded, and transcribed interviews, with 15 or fewer participants. Additionally, many have been conducted in larger urban areas, and to a lesser extent in rural areas (Chan, 1998; Kerr et al., 2011; Shernoff et al., 2011). Montgomery & Rupp (2005) conducted a meta-analysis of 65 published studies ( $n = 2527$ ) on teacher stress between 1998 and 2003, where with the analysis largely hinging upon quantitative, not qualitative analysis. Importantly, qualitative research can offer the perspective of teachers with more in-depth context

and understanding of their experience, including exploring risk and protective factors for long-term distress (Shernoff et al., 2011).

Kyriacou (2001) defined teacher stress as the experience by a teacher of unpleasant emotions associated with feelings of anger, anxiety, tension, and frustration linked to triggers within their environment. Simply put, stresses adversely affect a teacher's emotional health, thus negatively affecting their classroom effectiveness (Blasé, 1986). Through the international literature, poor coping skills are consistently identified as a primary cause of stress and can lead to missing more days of work and a low teacher retention rate altogether (Bowers, 2004; Montgomery & Rupp, 2005). Positive and varied coping skills that work toward mitigating stress such as mentally separating home life from work can attempt to decrease high teacher stress (Arikewuyo, 2004; Chan, 1998).

Research also identified fellow colleagues support as a primary way of attempting to reduce workplace stress (Kerr et al., 2011; Shernoff et al., 2011). Kerr et al. (2011) found that while all of the teachers identified other teachers as their primary source of support, none felt comfortable admitting stress or difficulties to their principal. Indeed, a positive correlation has been drawn between positive coping skills and social supports as the strongest mitigation factors against STS-related issues (Borntrager, et al., 2012; Follette, Polusny, & Milbeck, 1994; Kerr et al., 2011; Pearlman & Caringi, 2008; Shernoff et al., 2011). Another common factor that has been consistently identified through teacher work-stress qualitative research was difficulty in maintaining healthy boundaries with their students. Teachers reported wanting to impart knowledge and skills unto their students, while also attending to students' personal needs (Kerr et al., 2011). This balance, while not only difficult to maintain, resulted in higher stress when boundaries were blurred.

To date, many efforts to empirically identify predictors of teacher stress have looked at individual characteristics vs. organizational characteristics (Shernoff et al., 2011). However, organizational factors such as student, administrative, and other teacher-related factors constituted 83.1% of the most frequently cited stressors in Blasé's 1986 qualitative study (Blasé, 1986). These factors included classroom and school environment management factors, role overload, and conflict and were seen to more consistently predict work-stress in teachers (Dorman, 2003; Shernoff et al., 2011).

To our knowledge, the current study represents the first qualitative examination of secondary trauma reactions among public school personnel. As the current study followed that of Borntrager and colleagues (2012), the assessment included extrapolation on the quantitative measures that were described in the previous study. Themes that were explored included characteristics of students, class load size, and a personal history of trauma, though additional themes emerged during data analysis.

## **Method**

### ***Participants***

Participants for the quantitative study were 300 school staff members, including educators, paraprofessionals, school-based social workers, counselors, and administrators, across 6 public schools in the Rocky Mountain west, including urban, rural, and American-Indian reservation communities. These participants were part of a series of voluntary trainings on STS. Due to the rural nature of several of the communities, participants were not asked about their specific job titles in order to maintain confidentiality.

The STS trainings occurred following collection of the quantitative data portion described in Borntrager and colleagues (2012), with qualitative interviews described herein following the trainings. Roughly half of the 256 participants volunteered to be interviewed for the qualitative data portion of the study. Of those, 15 were interviewed via telephone. Given the geographic distance of some of the schools from the research team and lack of available technology, telephone interviews were the best option to assure representativeness of our greater sample.

Interviewees were representative of the overall sample. Participants had a mean age of 45.59 years ( $SD = 12.10$ ) and were primarily female (74.3%). Seventy-four percent of the sample was Caucasian, not Hispanic, with the second largest represented ethnic group being Native American (20%). This is noteworthy given that past research has demonstrated that indigenous populations, such as Native Americans and Alaska Natives, are disproportionately exposed to a host of negative circumstances including poverty, domestic violence, and suicide, among other stressors, and yet are also rarely included in research studies (Beals, et al., 1997; Child Welfare League of America, 2005; U.S. Department of Health and Human Services, Administration on Children, Youth and Families, 2002). The schools that participated in the study were identified as having large percentages of traumatized children in their classrooms. Teachers selected for interviews all described knowledge of children who experienced trauma in their classes. Trauma experienced by students included physical abuse, sexual abuse, neglect, and witnessing domestic violence as well as other types of childhood trauma.

### ***Procedure***

An interview guide with semi-structured questions was developed from a pilot study and from a review of the literature on STS among individuals who work with trauma-exposed youth. Question domains included: trauma type, organizational culture and climate elements, personal character traits of the teacher, and a personal history of trauma. Follow-up questions allowed researchers to explore more deeply within these domains and also to add other questions as needed. Three graduate research assistants trained by the primary author conducted interviews. Interviews were audiotaped with permission by use of a digital telephone recording system. The chosen sample was identified in order to mirror the characteristics of the overall workforce of the state. All interviews performed were included for analysis in the current study, and interviews were transcribed verbatim. Research assistants met regularly after each interview with the primary author to discuss the interview process, as well as to be sure there were no adverse impacts on the respondents or research assistants.

A combined deductive/inductive approach was used in the current study, not only in its overall methodology but also *within* the qualitative analysis process. Generally, qualitative research is thought of as ‘inductive and relativist’ only (Maxwell, 2005), though using both inductive and deductive analysis allows for rich description of findings. This methodology also provides assurances in the strength of credibility and trustworthiness of findings. As often used in qualitative research, content analysis was used to identify themes in the data. With initial conceptual decisions and research questions guided by the theoretical literature on STS, a deductive approach was used. Qualitative software, Atlas TI, was used to help store and organize the data.

Based on existing theory from the literature, initial coding categories were created. Identified by Figley (1995) and confirmed by Caringi & Hardiman (2011), three factors that contribute to STS levels: case type, class load size, and a personal history of

trauma were used as templates to examine the identified categories and determine if our data fit the pattern of previous research. In order to assure accuracy of the categories, the first half of the data was coded incident by incident while using memoing (Charmaz, 2003). Next, as described by Mayring (2000), coding categories were reviewed and adjusted after analyzing 50% of the data. To allow for new findings, inductive reasoning was then employed and research assistants kept analytic memos (Charmaz, 2003). These were used in research team meetings lead by the primary author to inductively adjust the coding categories. Using deductive analysis, categories were subsequently confirmed by reviewing findings from the quantitative data. As reported above, Atlas TI was used for data management purposes.

### ***Establishing validity and triangulating data***

To address validity of the qualitative findings, we used multiple methods to achieve credibility and trustworthiness (Caringi & Hardiman, 2011). Methods included the collection of ‘rich data,’ data triangulation, 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 via semi-structured interviews. Member checking and respondent validation assured 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 credibility and trustworthiness of the findings.

## **Results**

### ***Sample characteristics***

#### *Teaching experience and satisfaction*

Teachers who completed the survey ranged in teaching experience from 3 to 54 years with 21 as the median number of years teaching. Most teachers in the study went into teaching as their first career choice. Those who had been teaching for the entirety of their professional career described wanting to teach since a very young age. One teacher stated, ‘I’ve always loved children and school and teaching and I always knew that I would teach.’ Conversely, one interviewee was a farmer for approximately eight - years prior to becoming a teacher, and another retired from the army before going into the teaching profession.

Satisfaction levels with current placement or the teaching profession varied widely among teachers surveyed. There was no consistent theme to explain this variance. However, one teacher cited economic reasons for staying in the current placement while another cited feeling ‘stuck’ in her placement due to competitiveness in securing positions in other communities. Significantly, two teachers reported leaving their current placement for a less stressful position. Out of the fifteen teachers interviewed, three had no desire to leave their current placement and nine either had thoughts of changing careers or were actively planning to retire or move to a new placement. As described by one interviewee:

I think the first year that I worked with a high needs group was probably the hardest year teaching and I had been teaching for 5 years already. I remember going into the principal at my school and saying 'I'm either in the wrong grade, I'm in the wrong school or I'm in the wrong profession because something's wrong.' I've been looking for jobs and have taken a different job at a different school for this next year. I think this new position will allow me to try and bring my personal life and my work life into more balance.

### *Culture and childhood experiences which affect teaching*

Interviewees were asked questions regarding their childhood experiences and cultural background that may influence their ability to teach students. Of the sampled population, two teachers indicated growing up and attending school on a reservation. Of those teachers, one felt this did not contribute significantly to feeling prepared to deal with issues the students in his/her current positions dealt with. He/she explained:

I grew up on the [redacted] Indian Reservation. I lived there for 18 years, my whole life. We had a ranch up there. I saw trauma up there, kids that dealt with trauma. But working with kids, every day, kids coming in and asking if I had food in my room because they were 7th graders and pregnant, um, I don't think I was totally ready for that.

Of these two teachers, the other spoke of the knowledge he/she gained as a member of a reservation community as helpful when dealing with students' trauma. Additionally, this teacher explained the impact of growing up in a small community and then later teaching in it; 'We know the community and their background and their family members and everything so we're probably more impacted than if we were in a large city area.'

### *Support systems*

To better understand how teachers deal with work-related stress outside of the professional context, interviewees were asked about their families and personal support systems. Family makeup was somewhat homogeneous as ten of the teachers indicated having children of their own, only one teacher reported being single, and one married with no children.

When asked what support was most helpful in addressing STS or stress related to dealing with difficult students, most interviewees named more than one resource. Teachers described these support systems as 'wrap-around service people' and 'a spider web' of supports. Several teachers mentioned spending time with their children and extended families as a source of personal enjoyment and relaxation. Seven teachers stated the most helpful resource for mitigating stress was support from their colleagues. Specifically, teachers discussed paraprofessionals working with them in their classrooms, mentors, administration, and school counselors. Five interviewees cited additional resources such as mental health services inside and outside the school setting, school counseling for the students, and school and community services for the families. The school-based mental health program was cited specifically by two teachers as most helpful. A teacher emphasized how helpful the additional services are:

I can't say enough about having those services in the school building and working closely with them. I've learned a lot from them and I think that has a lot to do with how I handle things now too.

Some interviewees expressed that the simple act of discussing work-related stress is effective in reducing symptoms. One interviewee reported that the ability to talk about

his/her stress in the interview for this research project was most helpful. As this teacher explained ‘the knowledge that you guys have a report which might help the administration understand that this is a real problem is helpful. Maybe then they will stop ignoring it.’

In general, the opportunity for teachers to interact with colleagues allowed for knowledge sharing where teachers benefit from peers’ experience and professionalism. This occasion for interaction was a significant factor that aided teachers in managing stress. Conversely, the lack of such interaction was cited as a hindrance to the ability to handle all aspects of the job. One interviewee explained that ‘Professional Learning Communities’ have been implemented in their school to facilitate knowledge sharing and support that has been helpful. As one teacher explained:

I’ve been fortunate enough to work with a lot of good people and I think that has made a positive impact on me. I’ve gained from other people’s experiences, from watching and interacting with them to learning skills of teaching and how best to deal with students.

In the alternative, colleagues were discussed as having the potential to be a source of stress at times. Teachers reported this stress coming from a multitude of factors but included a colleague’s: lack of commitment, lack of experience with the students who may have difficult behaviors, inconsistency in dealing with disciplinary issues and applying rules, and feeling ‘excluded from group and community decisions’ within the school. A colleague’s inability to effectively manage these issues seemed to negatively impact the interviewee’s stress level.

### *Organizational stress factors*

Institutionalized practices within an organization can greatly impact levels of stress experienced by those who work within any given system. For instance, literature supports the premise that within school systems, class size can have an impact on teachers’ stress levels (Nishizaka, 2002; Wang & Guo, 2007). Indeed, teachers interviewed for this study discussed class size as a determining factor of stress and eight teachers agreed they experienced higher levels of stress with increased class sizes. Larger class sizes were described as difficult for several reasons including: it is difficult to ‘build connections’ with students; student behavior is negatively affected by larger class sizes; there are increased ‘issues and problems’ and; limited ability to effectively cover all educational material due to time dedicated managing student behaviors. As one teacher stated ‘it’s just easier for kids to disappear or to kind of cause trouble and get kicked out’ in a larger class. Another explained ‘You’re trying so hard to manage behavior that you don’t get a lot of time to actually feel like you’re being effective with a higher class size.’

Consistent with this premise, teachers in our sample confirmed that smaller class sizes were correlated with a reduction in stress levels. Specifically, teachers reported that smaller classes help manage stress by allowing flexibility in the day-to-day schedule with students. This flexibility aids the teacher in providing individual students who may be dealing with trauma more attention.

In addition to size of class, the number and kind of issues individual students were dealing with was also a factor that contributed to stress levels in teachers. Two teachers who stated they were not affected by class size still endorsed feeling the number of



problems or traumas students were experiencing was none-the-less indicative of added stress. One teacher stated that ‘even though the number of students in classrooms may have decreased, the number of issues have stayed the same or even increased over the years.’

### *Protective factors*

The literature supports that while some professionals may be more likely than others to experience high levels of stress, there are certain elements that help protect against burnout or CF (Kulkarni, Bell, Hartman, & Herman-Smith, 2013; Samios, Abel, & Rodzik, 2013). Specifically, feeling ‘successful’ with students was assessed as a potential protective factor against STS and workplace stress. Teachers reported that certain student characteristics helped them feel more successful including those students who were: more troubled, willing to work, resilient, responsive to positive reinforcement, younger female and students who desire success. Conversely, as may be expected of children who have or are currently experiencing trauma, one teacher cited difficulty feeling successful ‘if a kid’s hungry or worried about going home or whatever they’re not going to pay attention anyways so I’m just standing up there being a white sound to them.’

Self-care techniques were also reported by 11 teachers. Self-care techniques included: hobbies, reading, crossword puzzles, watching movies, enjoying music, exercise, enjoying personal relationships, spirituality or religious activities, prayer and meditation, using jokes and humor, performing repetitive work, gardening, camping, hiking, four wheeling, activities with family, traveling, venting to a spouse, drinking alcohol, going for a drive, deep breathing, talking with a counselor or psychologist, and medication. One teacher felt that his/her use of self-care was not working and as a result was losing weight, working long hours, isolating, and struggling to balance work and play. One teacher stated ‘to tell you the truth I don’t have any problems.’ The teacher attributed this to having a military background.

When teachers were asked if they received any mentoring, 10 said they were receiving no mentoring and 2 said that they were participating in a mentoring program. Of the teachers who were receiving no mentoring, five shared that mentoring would help them gain skills to better handle the student population they work with. One stated that he/she receives ‘supervision,’ which was more evaluative in nature and added to his/her stress. One mentioned that he/she receives ‘evaluations’ with no recommendations for change. Two stated that mentoring would be especially helpful to first year teachers. One described the first year as ‘baptism by fire.’ Another stated, ‘You get a new teacher in they’re just put on their own to figure it all out and that’s really not the way it should be done at all.’ Teachers described finding other ways to receive feedback such as talking with fellow teachers who are from the area, knowing the issues the students and teachers face, and requesting feedback:

I mean, this has been my life for the last 28 years and I can’t imagine doing anything else. I think when you talk about how people manage their level of stress and that sort of stuff, it’s really important to keep asking yourself the question: is this really what I want to be doing? So whether you’ve been in the field for 28, 5, or 10 years, if you feel like you’re not making a difference and you’re just teaching because it’s a job, I think you’re going to find yourself even more burnt out. Hopefully you’ll have the wherewithal to get out before you cause any damage to yourself or others.

## Discussion

The literature regarding secondary trauma reactions in school personnel continues to grow but, as yet, is still a small sample of the larger research base regarding secondary trauma in helping professionals. To our knowledge, this study is only the second published to date that examines secondary trauma among public school personnel. Overall, the qualitative responses provided by participants support findings from Bortrager and colleagues, 2012. Namely, the relatively seasoned staff (average 21 years of experience) and the endorsed negative impact on stress level due to the number and kind of trauma experienced by students in their classroom were supported by findings from the current study. Of the participants interviewed, 75% had thoughts of changing careers, were actively planning to retire or move to a new placement. Organizational factors such as lack of supervision and large class size were prominent themes influencing capacity to effectively manage work-related stress. Together these data illustrate the need for systematic policy reform that responds to high rates of turnover and organizational structures that contribute to secondary trauma.

Consistent with quantitative finding in Bortrager and colleagues (2012), the qualitative data suggest interventions for STS in school personnel would benefit from team-based collaborative program development. The public health triangle is a comprehensive framework for formulating STS mitigation strategies (Frieden, 2010). The model formulates implementation of interventions on universal (tier one), secondary (tier two), and tertiary (tier three) levels.

In the context of STS mitigation, the public health triangle suggests interventions lie on a continuum to reflect the severity of STS experienced by school staff. Tier one interventions are applied universally to all teachers and staff within a school regardless of STS levels. Tier two interventions are designed for teachers and staff who have been moderately impacted by STS. Finally, tier three interventions are for those who have significant levels of STS most appropriately treated by individual therapy and additional outside supports.

Based upon the finding that a majority of teachers interviewed had thoughts of changing careers due to work-related stress, it seems appropriate for education systems to institutionalize tier one education on STS recognition and response for all staff. Understanding secondary trauma symptomatology and corresponding mitigation strategies may prevent burnout and in turn increase retention of staff.

An example of a tier one intervention that supports symptom recognition and response can be found in the results from this study. Specifically, the data showcase open discussion with colleagues as an impactful treatment for STS. Participants described symptom reduction after engaging colleagues in dialog regarding work-related stress. This process applied universally in a school setting contributes to an organizational culture that prioritizes self-care and is consistent with current literature on the effective treatment of STS in child welfare systems. Creating a climate of support for STS mitigation that is flexible and responsive to staff cultural diversity prevents hierarchical mechanisms that ultimately contribute to STS levels (Caringi, Lawson, & Devlin, 2012). It is recommended that institutionalized mechanisms for peer-to-peer discussion and consultation on work-related stress would support prevention and mitigation of STS in educational settings.

In addition to strategies applied universally, some staff may benefit from more targeted (tier two) STS mitigation strategies. Findings from the current study provided support for individual supervision and mentoring as a STS mitigation strategy. Of the

participants interviewed, most did not receive supervision from administration yet endorsed this practice as helpful to gain skills in supporting children in their classroom who have experienced trauma. This may be especially helpful for new teachers who are learning ways to effectively manage emerging trauma symptoms of children including difficult behaviors. This individual supervision and mentoring as a STS mitigation strategy could be applied as a tier two intervention for teachers with moderate levels of STS. Supervision may focus on individual STS symptom recognition and response with support on management of affect in a classroom setting with children with active trauma symptomatology. Supervision time may be used to build a self-care plan that can be monitored for progress over a length of time.

Individual supervision and mentoring of this type aligns with literature supporting such intervention to reduce turnover. Again, due to the lack of research on this topic in the area of education, we borrow literature from the helping professions (child welfare, social work, and mental health) to illuminate this phenomenon. Published reports on the impact of supervision on worker outcomes underscore its importance in buffering the negative effects of working in human service organizations. In addition, effective supervision, that goes beyond focusing on administrative tasks, can contribute to positive worker outcomes such as job satisfaction, organizational commitment, and worker retention (Mor Barak, Travis, Pyun & Xie, 2009).

Finally, findings from the current study support individual treatment by outside resources as an appropriate tier three intervention in school personnel. Participants reported noticing a greater prevalence of trauma experienced by children in the classroom over time. This suggests that school personnel are at an increasingly greater risk of exposure to children who have experienced trauma and resulting STS. This fact, combined with certain geographic realities (i.e. rural community) make avoiding exposure very difficult. Teachers in rural communities may personally know the families of children exposed to trauma and have a few options for transfer to other positions without such conflicts. Thus, school personnel with high levels of STS may benefit from individualized treatment provided by an outside agency resource. This method is more intense than either tier one or tier two interventions but may be necessary in cases of prolonged and significant symptoms that interfere with job and home life satisfaction.

Consideration should also be given to the use of traditional cultural practices or spirituality as a method for STS mitigation. As can be seen from the demographic makeup of the study sample, American-Indians make up a high proportion of the population in the northwest. Many teachers and helping professionals who are tribal members may find practicing their cultural ways a more appropriate intervention for STS than western therapeutic methods. Research confirms the use of cultural resources and values as a mitigation strategy for negative mental health outcomes (Yellow Horse Brave Heart & DeBruyn, 1998). In addition, the support found in one's cultural or spiritual community may go a long way to promoting positive coping.

### **Limitations**

One of the main limitations of this study was the selection of qualitative interviewees from the overall sample. There may have been a bias of self-selection that impacted the study findings. It is possible that those willing to talk to researchers have a particular perspective on the impact of trauma on their work. In addition, the fact that all respondents were selected from a group that had participated in a training on STS could also have an impact on responses. However, an equal argument could be made that it is

essential to educate respondent on STS such that they can accurately answer questions about the phenomenon.

Phone interviews also have general limitations. Researchers were only able to take the words spoken in interviews at face value. There was no ability to interpret body language, emotion, or other means of communication requiring face-to-face contact.

Further, the fact that this study is cross-sectional in nature means we were only able to analyze one point in time. Future studies that are able to employ a longitudinal design will offer much in terms of advancement of the literature on the topic.

Finally, a randomized control trial would offer more rigor in testing interventions to decrease the impact of STS in schools (Hydon, Wong, Langley, Stein, & Kataoka, 2015). In that this study was the first of its kind, it is appropriate to use a purposive sample. As addressed in the *procedure* section, we utilized extensive techniques suggested as effective in the literature to address limitations to the study.

## Conclusion

Although research has examined STS among mental health workers, only one study has systematically addressed STS among public school personnel (Borntrager, et al., 2012). The Borntrager and colleagues (2012) study revealed significant levels of STS among educators, though little is known about the risk and mitigating factors relevant to the STS levels. This study represents the first study to examine such factors. Qualitative methods were utilized to develop a broader understanding of the experience of educators relative to their experience of STS in public school settings. Findings revealed that educators are deeply impacted by the trauma experiences of their students, which has impacted their interest in remaining in their professions. Further, they cited colleagues and family members as important areas of support for dealing with work-related stresses, though finding more formal systems of support could prove to be challenging particularly in rural communities. Thus, being from and working in rural and small communities was viewed as both a strength and a challenge for participants. Directions for future research should include replication of both quantitative and qualitative assessments of STS among educators in other communities, particularly to determine if common mitigating strategies can be developed across environments. Although techniques to address STS within a public health framework were suggested within the current study, it is unknown if these strategies would prove effective in a randomized, controlled trial. Thus, given the saliency and risk related to STS issues among educators in public school settings, future research should include rigorous evaluation of intervention efforts to promote the health and well-being of educators and the students they serve.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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