

This article was downloaded by: [Emily M. Douglas]

On: 25 July 2013, At: 11:39

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Journal of Evidence-Based Social Work

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/webs20>

Symptoms of Posttraumatic Stress among Child Welfare Workers Who Experience a Maltreatment Fatality on their Caseload

Emily M. Douglas^a

^a School of Social Work, Bridgewater State University, Bridgewater, Massachusetts, USA

To cite this article: Emily M. Douglas (2013) Symptoms of Posttraumatic Stress among Child Welfare Workers Who Experience a Maltreatment Fatality on their Caseload, *Journal of Evidence-Based Social Work*, 10:4, 373-387, DOI: [10.1080/15433714.2012.664058](https://doi.org/10.1080/15433714.2012.664058)

To link to this article: <http://dx.doi.org/10.1080/15433714.2012.664058>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

Symptoms of Posttraumatic Stress among Child Welfare Workers Who Experience a Maltreatment Fatality on their Caseload

Emily M. Douglas

School of Social Work, Bridgewater State University, Bridgewater, Massachusetts, USA

Annually, 1,000–2,000 child welfare workers experience the death of a child client. The child welfare field has paid increasing attention to the impact of workplace trauma events on the psychological distress of child welfare workers. In this article the author assesses the relationship between experiencing a maltreatment fatality and workers' posttraumatic stress among a multi-state sample of 385 child welfare workers. Results indicate that a maltreatment fatality is not associated with higher rates of posttraumatic stress. Among child welfare workers who experienced a fatality, those who feel greater culpability for the death report higher levels of posttraumatic stress. Implications for future research and practice are discussed.

Keywords: Child fatality, posttraumatic stress symptoms, child welfare workers

Researchers and practitioners alike have become increasingly concerned about the impact of trauma exposure on child welfare workers (CWWs; Bride, Jones, & MacMaster, 2007; Dane, 2000; Horwitz, 2006; Nelson-Gardell & Harris, 2003). It has been noted that workers are at-risk for suffering posttraumatic stress (PTS) and the detrimental impact that this may have on their practice skills and techniques (Horwitz, 1998). Researchers have assessed the prevalence of PTS symptoms, the influence of personal trauma on PTS symptoms, and training and assessment of for those working in child welfare (Dane, 2000; Knight, 2010; Perron & Hiltz, 2006). One gap in our knowledge is whether a critical incident on one's caseload can have a negative effect on a worker's mental health. The purpose of this article is to examine whether experiencing a maltreatment fatality on a CWW's caseload places a worker at an increased risk for experiencing PTS. The author further explores what characteristics and experiences serve as risk or protective factors for PTS among just those workers who have experienced a child maltreatment fatality (CMF) on their caseload.

CMF

According to official statistics, in 2009, 1,770 children died from maltreatment (U.S. Department of Health & Human Services, 2010). Roughly 30%–50% of CMF victims are known to child

The author gratefully acknowledges that the research presented in this article was funded by the Presidential Fellows Program and the Center for the Advancement of Research and Scholarship, both at Bridgewater State University. The author also thanks Toni Chance and Sandra Hodge for their individual guidance and consultation on this project; and Sean McCarthy for his assistance with coding the data.

Address correspondence to Emily M. Douglas, School of Social Work, Bridgewater State University, 95 Burrill Ave., Bridgewater, MA 02325, USA. E-mail: Emily.Douglas@bridgew.edu

welfare agencies before death (Anderson, Ambrosino, Valentine, & Lauderdale, 1983; Beveridge, 1994). This means that annually, hundreds or thousands of workers experience a fatality. For example, if 30%–50% of children who die each year are known to child welfare agencies, we can extrapolate that in 2009 between 531–885 CCWs experienced a fatality on a caseload. If we assume that each open case has a frontline worker and a supervisor, then the number of CWWs involved in fatalities annually is somewhere between 1,062–1,770, which is roughly 3.6%–6.0% of the child welfare workforce (U.S. Department of Health & Human Services, 2010). It is worth noting that this estimate may be slightly inflated because multiple children sometimes die in a single family, who would have had a single worker. Research has focused on agency-level involvement in deaths (Gustavsson & MacEachron, 2004; Palusci, Yager, & Covington, 2010; Regehr, Chau, Leslie, & Howe, 2002), but little research has focused on CWWs who experience a fatality and the potential trauma symptoms that they experience after the CMF.

PTS

An individual who has PTS has experienced a traumatic event, such as an accident, war, or victimization, and then experiences psychological distress related to this event: distressing recollections, thoughts, and dreams about the event or feeling as if the traumatic event were reoccurring again. In the most serious of cases, individuals meeting specific criteria are diagnosed with posttraumatic stress disorder (PTSD; American Psychiatric Association, 2000). In this article I assess for PTS symptoms, but much of the literature focuses on the diagnosis of the condition—PTSD. I use the terms PTS symptoms and PTSD interchangeably to be consistent with the literature that I cite, but caution the reader that I only measure PTS symptoms alone.

PTS and Child Welfare

Since the 1990s, a growing body of literature has explored the relationship between the traumatic experiences to which CWWs are exposed and later mental health concerns, including secondary or vicarious trauma, PTS, burnout, and compassion fatigue (Bride et al., 2007; Horwitz, 1998, 2006; Perron & Hiltz, 2006). The literature reports higher rates of PTS among social workers than among the general population. Specifically, in a single year, 15.2% of social workers meet the criteria for PTSD (Bride, 2007), compared to 3.5% of the general population (Kessler, Chiu, Demler, & Walters, 2005). Further, research has also found that CWWs have higher rates of psychological distress than among the general population (Cornille & Meyers, 1999). PTS symptoms serve as an impediment to the field of child welfare and social work. CWWs with higher levels of PTS symptoms are more likely to experience burnout, professional fatigue (Dane, 2000; Van Hook & Rothenberg, 2009), and disengagement from professional responsibilities (Perron & Hiltz, 2006). Thus, the after-effects of workplace trauma can have important implications for clients, who may receive less than optimum services from workers who struggle with burnout or similar conditions (Horwitz, 1998).

One of the earlier pieces in the literature on CWWs and their exposure to trauma explained that psychological trauma theory provided an excellent foundation for understanding the link between the work that CWWs undertake and their resulting mental health concerns (Horwitz, 1998). Research shows that experiencing a major trauma can overwhelm one's capacities and have a negative effect on daily functioning, as well as mental and physical well-being (Fullilove et al., 1993; Herman, 1992; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). Possible traumatic events usually include things which are beyond the control of the worker, such as being assaulted, having property vandalized, or dealing with the negative public perceptions of the child welfare profession (Horwitz, 2006). Workers can also experience secondary trauma through the clients

they serve. The trauma which is directed toward their clients can have an impact on CWWs, even though they are not the direct recipients or targets of that trauma (Knight, 2010; Nelson-Gardell & Harris, 2003; Perron & Hiltz, 2006).

Factors Associated with PTS

CWWs' demographic characteristics are often predictive of PTS symptoms. Women in child welfare work report higher levels of PTS symptoms (Horwitz, 2006), but years of experience is not related to PST symptoms (Bride et al., 2007; Nelson-Gardell & Harris, 2003; Perron & Hiltz, 2006). There are mixed findings with regard to the age of the worker, with one study finding that younger workers report more PST symptoms (Nelson-Gardell & Harris, 2003) and another finding no relationship between age and trauma symptoms (Horwitz, 2006). There is seemingly no relationship between level of education and PTS symptoms (Van Hook & Rothenberg, 2009). There are also a few studies which have found that CWWs who experienced maltreatment in their own childhoods have a higher degree of PTS symptoms (Nelson-Gardell & Harris, 2003; Stevens & Higgins, 2002).

The psychological effects of specific workplace trauma events have been examined among CWWs (Horwitz, 2006). One study considered hearing about abuse from a client, being placed in fear of safety by a client, being physically assaulted or having property damaged, working with children in distressing situations, and being unable to do enough for one's clients. Those events which had the strongest effect on a worker's mental health were vicarious events, such as hearing about abuse or working with children in distressing situations; being verbally abused or threatened was also statistically significantly related to trauma symptoms, although physical assault was not. This is the only study to examine specific professional trauma events, although the death of a client child was not considered. Only one study on CWWs and secondary trauma included information about CMFs. Workers unanimously identified CMFs as a stressful event that was tied to secondary trauma (Dane, 2000). Further work is needed to address the relationship between CMFs and PTS symptoms in CWWs so that workers can be adequately trained and supported as needed. In the current article I will address some of these concerns.

The support of supervisors and colleagues has been examined as a protective factor against experiencing PTS symptoms. Having support from one's work peers is negatively related to PTS symptoms (Bride et al., 2007). The literature on resilience also points to the importance of having supports to promote positive outcomes (Garmezy, 1993; Horwitz, 1998; Wyman, Cowen, Work, Work, & Parker, 1991). Yet, there have been conflicting results with regard to the role that co-worker support plays as a protective factor against PTS symptoms. One study found that having someone in which to confide is *positively* related to trauma symptoms and that support from inside or outside of work is not related to trauma effects (Horwitz, 2006). On a related note, satisfaction with one's organization is not related to one's trauma symptoms (Perron & Hiltz, 2006), but intent to remain employed in child protective work was negatively related to PTS symptoms (Bride et al., 2007). Nevertheless, the literature on secondary trauma and CWWs discusses the importance of developing resilience among CWWs (Horwitz, 1998) and one way to promote this is to build agency-based supports which encourage or enable workers to confide in a trusted individual or co-worker (Dane, 2000). Workers have also reported their desire to receive more support from administrators and less "red tape" (Van Hook & Rothenberg, 2009).

OBJECTIVES

The literature on CWWs and trauma symptomatology is limited by small sample sizes (Perron & Hiltz, 2006; Stevens & Higgins, 2002) and a focus on single states (Bride et al., 2007); they

have used univariate statistical analyses (Bride et al., 2007) and have not adequately addressed the worst outcome of child welfare work—the death of a child. These limitations will be addressed in the current article. My purpose through this article is to assess how experiences with maltreatment fatalities may have an impact on PTS among a multi-state sample of 385 CWWs. I also examine how practice techniques before the death and if supportive services after the fact are related to PTS symptoms. Based on the existing literature, I hypothesized that:

- (1) CWWs who experienced a CMF on their caseload will have higher levels of PTS symptoms. This is consistent with the literature on trauma (Fullilove et al., 1993; Herman, 1992; Horwitz, 1998; Resnick et al., 1993; Wyman et al., 1991).
- (2) Among CWWs who experienced a CMF, agency support, as well support from co-workers, supervisors, and the agency will act as a protective factor against PTS symptoms. The literature is split on this relationship, but research on resilience suggests that social and emotional support serves as a protective factor against maladaptation (Garmezy, 1993; Kobak & Sceery, 1988; Lambert, Lambert, Klipple, & Mewshaw, 1989; Roos & Cohen, 1987).
- (3) The practice techniques, worker attitudes, and case characteristics of CWWs who experienced a CMF, such as how recently the CWW saw the child before s/he died, attitude about the death, whether the family was being closely monitored, and age of the victim, will be related to CWWs' level of PTS symptoms. Previous research suggests that practice experiences, such as workers who feel that they are not able to do enough for their clients experience higher levels of PTS (Horwitz, 2006).

METHODS

Procedure

Data presented in this article was collected as part of a larger study, *Child Maltreatment Fatalities: Perceptions and Experiences of Child Welfare Professionals*, from September 2010–January 2011. CWWs and managers were recruited to participate in an online survey that focused on CWWs' perceptions of and experiences with CMFs. Potential participants were recruited through: (1) online advertisements (e.g., Child Welfare League of America), and (2) postings on the Facebook pages of the National Association for Social Work and of chapter affiliates. Most responses, however, came from: (3) announcements that were made to the Child Maltreatment Research Listserv (maintained by the National Data Archive on Child Abuse and Neglect, Cornell University), where members in the field forwarded the recruitment statement to child welfare workers and supervisors, and (4) direct appeals that were e-mailed to the most appropriate and easily identified agency administrator in each state.

Individuals who responded to the solicitation were directed to the online survey hosted by Survey Monkey. Potential participants were informed of their rights as a participant in the study, including that some of the questions may cause them distress. Individuals were assured that they could skip any questions and cease participation at any time. On the final page of the survey participants were given resources to national hotlines and websites where they could seek assistance for psychological distress should they need it after taking the survey. The methods for this study were approved by the Institutional Review Board at Bridgewater State University.

Participants

My purpose in conducting this study was to compare CWWs who experienced a CMF with those who did not; and, of those who did, to describe their experiences related to the CMF. At the

start of the survey, participants were introduced to the topic of the study and given the definition that is used by the National Child Abuse and Neglect Data System: "For clarification, a child maltreatment fatality (CMF) is: a child dying from abuse or neglect, because either (a) the injury from the abuse or neglect was the cause of death, or (b) the abuse and/or neglect was a contributing factor to the cause of death." About one-third of the way through the survey participants were asked, "Have you ever had a child die who was on your caseload, when you were either a front-line worker or supervisor for a county or state child protection/child welfare agency?" Those who answered "Yes," were presented with a question concerning the type of maltreatment from which the child died: medical neglect, physical abuse, physical neglect, psychological abuse, sexual abuse, and other; as well as a question pertaining to the individual who was responsible for the child's death: mother, father, step-mother/intimate partner of parent, step-father/intimate partner of parent, sister, brother, grandmother, grandfather, foster mother, foster father, child or daycare provider, unknown, and other—with an open field for text. In most instances, the responses concerning the manner of death and the individuals responsible were clear. In 54 instances, additional coding was required, which was performed by the researcher with the assistance of a former state child welfare administrator with 30 years of experience in the field. First, 34 deaths were determined to be non-CMF and included instances of deaths due to car accidents, illness, suicide, etc. Second, 5 cases were coded as CMFs and primarily concerned instances of physical neglect, such as a young child drowning in a bathtub or pool without supervision. Third, 12 respondents indicated that a fatality occurred, but did not provide further information; they were considered CMFs and retained for analyses. Fourth, in 3 instances CWWs provided information about the death, but did not indicate level of responsibility, such as "child drowned;" these cases were excluded.

Of the 452 participants in this study, 445 answered the question pertaining to losing a client. Specifically, 43.4% ($n = 193$) had experienced the death of a child; in 7.5% cases ($n = 34$) the death was a non-CMF; 35.8% ($n = 154$) had dealt with a death that was a CMF; only 30.5% ($n = 135$) of the total sample provided enough information about their CMF experience to be retained for analyses. Finally, in 12 of those cases, the CMF was the impetus for opening a new case. Thus, 27.2% of the total sample experienced a CMF on an open, active case, which resulted in $n = 123$. For the analyses presented in this article on the total sample, $n = 385$; for the subsample of workers experiencing a CMF was $n = 97$. The final measure of the survey assessed the mental well-being of workers and this section had more missing data, thus the reduction in the sample.

Table 1 displays current demographic information for the entire sample, and by whether the participants had experienced a CMF. For the total sample, one-quarter (25.3%) of the predominantly female (89.9%) sample identified as a racial or ethnic minority, with the largest percent being African Americans/Blacks (15.7%). The remainder (77.8%) of the CWWs identified as White. The total sample of CWWs was mid-career with a mean age of 41.26; they were also well educated, with 48.6% reporting that they had a bachelor's degree and 51.4% a master's degree. Only one respondent had an education level lower than this, with an associate's degree. The majority of the sample had a degree in social work (58.7%) or human services (4.4%). About one-third of the sample (30.9%) had a degree in another social science discipline; the rest of the sample (5.7%) of the sample had a degree in another field. The CWWs came from 24 different states, with large percentages of workers coming from California, North Carolina, Wisconsin, Louisiana, and New York.

Instrument

The survey asked participants about their demographic characteristics (currently and at the time of the CMF—for those where it applied), PTS symptoms, using the Posttraumatic Stress Disorder Checklist (PCL), and for those who had experienced a CMF on their caseload, specific information about the victims, the CWWs' practice behaviors leading up to the CMF, and attitudes about the

TABLE 1
Demographic Characteristics of Study Participants and Independent Variable
Predicting Child Maltreatment Fatality (CMF) on Caseload ($n = 385$)

<i>Demographic Characteristic</i>	<i>Total Sample (n = 385)</i>	<i>Never Experienced CMF on Active Caseload (n = 265)</i>	<i>Experienced CMF on Active Caseload (n = 105)</i>	<i>Difference between Non-CMF vs. CMF χ^2 or t</i>
Age—Mean (SD)	41.26 (10.79)	39.97 (10.68)	44.85 (10.66)	3.96***
Gender—Male (Percent)	10.1	8.9	14.3	2.25
Race/Ethnicity				4.26*
Any minority	25.3	28.5	18.1	
American Indian	1.6	2.2	0.0	
Asian	3.1	3.4	2.9	
African American/Black	15.7	18.4	8.6	
Latino/Hispanic	6.3	6.4	6.7	
Pacific Islander	0.3	0.4	0.0	
White	77.8	74.5	85.7	
Education				6.40**
Bachelor's degree	48.6	52.3	37.7	
Master's degree	51.4	47.7	62.3	
Education specialization^a				
Social work	58.7	57.1	64.2	
Human services	4.4	4.1	4.8	
Other social science field	30.9	33.6	22.9	
Other	5.7	5.2	7.6	
Region of employment				1.67
North (ME, NY, NJ, PA)	9.1	8.6	9.4	
Midwest (IL, IN, MI, OH, WI)	17.9	16.4	21.7	
South (AL, DC, GA, LA, MD, NC, OK, TX, VA, WV)	43.9	45.1	40.6	
West (CA, CO, OR, WA, WY)	29.1	29.9	28.3	

^aDenotes chi-square could not be calculated. One cell or more has expected count less than 5.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

CMF. The PCL (Weathers, Litz, Herman, Huska, & Keane, 1993) is a 17-item self-report measure of the severity of PTSD symptomatology. Items reflect three symptom clusters: re-experiencing, numbing/avoidance, and hyperarousal. In order to make the questions comparable across workers who had and had not experienced a CMF, the questions were not anchored in a specific event. Workers were asked to indicate the extent to which they were bothered by each symptom in the preceding month using a 5-point scale (1 = *not at all*, 5 = *extremely*). The items were then summed to create a continuous measure of PTS symptoms, which was used as the dependent variable. Scores were also dichotomized to indicate the likely presence or absence of PTSD. There is no exact cut-off score to indicate PTSD; I chose a cut-off score of 45 that was used in a study of breast cancer patients (Andrykowski, Cordova, Studts, & Miller, 1998). It is important to also note that Ruggiero and colleagues (2003) found little differences in the diagnostic efficiency of different cut-points using a civilian sample. The PCL has been validated for use in both combat and civilian populations, and the civilian version was used for this study. The PCL has been shown

to have excellent reliability (Weathers et al., 1993) and strong convergent and divergent validity (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996; Ruggiero, DelBen, Scotti, & Rabalais, 2003). For the current total sample, the alpha for all items combined, the PCL total was .94; .91 for the re-experiencing subscale; .88 for the avoidance/numbness subscale; and .86 for the arousal subscale. For the sample of workers who experienced a CMF on their caseload, the alphas were similarly high and ranged from .84–.94.

Participants also answered questions about their CMF experience. Five CMF content areas were included as predictors in this article: (1) victim characteristics, (2) child welfare practice characteristics, (3) attitude about the death, (4) support received after the CMF, and (5) year of CMF. Victim characteristics consisted of victim age (in months) and how the child died. For this latter information, I included two dummy variables for death by: (1) physical abuse or (2) physical neglect, compared to all other deaths. Child welfare practice characteristics included whether the worker was a supervisor at the time of the CMF; length of time practicing in child welfare at time of CMF; how long the child had been on the worker's caseload before the CMF; how recently the worker had seen the child before the death; whether the family was being closely monitored at the time of the CMF; and, if the bureaucratic process following the death was a source of stress. Worker attitudes about the child's death were measured by a single item which asked the worker if the child's death was unavoidable. Participants were asked about the level of support that they received after the CMF, including from co-workers, supervisors, and if their agency offered them formal support, such as therapy/counseling. For all of these questions, save those that were numerical in nature (such as age of the victim), participants were asked to rate the extent to which they agreed or disagreed with each statement, where 1 = *strongly disagree* and 4 = *strongly agree*.

The survey also asked about knowledge of risk factors for CMF, opinions about CMFs, and training and practice concerns regarding CMFs—none of which is relevant to the present article. The majority of the survey questions were developed from a review of the literature (Douglas, 2005; Graham, Stepura, Baumann, & Kern, 2010) and was pre-tested on a small sample of caseworkers and supervisors in Massachusetts and Texas before full implementation.

Analyses

Bivariate analyses were conducted between the independent and dependent variables, for the total and subsamples, presented in Table 2. Those independent variables which met the first-stage bivariate criterion of $p \leq .10$ were included in multivariate analyses using ordinary least squares (OLS) regression. Stepwise deletion was used to remove variables that were not statistically significant to the dependent variables. Parsimonious results of the OLS regression analyses are presented in Tables 3 and 4.

RESULTS

PTS Symptoms among All Workers and the Influence of CMFs

Over one-tenth of the sample, 12.5%, met the cutoff score of 45 for PTSD. Among those who had experienced a CMF, 15.4% of workers met the cutoff for PTSD, compared to 11.8% who had not experienced a CMF. Bivariate analyses between independent and dependent variables are displayed in the top half of Table 2 and indicate that experiencing a CMF is not associated with higher levels of PTS symptoms. The final regression models for the total sample are presented in Table 3 and show that with regard to total PCL symptoms, workers who were employed in the South were more likely to report higher levels of PTS. Workers from this region scored 3 points

TABLE 2
Bivariate, Pearson's Correlations between Independent and Dependent Variables

<i>Independent Variable</i>	<i>PCL Total</i>	<i>PCL Re-Experience</i>	<i>PCL Avoid/ Numbing</i>	<i>PCL Arousal</i>
<i>All Workers (n = 385)</i>				
Demographic: Age of worker	-.107*	-.117*	-.084 [^]	-.115*
Demographic: Edu. discipline at time of CMF—Social work/Human serv.	-.016	.020	-.041	.009
Demographic: Edu. discipline at time of CMF—Other social science	.061	.016	.084 [^]	.036
Demographic: Edu. discipline at time of CMF—Outside of social science	-.088 [^]	-.072	-.082	-.090 [^]
Demographic: Edu. Master's degree	-.058	-.050	-.069	-.044
Demographic: Gender	.030	.003	.075	.027
Demographic: Racial/Ethnic minority	.007	.020	.041	-.027
Demographic: Region currently works—Midwest	-.071	-.046	-.080	-.083
Demographic: Region currently works—North	-.060	-.041	-.045	-.086 [^]
Demographic: Region currently works—South	.114*	.096 [^]	.093 [^]	.138**
Demographic: Region currently works—West	-.026	-.040	-.007	-.026
Worker experienced CMF on open, active case	-.023	.035	-.064	-.028
<i>Workers Who Experienced a CMF on Caseload (n = 98)</i>				
Attitude: Child's death was unavoidable	-.187 [^]	-.118	-.251*	-.184 [^]
Child welfare practice role at time of CMF: Supervisor	-.039	-.019	-.049	-.037
Child welfare practice: Bureaucratic process after CMF source of stress	.169 [^]	.160	.129	.201*
Child welfare practice: Case closely monitored before CMF	.172 [^]	.162 [^]	.140	.152
Child welfare practice: Time on caseload before CMF	.017	.014	-.048	.057
Child welfare practice: Time saw child before CMF	.162	.132	.153	.140
Child welfare practice: Years in CPS at time of CMF	-.110	-.096	-.076	-.140
CMF victim: Age at death	.077	.048	.049	.074
CMF victim: Died from physical abuse	.025	.013	-.042	.027
CMF victim: Died from physical neglect	-.125	-.137	-.073	-.134
Demographic: Age of worker at time of CMF	-.076	-.041	-.070	-.094
Demographic: Edu. discipline at time of CMF—Social work/Human serv.	.088	.073	.021	.158 [^]
Demographic: Edu. discipline at time of CMF—Other social science	-.065	-.083	-.017	-.088
Demographic: Edu. discipline at time of CMF—Outside of social science	-.046	.007	-.009	-.126
Demographic: Edu. Master's degree	.094	.070	.091	.144
Demographic: Gender	-.042	.069	-.011	-.038
Demographic: Racial/Ethnic minority	.091	.092	.100	.033
Demographic: Region worked in at time of CMF—Midwest	-.205*	-.215*	-.155	-.198*
Demographic: Region worked in at time of CMF—North	-.116	-.111	-.088	-.118
Demographic: Region worked in at time of CMF—South	.046	.023	-.018	.071
Demographic: Region worked in at time of CMF—West	.223*	.255**	.228*	.191*
Support: Co-workers provided emotional support	-.106	-.100	-.191 [^]	.004
Support: Department/agency offered me support/therapy after CMF	-.012	.095	-.073	.012
Support: Supervisors provided emotional support	-.049	.009	-.148	-.059
Year of CMF	.094	.129	.130	.038

Note. Variables that are bold faced were entered into multivariate analyses.

[^] $p \leq .10$. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

TABLE 3
Parsimonious Summary Statistics of OLS Regression Predicting Posttraumatic Stress Symptoms
of All Workers

<i>Independent Variable</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
<i>PCL Total, F(2, 375) = 4.324, p = .014, R² = .023</i>					
Education, discipline outside of social science	-5.213	2.732	-.098	-1.908	.057
Region employed: South	3.082	1.294	.122	2.382	.018
<i>Re-experiencing, F(2, 380) = 4.229, p = .015, R² = .022</i>					
Age of worker	-.041	.021	-.103	-2.001	.046
Region employed: South	.802	.449	.092	1.784	.075
<i>Arousal, F(3, 379) = 5.134, p = .002, R² = .039</i>					
Age of worker	-.036	.021	-.087	-1.700	.090
Education, discipline outside of social science	-1.782	.974	-.093	-1.830	.068
Region employed: South	1.268	.462	.141	2.745	.006

TABLE 4
Parsimonious Summary Statistics for OLS Regression Predicting Posttraumatic Stress Symptoms among
Workers Who Experienced a Maltreatment Fatality on a Caseload

<i>Variable</i>	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
<i>PCL Total Score, F(4, 95) = 4.96, p = .001, R² = .179</i>					
Child's death was unavoidable (attitude)	-2.557	1.169	-.216	-2.188	.031
Region worked in when child died: Midwest	-5.023	2.767	-.182	-1.816	.073
Region worked in when child died: West	5.286	2.713	.197	1.948	.055
We were closely monitoring family when child died	3.194	1.314	.238	2.431	.017
<i>PCL Subscale: Re-experiencing, F(3, 96) = 4.698, p = .004, R² = .128</i>					
Region worked in when child died: Midwest	-1.827	1.070	-.172	-1.707	.091
Region worked in when child died: West	2.232	1.029	.219	2.168	.033
We were closely monitoring family when child died	.922	.503	.175	1.834	.070
<i>PCL Subscale: Avoidance/Numbness, F(2, 96) = 5.71, p = .005, R² = .108</i>					
Child's death was unavoidable (attitude)	-.942	.419	-.221	-2.249	.027
Region worked in when child died: West	2.073	.950	.215	2.181	.032
<i>PCL Subscale: Arousal, F(3, 97) = 4.50, p = .005, R² = .126</i>					
Child's death was unavoidable (attitude)	-.929	.453	-.199	-2.050	.043
Social work/human service degree when child died	1.794	.939	.190	1.911	.059
Region worked in when child died: Midwest	-3.035	1.062	-.283	-2.858	.005

higher on the total PCL score than workers from other regions. There was also a trend toward significance ($p = .06$) that workers with a degree outside of the social sciences were less likely to report PTS symptoms. Overall, this model was weak, with only 2.3% of the variance explained by the variables.

In the model for re-experiencing symptoms, older workers were less likely to report re-experiencing symptoms of PTS. Each additional year of a worker's age was associated with a .04 decrease in the re-experiencing subscale of the PCL. In the arousal model, workers from the South reported higher levels of arousal. There were also trends toward significance for education and age of worker. CWWs who had a degree outside of the social sciences ($p = .068$) and older workers ($p = .090$) reported fewer arousal symptoms. In both of these models, the variables explained a small amount of the variance (2.2%–3.9%) in the subscales of the PCL. With regard to the avoidance/numbness subscale of the PCL, none of the variables remained significant once entered into the multivariate model.

PTS Symptoms among Workers Experiencing a CMF

Bivariate analyses were performed between the independent and dependent variables, using only the sub-sample of workers who had experienced a CMF on their caseload. The results are displayed in the bottom half of Table 2. Table 4 displays the results of the OLS regression analyses which examined the relationship between worker characteristics and PTS symptoms, among those workers who had a child on their caseload suffer a CMF. The results indicate that among workers who experienced a CMF on his/her caseload, attitudes about the child's death, child welfare practice characteristics, and the region in which the worker was employed when the child died were related to the total PCL score. There was also a trend toward significance ($p = .07$) that workers who believed that the child's death was unavoidable had lower levels of PTS. Additionally, those who worked in the Midwest when the child died had lower scores of PTS. With regard to higher levels of PTS, workers who reported that they were closely monitoring the family when the child died were more likely to have higher scores on the PCL total score. There was also a trend toward significance ($p = .06$) that workers who were employed in the West when the child died had higher levels of PTS.

There were similar findings for the re-experiencing subscale of the PCL. Workers who were employed in Western states when the child died had higher rates of re-experiencing PTS. There was a trend toward significance for both the Midwest region and child welfare practice characteristics. Workers who were employed in the Midwest when a child on their caseload died were less likely to have re-experiencing symptoms ($p = .09$) and workers who reported monitoring the family closely when the child died were slightly more likely to have higher levels of re-experiencing symptoms ($p = .07$).

Symptoms of avoidance/numbness were associated with attitudes about the child's death and region of the nation. Workers who believed that the child's death was unavoidable were less likely to experience avoidance/numbness. CWWs who were employed in the Western region of the United States when the child died experienced higher levels of PTS in the form of avoidance/numbness; they scored 2 points higher on this subscale than workers from other regions.

PTS symptoms of arousal were related to attitudes, region, and formal education. Once again, workers who believed that the death of the child on their caseload was unavoidable reported lower levels of arousal. Workers who were employed in the Midwest when the child died had lower levels of arousal than workers from other regions; on average, they scored 3 points lower. There was also a trend toward significance ($p = .06$) that workers with a degree in social work or human services scored higher on the avoidance subscale than workers with degrees in the social sciences or a field unrelated to child welfare. Overall, the models for this subsample were a better fit to the data, with roughly 11%–18% of the variance explained.

TABLE 5
Summary Statistics for *t*-test Examining Difference between Posttraumatic Stress (PTS) Symptoms,
by Use of Therapeutic Services

<i>PTS Symptom</i>	<i>Used Therapy</i> (<i>n</i> = 26) <i>M</i> (<i>SD</i>)	<i>Did Not Use</i> (<i>n</i> = 19) <i>M</i> (<i>SD</i>)	<i>t</i>	<i>p</i>
PCL total	27.75 (11.14)	31.00 (12.67)	−.882	.383
Re-experiencing	9.12 (4.73)	10.68 (5.91)	−.269	.353
Avoidance/numbing	9.56 (3.20)	10.83 (3.45)	−1.245	.220
PCL arousal	8.88 (4.22)	10.63 (5.70)	−1.173	.247

Therapeutic Support and PTS Symptoms

A previous analyses using this dataset (Douglas, 2012), found that about 36.6% (or $n = 45$) of workers who experienced a CMF reported being offered support/therapy, to cope with the critical incident, by their department/agency. Of those who were offered, 57.7% (or $n = 26$) used this service. Even with this small sample size, I compared levels of PTS symptoms based on a subsample of workers who experienced a CMF: those who used the therapeutic service compared with those who did not; the results are presented in Table 5. The independent samples *t*-test did not reveal any differences in PTS based on the use of therapeutic services.

DISCUSSION

The purpose of this study was to examine the potential impact of a CMF on the level of PTS symptoms experienced by CWWs. The results indicate that experiencing a CMF on one's active caseload does not result in higher levels of PTS symptoms. That said, among workers who did experience a CMF, their levels of PTS symptoms were related to their attitudes concerning whether the death was preventable, child welfare practice techniques, and region of the nation in which the worker was employed when the child died. Finally, the results also indicate that workers who experienced a CMF and utilized a formal support service offered by their department/agency, were seemingly unaffected by this service—as measured by PTS symptoms.

Maltreatment Fatalities and PTS

The prevalence of the sample who met the criteria for PTSD (Andrykowski et al., 1998) was higher than among the general population. Nationwide, 3.5% of the population meet the criteria for PTSD in a single year (Kessler et al., 2005); 12.5% of the workers in this study met the criteria for PTSD. Using the literature on trauma as a base (Fullilove et al., 1993; Herman, 1992; Resnick et al., 1993), I hypothesized that workers who experienced a CMF would have higher rates of PTS. The percent of workers who had experienced a CMF and met the criteria for PTSD was higher—15.4%, than the percent of the sample who at not experienced a CMF—11.8%, but the difference was not statistically significant. Thus, this hypothesis was not true. Previous research had shown that workplace trauma was related to trauma symptoms (Horwitz, 2006). That said, trauma events which have been found to be related to PTS symptoms were more benign—such as working with children who express distress, as opposed to more severe—including physical assault and property damage. It is possible that major events, including the death of a child, receive more attention from agencies, supervisors, and workers themselves.

In general, the models predicting PTS symptoms for the total sample were a poor fit for the data. Only 2%–4% of the variance in the dependent variables measuring PTS was explained by the final models. Other research has found a better fit to the data. Those studies often utilized experiences outside the workplace, such as personal trauma history (Nelson-Gardell & Harris, 2003; Stevens & Higgins, 2002). Future research should continue to consider potentially new contributions, including work place trauma, to better understand PTS symptoms among CWWs.

Support for Workers Experiencing Maltreatment Fatalities

I hypothesized that the emotional support that workers received in the wake of a CMF would act as a protective factor against PTS. This hypothesis was false. Neither support from co-workers or supervisors was related to any of the PTS symptoms measured by the PCL. Despite some of the main tenants of resilience theory, support from colleagues was not related to mental health functioning. These findings are consistent with other research on child welfare workers which has found no relationship between emotional and professional support and trauma symptoms (Horwitz, 2006). It is inconsistent with research outside of the child welfare profession, which has found that among those suffering a workplace trauma, higher rates of peer, supervisor, and non-work support have been negatively related to PTSD (Matthews, 2006; Stephens & Long, 1999; Wilson, Poole, & Trew, 1997; Yuan et al., 2011). An area for future research is whether the culture of child welfare work prevents support from being more helpful.

In a similar finding, of the workers who experienced a CMF, 36.6%, or 45 CWWs were offered therapy by their agency. Of those 45 individuals, 26 used this service. Despite the small sample size, I compared those who used the service with those that did not and found no difference between the two groups of CWWs. This suggests that the agency-based support that was offered to workers did not yield better outcomes for workers, as far as PTS symptoms are concerned. Additional research using larger sample sizes should be conducted on the efficacy of agency-based support and therapeutic services among workers who experience CMFs on their caseloads. That said, this particular outcome is consistent with the literature on critical incident debriefing, which has found mixed results with regard to its efficacy among emergency responders, such as police and fire service personnel (Adler et al., 2008; Bisson, McFarlane, & Rose, 2000; Lewis, 2003; Regehr & Hill, 2000).

Practice Behaviors/Attitudes, Maltreatment Fatalities, and Trauma Symptoms

Two practice behaviors and attitudes were related to PST symptoms. Workers who believed that the child's death was unavoidable had lower rates of overall PTS symptoms, as well as avoidance/numbness and arousal. This finding suggests that if workers' believe that the death of the child is out of their hands then the event is less traumatic for them. On the other hand, workers who reported that they were closely monitoring the family when the child died had higher overall rates of PST symptoms and there was a trend toward significance that workers who reported the same concerns had higher rates of re-experiencing symptoms. Both of these findings are similar to research which has found that workers who feel that they cannot do enough for their clients have higher levels of trauma symptoms (Horwitz, 2006). Other research has emphasized the important role that perception of the traumatic event plays in the development of PTSD (Hampe, 2007; Simmons, 2007). This finding has important implications for supervisors and administrators in the social work fields. Workers who feel responsible for the traumatic events that their clients experience are more likely to experience mental distress and may be in need of assessment, support, intervention, or treatment.

Additional Factors and Relationship to PTS

The most consistent finding between demographic characteristics and PTS symptoms among the total sample was being from the South. Workers who were from the South had higher rates of overall PTS and higher rates of arousal. This may be a true effect of the South or it could be the result of sampling and which state agencies encouraged their workers to participate in the study. Additionally, workers who were younger had higher rates of re-experiencing symptoms of PTS. This latter finding is consistent with the previous literature (Nelson-Gardell & Harris, 2003). Among workers who experienced a CMF, different regional patterns emerged. Workers who worked in the West at the time of the CMF were more likely to have re-experiencing symptoms and to experience avoidance/numbness. Workers from the Midwest were *less* likely to experience arousal. Future research should continue to examine whether such findings truly reflect differences in social work practice or if they are a function of sampling.

Limitations

This study is not without limitations. First, it is based on a convenience sample of CWWs and is not representative of all workers nationwide, workers in their respective states, or workers who have experienced a CMF. The sample is, however, similar to a national sample of CWWs (Barth, Lloyd, Christ, Chapman, & Dickinson, 2008). The sample for the present study has a lower proportion of males, is less racial/ethnically diverse, and is better educated compared to a national sample of workers. Second, the workers who were recruited by agency directors or the workers themselves could have a special interest in CMFs, which may influence the findings of this study. Third, the group of workers who experienced a CMF on their caseload was small and included some missing data, so multivariate analyses were conducted with a sample of fewer than 100 participants. Future research on this topic should include a larger sample of workers who have experienced a fatality to increase the robustness of the findings. Fourth, many respondents did not complete the entire survey and failed to complete questions concerning PTS. It is possible that those who completed the entire survey are different from those who did not.

CONCLUSION AND IMPLICATIONS

Research supports that individuals with a major life trauma are more likely to present with PTS (Fullilove et al., 1993; Herman, 1992; Resnick et al., 1993); further, research on resilience shows that individuals who feel supported are less likely to experience psychological maladaptation (Garmezy, 1993; Kobak & Sceery, 1988; Lambert et al., 1989; Roos & Cohen, 1987). The findings of this study did not support any of this literature; CWWs who experienced a CMF on their caseloads did not have higher levels of PTS symptoms and support played no role in their level of psychological distress. Nevertheless, the results still offer important implications for both researchers and practitioners. For researchers, this is the first study which has examined the relationship between experiencing a CMF and PTS. In the future researchers may want to recruit a larger sample of workers experiencing a CMF on their caseload and may want to place a temporal limit on when the CMF occurred as part of their recruitment strategy. I encourage researchers to use online methods that allow workers to participate anonymously and that examine workers from multiple states to avoid a state, regional, or district effect on their results. Researchers may also want to consider additional professional and mental health challenges, such as burn out, disengagement, depression, and anxiety as a potential correlate of a CMF on one's caseload.

The most important finding from this study is the worker's subjective understanding of the maltreatment fatality and her/his level of culpability in the event. Thus, workers who believe that

they could have done more and that they were closely engaged with the family at the time of the death are more likely to suffer mental health consequences. On the other hand, workers who believe that the death could not be prevented are less likely to experience distress. Co-workers, supervisors, and administrators who believe that their workers feel responsible for a child's death may want to consider offering additional types of support, such as a temporary reduction in caseload, paid time off, referrals for clinical support and intervention, and additional ways to promote resilience among workers who may be struggling the most (Horwitz, 1998).

REFERENCES

- Adler, A. B., Litz, B. T., Castro, C. A., Suvak, M., Thomas, J. L., Burrell, L., . . . Bliese, P. D. (2008). A group randomized trial of critical incident stress debriefing provided to U.S. peacekeepers. *Journal of Traumatic Stress, 21*, 253–263. doi: 10.1002/jts.20342
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental health disorders* (4th ed., text rev.). Washington, DC: Author.
- Anderson, R., Ambrosino, R., Valentine, D., & Lauderdale, M. (1983). Child deaths attributed to abuse and neglect: An empirical study. *Children and Youth Services Review, 5*, 75–89.
- Andrykowski, M. A., Cordova, M. J., Studts, J. L., & Miller, T. W. (1998). Posttraumatic stress disorder after treatment for breast cancer: Prevalence of diagnosis and use of the PTSD Checklist–Civilian Version (PCL–C) as a screening instrument. *Journal of Consulting and Clinical Psychology, 66*, 586–590.
- Barth, R. P., Lloyd, E. C., Christ, S. L., Chapman, M. V., & Dickinson, N. S. (2008). Child welfare worker characteristics and job satisfaction: A national study. *Social Work, 53*, 199–209.
- Beveridge, J. (1994). Analysis of Colorado child maltreatment fatalities. *Colorado's Children, 13*, 3–6.
- Bisson, J. I., McFarlane, A. C., & Rose, S. (2000). Psychological debriefing. In E. B. Foa, T. M. Keane & M. J. Friedman (Eds.), *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies*. (pp. 39–59). New York, NY: Guilford Press.
- Blanchard, E. B., Jones-Alexander, J. B., Buckley, T. C., & Forneris, C. A. (1996). Psychometric properties of the PTSD checklist (PCL). *Behavior Research and Therapy, 34*, 669–673.
- Bride, B. E. (2007). Prevalence of secondary traumatic stress among social workers. *Social Work, 52*, 63–70.
- Bride, B. E., Jones, J. L., & MacMaster, S. A. (2007). Correlates of secondary traumatic stress in child protective services workers. *Journal of Evidence-Based Social Work, 4*, 69–80. doi: 10.1300/J394v04n03_05
- Cornille, T. A., & Meyers, T. W. (1999). Secondary traumatic stress among child protective service workers. *Traumatology, 5*, 15–31. doi: 10.1177/153476569900500105
- Dane, B. (2000). Child welfare workers: An innovative approach for interacting with secondary trauma. *Journal of Social Work Education, 36*, 27–38.
- Douglas, E. M. (2005). Child maltreatment fatalities: What do we know, what have we done and where do we go from here? In K. Kendall-Tackett & S. Gaicomoni (Eds.), *Child victimization* (pp. 4.1–4.18). Kingston, NJ: Civic Research Institute.
- Douglas, E. M. (2012). Child welfare workers who experience the death of a child client. *Administration in Social Work, 37*(1), 59–72.
- Fullilove, M. T., Fullilove III, R. E., Smith, M., Winkler, K., Michael, C., Panzer, P. G., & Wallace, R. (1993). Violence, trauma, and post-traumatic stress disorder among women drug users. *Journal of Traumatic Stress, 6*, 533–543.
- Garnezy, N. (1993). Children in poverty: Resilience despite risk. *Psychiatry, 56*, 127–136.
- Graham, J. C., Stepura, K., Baumann, D. J., & Kern, H. (2010). Predicting child fatalities among less-severe CPS investigations. *Children and Youth Services Review, 32*, 274–280.
- Gustavsson, N., & MacEachron, A. E. (2004). When a child welfare client dies: An agency-centered perspective. *Child Welfare: Journal of Policy, Practice, and Program, 83*, 317–340.
- Hampe, M. (2007). Achilles' brain: Philosophical notes on trauma. *History of the Human Sciences, 20*, 85–103. doi: 10.1177/0952695107079336
- Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress, 5*, 377–391.
- Horwitz, M. (1998). Social worker trauma: Building resilience in child protection social workers. *Smith College Studies in Social Work, 68*, 363–377.
- Horwitz, M. J. (2006). Work-related trauma effects in child protection social workers. *Journal of Social Service Research, 32*, 1–18.

- Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry*, *62*, 617–627. doi: 10.1001/archpsyc.62.6.617
- Knight, C. (2010). Indirect trauma in the field practicum: Secondary traumatic stress, vicarious trauma, and compassion fatigue among social work students and their field instructors. *Journal of Baccalaureate Social Work*, *15*, 31–52.
- Kobak, R. R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. *Child Development*, *59*, 135–146. doi: 10.2307/1130395
- Lambert, V. A., Lambert, C. E., Jr., Klipple, G. L., & Mewshaw, E. A. (1989). Social support, hardiness and psychological well-being in women with arthritis. *IMAGE: Journal of Nursing Scholarship*, *21*, 128–131. doi: 10.1111/j.1547-5069.1989.tb00116.x
- Lewis, S. J. (2003). Do one-shot preventive interventions for PTSD work? A systematic research synthesis of psychological debriefings. *Aggression & Violent Behavior*, *8*, 329. doi: 10.1016/s1359-1789(01)00079-9
- Matthews, L. R. (2006). Posttrauma employability of people with symptoms of PTSD and the contribution of work environments. *The International Journal of Disability Management Research*, *1*, 87–96. doi: 10.1375/jdmr.1.1.87
- Nelson-Gardell, D., & Harris, D. (2003). Childhood abuse history, secondary traumatic stress, and child welfare workers. *Child Welfare*, *82*, 5–26.
- Palusci, V. J., Yager, S., & Covington, T. M. (2010). Effects of a citizens review panel in preventing child maltreatment fatalities. *Child Abuse & Neglect*, *34*, 324–331.
- Perron, B., & Hiltz, B. (2006). Burnout and secondary trauma among forensic interviewers of abused children. *Child & Adolescent Social Work Journal*, *23*, 216–234. doi: 10.1007/s10560-005-0044-3
- Regehr, C., Chau, S., Leslie, B., & Howe, P. (2002). Inquiries into deaths of children in care: The impact on child welfare workers and their organization. *Children and Youth Services Review*, *24*, 885–902.
- Regehr, C., & Hill, J. (2000). Evaluating the efficacy of crisis debriefing groups. *Social Work with Groups: A Journal of Community and Clinical Practice*, *23*, 69–79. doi: 10.1300/J009v23n03_06
- Resnick, H. S., Kilpatrick, D. G., Dansky, B. S., Saunders, B. E., & Best, C. L. (1993). Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of Consulting and Clinical Psychology*, *61*, 984–991. doi: 10.1037/0022-006x.61.6.984
- Roos, P. E., & Cohen, L. H. (1987). Sex roles and social support as moderators of life stress adjustment. *Journal of Personality and Social Psychology*, *52*, 576–585. doi: 10.1037/0022-3514.52.3.576
- Ruggiero, K. J., DelBen, K., Scotti, J. R., & Rabalais, A. E. (2003). Psychometric properties of the PTSD checklist–Civilian version. *Journal of Traumatic Stress*, *16*, 495–502.
- Simmons, C. A. (2007). Speculation as to why women “get” PTSD more often than men. *Women & Therapy*, *30*, 85–98. doi: 10.1300/J015v30n01_05
- Stephens, C., & Long, N. (1999). Posttraumatic stress disorder in the New Zealand police: The moderating role of social support following traumatic stress. *Anxiety, Stress & Coping*, *12*, 247.
- Stevens, M., & Higgins, D. J. (2002). The influence of risk and protective factors on burnout experienced by those who work with maltreated children. *Child Abuse Review*, *11*, 313–331. doi: 10.1002/car.754
- U.S. Department of Health & Human Services. (2010). *Child maltreatment 2009: Reports from the states to the national child abuse and neglect data systems—National statistics on child abuse and neglect*. Washington, DC: Administration for Children & Families, U.S. Department of Health & Human Services.
- Van Hook, M. P., & Rothenberg, M. (2009). Quality of life and compassion satisfaction/fatigue and burnout in child welfare workers: A study of the child welfare workers in community based care organizations in central Florida. *Social Work & Christianity*, *36*, 36–54.
- Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility*. Paper presented at the International Society for Traumatic Stress Studies, San Antonio, TX.
- Wilson, F. C., Poole, A. D., & Trew, K. (1997). Psychological distress in police officers following critical incidents. *Irish Journal of Psychology*, *18*, 321–340.
- Wyman, P. A., Cowen, E. L., Work, W. C., Work, W. C., & Parker, G. R. (1991). Developmental and family milieu correlates of resilience in urban children who have experienced major life stress. *American Journal of Community Psychology*, *19*, 405–426.
- Yuan, C., Wang, Z., Inslicht, S. S., McCaslin, S. E., Metzler, T. J., Henn-Haase, C., . . . Marmar, C. R. (2011). Protective factors for posttraumatic stress disorder symptoms in a prospective study of police officers. *Psychiatry Research*, *188*, 45–50. doi: 10.1016/j.psychres.2010.10.034