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Secondary Trauma in Children Services Workers: Is the Opioid Crisis a Contributing Factor?

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Honors Thesis

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Abstract

Secondary traumatic stress (STS) can impact anyone who interacts with a victim of trauma, such as family, friends, first responders, or social workers. This project ultimately aims to determine whether or not the opioid crisis impacts the levels of secondary traumatic stress in children services workers. This research examines STS in current children services workers who work directly with victims of child abuse or neglect alongside how frequently children services workers are exposed to opioid-related cases in their professional lives. Data for this project were gathered by administering a survey to two area children services agencies to assess the STS levels of those who work there. After conducting a multiple regression analysis, the results of this research show that there is a weak to moderate association between the frequency of a children services worker's exposure to opioid-related children services cases and a higher level of STS.

Dedication or Acknowledgements

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Table of Contents

Abstract	Title Page
Introduction	1
Literature Review	3
Defining and Developing STS	3
Responses to Trauma and Consequences of STS	6
The Opioid Crisis/Epidemic	8
Applicable Theory	9
Methodology	10
Results	13
Demographics	13
Correlations and Predictors	13
Multiple Regression Analysis	16
Partial Correlation Coefficients	16
Discussion	17
Summary	17
Interpretation of Results	18
Strengths/Limitations	20
Implications	21
Suggestions for Future Research	23
References	24
Appendix	29
Appendix A	29
Appendix B	32
Appendix C	33

Secondary Trauma in Children Services Workers:
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Introduction

STS can impact anyone who closely interacts with a victim of trauma, such as family, friends, and, most commonly, social service workers (Bride, 2007). STS is a condition in which those who are aware of or directly hear about the trauma (e.g. case workers, relatives, etc.) a victim experiences show symptoms similar to post-traumatic stress disorder (PTSD) (Ben-Porat, 2017; Bride, Jones, & MacMaster, 2007; Gil & Weinberg, 2015). STS affects different features of individuals, such as physical, behavioral, cognitive, and emotional; specific symptoms of STS include (but are not limited to) lowered concentration, rigid thinking, feelings of helplessness, anger, hyper-vigilance, sleep disturbance, increased severity of medical conditions, and immune system impairment (Administration for Children & Families, n.d.). STS can also be identified using other similar terms, such as 'vicarious trauma' or 'compassion fatigue' (Geoffrion, Morselli, & Guay, 2016; Sprang, Craig, & Clark 2011). Most of the STS literature discussed the issue impacting social workers who work with the mentally ill as well as abused children and adults, however some literature has concentrated on crisis workers and first responders (Cornille & Meyers, 1999). Though STS has been a concerning issue among crisis workers, the opioid crisis has been concerning across the United States (Centers for Disease Control and Prevention, 2018; U.S. Department of Health and Human Services, 2019).

The U.S. Department of Health and Human Services, or HHS, (2019) declared the opioid crisis, or epidemic, to be a public health emergency in 2017. This public health

emergency is mostly a result of an increased rate of opioid pain killers being prescribed to patients by healthcare providers (HHS, 2019). These prescriptions began to increase in the late 1990s after drug manufacturers claimed that the opioids were not addictive (HHS, 2019). According to Centers for Disease Control and Prevention, or CDC, (2018) opioid overdose deaths have increased in waves based on the type of drug being abused. The early 2000s saw the first wave with an increase in prescription opioid overdose deaths that have been increasing throughout the years. The year 2010 saw the second wave that showed a dramatic increase in heroin overdoses, and 2017 saw the third and final wave of the epidemic with a rapid increase in synthetic opioid overdose deaths from drugs such as tramadol and fentanyl (CDC, 2018).

Roughly 400,000 people have died from opioid overdoses between 1999 and 2017 (CDC, 2018). The National Institute on Drug Abuse (2018) reports that Ohio is one of the top five states in the United States for high numbers of opioid-related deaths. According to the Ohio Department of Health (2017), southwest Ohio counties (such as Montgomery, Fayette, Brown, and Adams) have the highest drug overdose death rates; Montgomery County had the highest rate in 2017 with 56.5 deaths per 100,000 persons. Drug abuse has not only caused a rise in overdose deaths, it has also caused a steady rise in children entering the foster care system since 2007 (Sepulveda & Williams, 2019). In the year 2017, a total of 96,400 children were removed from their home as a result of drug abuse across the United States (Sepulveda & Williams, 2019). The state of Ohio experienced the one of the largest increases in drug abuse foster care entries between 2016 and 2017; a 29% increase showed an additional 3,519 children entering the system (Sepulveda & Williams, 2019). This rise in foster care entries have had a direct impact on overworked

children services workers, leaving them with larger caseloads and fewer resources for drug treatment and foster homes (Radel, Baldwin, Crouse, Ghertner, and Waters, 2018; Sepulveda & Williams, 2019). This direct influence of the opioid crisis on families and children services workers, as well as the potential for STS, lead to the formation of the question for this research: Does the opioid crisis predict levels of STS in children services workers?

Literature Review

Defining and Developing STS

When establishing a solid definition of the term secondary traumatic stress (or STS), several pieces of literature refer to the work of traumatologist Charles Figley (e.g. Ben-Porat, 2017; Bride, 2007; Bride, Robinson, Yegidis, & Figley, 2004; Conrad & Kellar-Guenther, 2006). Figley defines STS as a psychological side effect of listening to another person's traumatic experience; it is the direct result of becoming aware of the trauma of another person, which leads to symptoms that are similar to post-traumatic stress disorder (PTSD). This definition was first established in Figley's (1995) work after continuously studying the phenomena over a period of 10 years; and it is considered to be a foundational contribution to STS literature. The study of this STS started developing during the Vietnam War—of which Figley was a veteran—in order to better "understand PTSD and the consequences of combat on those who fought in the Vietnam War" (Figley & Boscarino, 2012, para. 1). During this era, a gap in the abundant literature on post-traumatic stress disorder was discovered: it did not address the trauma that impacted those who did not experience the trauma first-hand (Figley, 1995).

Symptoms of STS have the potential to arise in an individual (the trauma worker) after just one first-hand experience with a traumatized person (such as a client) (Conrad & Kellar-Guenther, 2006). These STS symptoms can be broken into three separate categories: avoidance, arousal, and intrusion (Bride, 2007; Bride et al., 2004). Symptoms of avoidance can involve evading places or thoughts that can remind the person of the trauma, while symptoms of arousal cause more prevalent symptoms, like anxiety, irritability, and hypervigilance (Bride, 2007). Intrusion symptoms remind the trauma worker of trauma through things such as hallucinations and psychological distress, and can often lead to the trauma worker experiencing the STS symptoms while psychologically experiencing the trauma of the client (Bride, 2007).

The term 'secondary traumatic stress' (STS) can be interchanged with the terms 'vicarious trauma'(VT) and 'compassion fatigue' (CF) (Bride et al., 2007; Conrad & Kellar-Guenther, 2006; Sprang et al., 2007; Sprang et al., 2011; Tavormina & Clossey, 2015.; Van Hook & Rothenberg, 2009). Van Hook & Rothenberg (2009) suggest that all three terms refer to the same experience or feeling—the feelings and behaviors resulting from contact with another individual who has experienced severe trauma or stress, specifically within a workplace environment. On the other hand, CF—overusing or exhausting one's ability to feel compassion toward others—is also thought to have been used widely within the field of trauma as a blanket term to directly refer to STS/VT, rather than all three assuming the same definition (Van Hook & Rothenberg, 2009).

Kadambi & Ennis (2004) constructed a review of vicarious trauma literature that offered several explanations of and different contexts for VT, especially within the role of a therapist. For example, a therapist is most likely to experience VT when they are

exposed to graphic trauma material, the realism of malicious human behavior, or when they perform a therapy process that causes clients to re-live or re-experience their trauma (Kadambi & Ennis, 2004). When facing VT, therapists can begin to question their own personal identity, spirituality, and how they view the outside world; this is ultimately caused by "disruptions in cognitive schemas," including those linked to trust, safety, control, and more (Kadambi & Ennis, 2004, p. 4). VT was compared with CF, and CF was identified as a possible side effect of VT (Kadambi & Ennis, 2004).

Other scholars have argued that only the terms STS and VT are relatively the same (Bride et al., 2007; Tavormina & Clossey, 2015). Bride and colleagues (2007) explain that though both terms represent the same concept, STS only concentrates on initial symptoms while VT focuses on the significance of the symptoms as well as the affected person's reaction to the symptoms. Tavormina & Clossey (2015) primarily use VT over STS to identify the condition. Others argue that STS and CF are interchangeable (Conrad & Kellar-Guenther, 2006; Sprang et al., 2007; Sprang et al., 2011). Conrad & Kellar-Guenther (2006) identify both STS and CF as the symptoms experienced by an individual providing assistance—or wanting to provide assistance—to a traumatized person. However, Sprang and colleagues (2007; 2011) argue that CF is a term that is used to refer to STS in a less stigmatizing way.

Other research suggests that the terms STS, CF, and VT are not at all the same (Geoffrion et al., 2016; Horwitz, 1998; Jenkins & Baird, 2002; Cornille & Meyers, 1999). Jenkins & Baird (2002) claim that VT builds up and occurs over long periods of time, while STS occurs almost immediately. In other words, VT is identified to be a more

chronic condition than STS. Geoffrion and colleagues (2016) make an argument for the following regarding child protection workers, in particular:

> Secondary traumatic stress occurs when the child-protection worker is overwhelmed by exposure to an extreme event directly experienced by another person…Vicarious traumatization is bearing witness to another person's traumas through listening to their stories. Compassion fatigue is therefore a reaction that emerges from the child-protection worker's overexposure to human suffering (p. 272).

This statement identifies these three terms as different experiences and consequences while working with a child who has experienced some type of traumatic life event. Despite the different interpretations of previous research, this study will only refer to STS as it is referred to through the previous work of Figley described in Bride and colleagues (2004, p. 27): "the observation that those who come into continued close contact with trauma survivors, including social workers, may experience considerable emotional disruption and may become indirect victims of the trauma themselves."

Responses to Trauma and Consequences of STS

Previous research on responses to trauma in the social services field have found mixed results. For example, some studies have found that female social workers, children services workers, and licensed behavioral health professionals experience higher levels of CF or STS than males in the same profession (Gil & Weinberg, 2015; Sprang et al., 2007; Van Hook & Rothenberg, 2009). The research suggests that these findings are potentially a result of the social work field being a female-majority profession, in addition to the expectations of gender roles in regards to the caretaking expectations of females. However, other research suggests that males report distress symptoms more often than females (Cornille & Meyers, 1999), in addition to the finding that male children services workers experience higher levels of distress or CF than females (Sprang et al., 2011). In

accordance with their study, Sprang and colleagues (2011) propose that there was a child welfare bias that influenced their results; this is because a significant percentage of males who participated in the study worked in child welfare over other social service agencies. In other words, working in child welfare, rather than gender, influenced the high levels of STS in males.

Moderately younger children services workers, along with licensed behavioral health professionals, experience higher levels of CF than older, more experienced workers (Sprang et al., 2007; Sprang et al., 2011; Van Hook & Rothenberg, 2009). Receiving more training, overall, could be the explanation as to those findings (Sprang et al., 2007; Sprang et al., 2011). Children services workers and, more specifically, social workers tend to experience higher levels of distress and STS than the general population (Cornille & Meyers, 1999; Van Hook & Rothenberg, 2009); this is especially true in the cases in which the worker has faced some sort of individual-level trauma themselves. Previous research has also shown that social workers and children services workers who have lower caseloads, express a feeling of peer or co-worker support, express a sense of confidence or mastery in their work, and express the feeling of having control in their work environment were all shown to contribute to overall lower levels of STS or CF (Ben-Porat, 2017; Bride et al., 2007; Gil & Weinberg, 2015).

Several studies have found that experiencing STS can lead to troubles within one's professional life as well as one's personal life. In the field of child protective services, there is a potential to feel less empathy for clients, in addition to suffering from feelings of burnout or exhaustion because of their work (Geoffrion et al., 2016; Sprang et al., 2007; Sprang et al., 2011; Van Hook & Rothenberg, 2009). Case workers may also

bury their emotions or become emotionally numb to devastating aspects of their work, which can impact their ability to do their job (Horwitz, 1998). Specifically, child protection workers have been shown to change their parenting styles to "become more cynical and less trusting" and devote less time to their personal selves and their families (Tavormina & Clossey, 2015, p. 132).

The research conducted on STS has several limitations. Small, unrepresentative sample sizes used in the studies were found to limit the conclusions of the research (Bride et al., 2007; Gil & Weinberg, 2015; Tavormina & Clossey, 2015). These populations—whether limited by location or vocation—were not found to provide a representative sample for the research (Ben-Porat, 2017; Conrad & Kellar-Guenther, 2006; Gil & Weinberg, 2015; Van Hook & Rothenberg, 2009). Another limitation discussed in the research was the unreliability of self-reported data (Sprang et al., 2011; Van Hook & Rothenberg, 2009). Additionally, there is a lack of peer-reviewed research concentrating on STS in relation to different public health crises, such as the more recent opioid crisis. The current study was designed and conducted with these limitations in mind.

The Opioid Crisis/Epidemic

There is limited existing research that connects child welfare and trauma to the opioid crisis, especially within the state of Ohio. This lack of research inspired the development and execution of the present research. However, one study concentrated on the relationship between substance abuse (especially opioids) and child welfare, as well as the perspective of crisis workers who regularly encounter families impacted by substance abuse (Radel et al., 2018). The goal of the research was to, "describe how the child welfare system interacts with community partners to serve an increasing population

of parents whose substance use has impaired their ability to parent, placing their children at risk" (Radel et al., 2018, p. 2).

When looking at the county level, it was discovered that bigger child welfare caseloads were correlated with higher opioid overdose and hospitalization rates; these cases are also becoming "more complex and severe," with more children being removed from their homes and into the foster care system, while child welfare workers—judges and case workers, in this case—are finding it more difficult to reunify those children with their parents (Radel et al., 2018, p. 4). Additionally, child welfare agencies and case workers are becoming overwhelmed "by the volume of cases, the lack of treatment resources, and the sheer magnitude of the problem" (Radel et al., 2018, p. 7). Other perceptions from child welfare workers in this study include a negative view of current children services approaches to families suffering from substance abuse, as well as an expression of frustration at the barriers in place that prevent agency collaborations (e.g. children services and treatment programs), such as confidentiality regulations (Radel et al., 2018).

Applicable Theory

The social work theory that most directly aligns with this study is ecological framework theory along with the person-in-environment perspective (Compton, Galaway, & Cournoyer, 2005; Cox, Tice, & Long, 2016). The person-in-environment perspective studies an individual alongside their social and family relationships, while ecological framework focuses on settings the individual is in (such as institutions, communities, and workplaces) (Compton et al., 2005; Cox, Tice, & Long, 2016). Specifically, the ecological framework theory is used to identify a poor adaptation between a person and

their environment which puts the individual at a disadvantage (Compton et al., 2005; Cox, Tice, & Long, 2016). These theories are mostly used in the practice of social work to develop case plans for clients (Compton et al., 2005; Cox, Tice, & Long, 2016). However, these theories can be applied to the case worker as well. In relevance to this study, the social and professional ties that the children services workers have, most applicably, their ties to their clients' trauma, can potentially cause them to experience problems—in this case, STS.

Methodology

This study explored whether exposure to opioid related situations impacts STS levels in children services workers. Various methodologies have been used in other related studies, but the vast majority have used quantitative methods. Other research studies (Ben-Porat, 2015; Bride, 2007; Bride et al., 2007) have used the Secondary Traumatic Stress Scale (or STSS). Originally developed by Bride and colleagues (2004) the STSS uses 17 Likert-scale-based items to measure symptoms associated with STS. The STS scale was developed in alignment with 17 symptoms collected from the *Diagnostic and Statistical Manual of Mental Disorders*, and deliberately excluded symptoms that corresponded with posttraumatic stress disorder (American Psychiatric Association, 1994; Bride et al., 2004). The pilot survey tested with 65 items, then tested again after it was revised to 50 items, and eventually reduced to 17 items. To remain consistent with previous literature, the STSS was used in this study.

The survey was made up of three different parts regarding the opioid crisis, STS, and demographics (see Appendix A). The opioid exposure instrument (or OEI) designed for this study and the previously used STSS were made up of various statements along

with a 5-point Likert scale for each statement (1 = never, 2 = rarely, 3 = occasionally, 4 = often, 5 = very often). The demographics portion contained a series of short answer and multiple choice questions (e.g. job position, time spent in field, age, and race). The OEI contained 12 items, the STSS contained its original 17 items, and the demographic section contained 9 items. The OEI was developed by the researcher specifically for this study based on the previously developed STSS used by Bride, Robinson, Yegidis, & Figley (2004); the researcher developed all 12 items on the OEI, but formatted the OEI in a way that modeled the STSS. Similar to the STSS, the OEI had items that reflected interactions social services workers may experience with the current opioid crisis (e.g. 'I have served more clients as a result of the opioid epidemic,' 'I have received adequate training in response to the opioid epidemic'). Specifically, the variable involving adequate training was reverse coded to align with the negative implications of a higher OEI score. These statements were also listed alongside a 5-point Likert scale (1 = never, 2 = rarely, 3 = occasionally, 4 = often, 5 = very often). The hypothesis for this research claimed that STS levels would rise as OEI scores would rise; in other words, the OEI would be a statistically significant predictor of STS.

Once the proposal for research was approved by the University of Dayton Institutional Review Board (IRB), the surveys were printed and hand-delivered to each agency on consecutive days in September 2018. The surveys were placed in clasped envelopes with the invited participants' names on the front. Each envelope contained a survey, an invitation to participate (see Appendix B), a cover letter explaining the survey process (see Appendix C), and a prepaid return envelope for the participants to return their surveys. The only exclusion criterion to the survey was the STS portion; participants

had to have worked at least 4 of the 7 days prior to receiving the survey in order to complete it, so that their STS symptoms were based off their most recent work experiences. In those cases, the STS portion of the data for that person was excluded and the rest of the person's data (i.e. their responses to the OEI and the demographics) were kept. The participants were given a time frame of three weeks to complete and return the surveys. Participants completed the survey anonymously and provided their informed consent by returning their finished survey. No incentives were used to increase participation rates.

The purposive sample participants (n = 64) for this research consisted of children services workers in the southwest region of Ohio. Four agencies were invited to participate and two chose to participate: one rural county (n [number of participants]) = 11) and suburban county (n = 53); overall, there was a 67% response rate (n = 43). At the request of the rural county agency, only caseworkers and one supervisor—not all employees—were invited to participate. All children services workers from the suburban county were invited to participate, including caseworkers, supervisors, screening personnel, and directors. A multiple regression analysis was used to analyze the quantitative data collected from the surveys, as the data met the assumptions for the analysis. The independent variable was identified as the opioid exposure level (average Likert scale score) and the dependent variable was identified as the STS level (average Likert scale score). Different control variables (such as education level, age, and years of social services experience) were also considered and analyzed, such as how long the children services worker has worked in the social services field and the agency they

currently work for. The qualitative demographic information collected was analyzed and coded by category.

Results

Demographics

The largest proportion of the respondents were between 26 and 30 years-old (27.9%), and a strong majority identified as White (93%) and as female (90.7%). A bachelor's degree was the highest level of education for 65.1%, while nearly a quarter of the sample reported having a master's degree (23.3%). Over a third (34.9%) of participants were case workers, 20.9% were supervisors, 11.6% were social services workers, 9.3% were intake workers, 4.7% were case aides, and 18.6% claimed to have another job position. The largest proportion of the sample has worked in the social services field for 1.1 to 5 years (48.7%). Additionally, a majority had 1.1 to 5 years of experience in child protective services (54.7%).

Correlations and Predictors

The average STS scores in the sample was 2.239 (or between 'rarely' and 'occasionally' on the Likert scale), and the range was 2.71; the average OEI score was 2.962 (or between rarely and occasionally on the Likert scale), and the range was 2.83. The data were found to meet the assumptions for a multiple regression analysis after conducting a pre-analysis data screening. Those with incomplete data (n = 3), such as those who did not complete the STS portion of the survey, were removed; those participants determined that it was not applicable to their position or recent work week. Correlation coefficients were calculated between all pairs of study and control

variables—STS level, OEI level, highest level of education completed, length of time working for children services, length of time working in the social services field, and age. The findings presented in Table 1 show that there is a weak, positive correlation between the average STS score and the OEI score ($r = .385$, $p \leq .05$). That is to say that a higher level of STS is correlated with a higher OEI level. Of four control variables tested, there is a weak, negative correlation between the average STS score and length of time working for children services ($r = -.328$, $p \leq .05$) as well as length of time working in the social services field ($r = -.334$, $p \leq .05$). In other words, working in children services, as well as in the social services field, for a shorter length of time was correlated with higher levels of STS. Both of the previous control variables were found to be significant and were included in the multiple regression analysis. Education and age were not significantly correlated with STS or OEI and, therefore, were excluded from further analysis.

Table 1: Correlations - Dependent, Independent, and Control Variables

	Highest Level of Education Completed	Length of Time Working for CPS	Length of Time Working in Social Services	Age (years)	Average STS Score	Average OEI Score
Highest Level of Education Completed	1.00					
Length of Time Working for CPS	.285	1.00				
Length of Time Working in Social Services	.410*	.738*	1.00			
Age (years)	.308*	.576*	.873*	1.00		
Average STS Score	.081	-.328*	-.334*	-.286	1.00	
Average OEI Score	-.067	-.175	-.119	-.253	.385*	1.00

*$p \leq .05$

The table above displays the significance of each of the control variables alongside the dependent and independent variables. In addition to the significant measures in the data previously discussed, there is also a weak correlation between highest level of education and length of time working for children services ($r = .410$, $p \leq .05$), a strong correlation between length of time working for children services and length of time working in social services ($r = .738$, $p \leq .05$), a weak correlation between highest level of education completed and age ($r = .308$, $p \leq .05$), a moderate correlation between length of time

working for children services and age ($r = .576$, $p \leq .05$), and a strong correlation between length of time working in social services and age ($r = .873$, $p \leq .05$).

Multiple Regression Analysis

Multiple regression analysis was conducted to determine if the average STS scores were impacted by the average opioid scores. In addition, length of time working for children services and length of time working in the social services field were included as control variables. The multiple linear regression model shows that this model significantly predicts the average STS score ($R^2 = .228$, $F = 2.459$, $p \leq .05$). As the data show in Table 2, the average OEI score was the only statistically significant contributor to the model ($B = .461$, $p \leq .05$). Though the correlation is weak, this shows that the OEI score predicts the average STS scores, unlike length of time working in social services ($B = .011$, $p = .889$) and length of time working for children services ($B = .014$, $p = .872$).

Table 2: Beta Coefficients and Standard Error

	Unstandardized Coefficients B(SE)	t	ß
Average OEI Score	.461(.21)*	2.238	.403
Length of Time Working in Social Services	-.011(.08)	-.141	-.086
Length of Time Working for CPS	-.014(.08)	.872	-.099

* $p \leq .05$

Partial Correlation Coefficients

The data were also controlled for job position (supervisor vs. 'other') as well as location (rural vs. suburban), as shown in Table 3. When job position is considered, the

data on the relationship between the average STS score and the average OEI score show that there is weak statistical significance in the 'other' job position ($r = .445$, $p \leq .05$). When location is considered, the correlation coefficient of the relationship between the average STS score and the average OEI score shows that there is a weak correlation in the suburban location ($r = .369$, $p \leq .05$), but not in the rural location.

Table 3: Partial Correlations Coefficients of STS and OEI by Job Title and County

Supervisor	.997
Other	.445*
Suburban	.396*
Rural	.352

*$p \leq .05$

Discussion

Summary

This research expanded on STS, the opioid crisis, and their relevance in the professional lives of children services workers. The original research question aimed to determine whether or not the opioid crisis had an indirect influence on the level of STS in children services workers. The results concluded from this study show that there is a slight relationship between STS levels in children services workers and how frequently they encounter effects of the opioid crisis in their work. The conclusions drawn from the data were supportive of the original hypothesis.

Interpretation of Results

The R^2 of the model shows that the OEI explained 22.8% of the variation in the STS scores ($R^2 = .228$, $F = 2.459$, $p \leq .05$). In relevance to the study conducted by Radel and colleagues (2018), this study also looked at the perspectives of children services workers. Additionally, the statistical findings of Radel and colleagues (2018) are similar to the statistical findings of this study. When asked if the children services workers' clients are receiving agency services because of opioid drug use, the most frequent response was found to be 4, or often (41.9%); when asked if the children services workers have served more clients as a result of the opioid epidemic, the most frequent response was 4, or often, and 5, or very often (37.2%). Based on statistical findings, Radel and colleagues (2018) explained that higher children services caseloads are correlated with opioid overdose deaths. Additionally, those cases were found to be more severe and complex (Radel et al., 2018). Overall, what the participants expressed in this study were similar to the existing statistics that showed a significant relationship between children services cases and opioid use.

The data provided by the participants was not found to align with the findings of existing research on STS. Previous research has found that less experienced children services workers were previously found to have higher levels of STS or CF (Sprang et al., 2007; Sprang et al., 2011; Van Hook & Rothenberg, 2009), which was not found to be true in this research. The finding from the current study was based on years of experience both in social services and in children services; both were not independently and significantly correlated with the dependent variable. Previous research studies specifically state that there is a correlation between age and STS or CF levels. In other

words, the younger the participant, the higher the levels of STS or CF (Sprang et al., 2007; Sprang et al., 2011; Van Hook & Rothenberg, 2009). The current study, unlike previous studies, did not find a significant correlation between age and average STS level. Though this study does not align with previous research discussed, it does factor in the opioid crises, whereas these studies do not; this could imply that the opioid crisis could be an underlying factor in STS levels discovered in studies conducted throughout the crisis' time period (i.e. 2007 to present).

In continuing the dissimilarities of the findings of this research and some existing research (Sprang et al., 2007; Sprang et al., 2011), the current research found that those in a suburban work setting were found to experience more significant levels of STS than those in a rural setting. However, this study did have a limited number of rural participants in the study and a larger number of suburban participants. Therefore, this particular finding is likely to be skewed based on the described limitations of the data. In addition to this difference, a strong majority of the participants in the current study were female. In other words, this research could not fairly conclude whether males or females experience more symptoms than the opposite gender, as the gendered results found in previous studies were based on a more diverse sample than the current sample (Gil & Weinberg, 2015; Sprang et al., 2007; Van Hook & Rothenberg, 2009).

Other studies that used the STSS to measure STS levels in children services workers (Bride, 2007; Bride et al., 2007) had a much larger sample size ($n = 282$ and $n = 187$, respectively) and also reported whether or not the results indicated diagnostic criteria for PTSD. Since these studies did not factor in another variable as a cause of STS, these studies did not use multiple regression analysis as their main form of analysis; One

study (Bride et al., 2007) did, however, incorporate bivariate correlations and discovered that large caseload size, lack peer support, more lifetime trauma history, and less intent to remain employed were all significantly associated with higher levels of STS; unlike the current study that only found opioid crisis exposure to be significantly associated with STS levels.

Strengths/Limitations

The current study has several strengths that benefit the existing research. This study looked into a problem that has not been widely addressed by research conducted in the past; it provides a new insight to the prevalence of the opioid crisis, as well as how it can impact individuals in an indirect way through STS. Further, this research expands on the previously existing research on STS while providing a possible contributor to that stress. The current research is especially relevant because of the region studied. As mentioned in the review of existing literature, the southwestern Ohio region is considered to be the epicenter of opioid overdose rates. By sampling this particular area, the findings more accurately depict the prevalence of the problem. This study also incorporated a new measuring instrument, the OEI. This measurement was original and developed by the researcher, and, currently, has never been used in another existing study.

In addition to the beneficial strengths, this study also has limitations. This study was limited by its sample size as well as the limited number of agencies sampled. These limitations do not provide a representative sample of all children services workers and, therefore, general conclusions cannot be drawn; the data likely exhibits the preceding findings because there were far more ‘other’ job positions (n = 34) than supervisors (n = 9), and more suburban respondents (n = 35) than rural (n = 8). Additionally, the

participants were not exceedingly diverse. A strong majority of the participants identified as white females and, again, do not provide a representative sample of all children services workers. The sample also showed great differences in the sizes of the various group representations (i.e. rural agency versus suburban agency, supervisor job position versus other job positions); these representations likely skewed the partial correlation data. Additionally, the OEI has not been validated by any professionals. The development of the instrument was based on existing opioid crisis and social services statistics, but further testing to establish validity and reliability is needed.

Implications

Implications that can be drawn from this study include mental health awareness and public health awareness. A majority of the literature identified a necessity of providing more trauma-based training to better prepare professionals for trauma-related situations in order to better deal with the STS experienced by trauma workers experience (Ben-Porat, 2017; Jenkins & Baird, 2002; Sprang et al., 2011; Tavormina & Clossey, 2015). In addition to more training, some literature also suggests that trauma workers should be taught beneficial coping strategies, such as problem-based or emotional-based coping, so that they may be able to better manage their emotions (Gil & Weinberg, 2015; Van Hook & Rothenberg, 2009). Some literature expressed a need for social, peer, and administrative support within and outside of the workplace; these types of support are essential for trauma workers to improve their skills and cope with their STS experience (Ben-Porat, 2017; Cornille & Meyers, 1999; Jenkins & Baird, 2002; Tavormina & Clossey, 2015; Van Hook & Rothenberg, 2009).

Based on existing research, implications that can be drawn from the study include mental health awareness and public health awareness. Information obtained from Capacity Building Center for States, or CBCS (2018) through the Children's Bureau, Administration for Children and Families, and U.S. Department of Health and Human Services discusses the wellbeing of children services workers. The CBCS (2018) discusses implementing certain work-based strategies to help combat STS, which can include training to develop a stronger resiliency to trauma, incorporating a debriefing for serious incidents, and building support systems amongst peers and administration. Different approaches to individual self-care are also discussed, such as getting enough sleep, incorporating things into one's day that promote mindfulness (such as yoga or meditation), and reflecting on what has and has not worked to manage stress in the past (CBCS, 2018). In accordance with these methods, this study can serve as an advocate for improvements in availability of these mental health resources for social services workers. In addition, more research can be conducted on the mental health of social services workers, as well as various trainings or treatments that can be beneficial to those with poor mental health.

Not only can this study lead to more mental health research in the social services field, it can also lead to more research on public health crises. Widespread crises, like the opioid crisis, can impact more than just health, and this research has helped exhibit that. In the year 2019, almost $17 billion is being sought out by the Presidential Administration to continue to combat the opioid crisis (Executive Office of the President of the United States (EOPUS), 2019). This proposed budget consists of the expansion of resources for treatment and recovery though state grants (EOPUS, 2019). Within the past

3 years, Ohio has raised its annual budget for combatting the opioid crisis specifically from about $14 million in 2017 to almost $56 million in 2019 (Ohio Office of Budget and Management, 2019). The raise in Ohio's budget aligns with the third wave of synthetic opioid overdoses established by the CDC (2018).

Suggestions for Future Research

It would be beneficial for this research to be replicated with a larger and more diverse sample; more data would lead to more accurate statistical findings and could help solidify, or disprove, the theory that the opioid crisis influences the STS levels of children services workers. Additionally, this research could be replicated with more social services agencies rather than just children services. It could be beneficial to incorporate workers from adult protective services, job and family services, and more. Other trauma workers, such as first responders and behavioral therapists, could also be surveyed for important data. Incorporating a qualitative approach, such as interviews or open-ended questions, may also be beneficial to the research. The perspective of the workers would be more straightforward, more insight would be provided, and the qualitative findings could provide a context to the statistical findings. In addition, future research could study other mental health illnesses other that STS; measuring levels of illnesses like depression, anxiety, and others can provide important data that could help combat these issues in social services workers. Conclusively, this study suggests that STS levels in children services workers may be partially influenced by effects of the opioid crisis. These findings can lead to similar research in this area of study, as well as additional research on the wellbeing of social services workers and indirect influence of public health crises.

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Appendices

Appendix A: Survey Instruments

The following is a list of statements made by the researcher regarding the one of the nation's current public health crises, the opioid epidemic. Read each statement, then indicate how frequently the statement has applied to ***your work at your current during the past year*** *(or less depending on your hire date) by circling the corresponding number next to the statement.* ***(In this case, opioids are considered to be prescription pain medication, heroin, and fentanyl.)***

	Never	Rarely	Occasionally	Often	Very Often
1. I have seen an opioid overdose victim in person.	1	2	3	4	5
2. I have seen a deceased opioid overdose victim in person.	1	2	3	4	5
3. I have seen opioid drug paraphernalia in person (i.e. needles, pills, etc.).	1	2	3	4	5
4. My clients speak to me about opioid drug use.	1	2	3	4	5
5. The guardians of my clients are addicted to opioids.	1	2	3	4	5
6. My clients are receiving agency services because of opioid drug use.	1	2	3	4	5
7. The guardians of my clients have been arrested because of opioids.	1	2	3	4	5
8. I have referred guardians of clients to drug treatment services for opioid misuse.	1	2	3	4	5
9. I have served more clients as a result of the opioid epidemic.	1	2	3	4	5
10. I have served the same client more than once because of opioid drug use.	1	2	3	4	5
11. I have used naloxone (or another overdose reversal drug) on an overdose victim.	1	2	3	4	5
12. I have received adequate training in response to the opioid epidemic.	1	2	3	4	5

*The following is a list of statements made by persons who have been impacted by their work with traumatized clients. Read each statement, then indicate how frequently the statement was true for **you in the past seven (7) days** by circling the corresponding number next to the statement.*

Have you worked **at least four (4)** of the past seven (7) days? Check yes or no. (If no, please skip the following statements and respond to the next page.) ☐ Yes ☐ No

	Never	Rarely	Occasi-onally	Often	Very Often
1. I felt emotionally numb.	1	2	3	4	5
2. My heart started pounding when I thought about work with my clients.	1	2	3	4	5
3. It seemed as if I was reliving the trauma(s) experienced by my client(s).	1	2	3	4	5
4. I had trouble sleeping.	1	2	3	4	5
5. I felt discouraged about the future.	1	2	3	4	5
6. Reminders of my work with clients upset me.	1	2	3	4	5
7. I had little interest in being around others.	1	2	3	4	5
8. I felt jumpy.	1	2	3	4	5
9. I was less active than usual.	1	2	3	4	5
10. I thought about my work with clients when I didn't intend to.	1	2	3	4	5
11. I had trouble concentrating.	1	2	3	4	5
12. I avoided people, places, or things that reminded me of my work with clients.	1	2	3	4	5
13. I had disturbing dreams about my work with clients.	1	2	3	4	5
14. I wanted to avoid working with some clients.	1	2	3	4	5
15. I was easily annoyed.	1	2	3	4	5
16. I expected something bad to happen.	1	2	3	4	5
17. I noticed gaps in my memory about client sessions.	1	2	3	4	5

 NOTE: "Client" is used to indicate persons with whom you have been engaged in a helping relationship. You may substitute another noun that better represents your work such as consumer, patient, recipient, and so forth.

*Please circle **one answer** for each of the following questions and/or fill in the specified blank. These questions reflect how you, the participant, describe yourself.*

1. What is your age? Age: _____

2. What gender do you identify as? a. Male b. Female c. Other (please specify): _____

3. How do you identify yourself racially? Race: _____

4. What is the highest level of education you have completed? What have you studied?
   a. High school
   b. Associate's degree in _____
   c. Bachelor's degree in _____
   d. Master's degree in _____
   e. Doctoral degree in _____

5. Are you licensed in counseling or social work? Please specify.
   a. Yes: _____ b. No
6. What county does your agency serve?
   a. Preble
   b. Montgomery
   c. Warren

7. What is your job position at the agency you serve? Position: _____

8. How long have you worked in the social services field? Time: _____
This time includes **all agencies you have been employed at. Please specify in whatever unit(s) of time you believe to be relevant (i.e. years, months, weeks, etc.).*

9. How long have you worked for child protective services? Time: _____
This time includes your employment time at your **current agency only. Please specify in whatever unit(s) of time you believe to be relevant (i.e. years, months, weeks, etc.).*

Appendix B: Survey Invitation to Participate

INVITATION TO PARTICIPATE IN RESEARCH

Surveys

Research Project Title: Secondary Trauma in Children Services Case Workers: Are Opioid Crisis Experiences a Contributing Factor?

You have been asked to participate in a research project conducted by Rebecca Richardson from the University of Dayton, in the Department of Sociology, Anthropology, and Social Work. The purpose of the project is to answer the question of whether or not work-related opioid crisis experiences correlate with higher reports of secondary traumatic stress.

You should read the information below, and ask questions about anything you do not understand, before deciding whether or not to participate.

- Your participation in this research is voluntary. You have the right not to answer any question and to stop participating at any time for any reason. Answering the questions will take about 10 to 15 minutes.
- You will not be compensated for your participation.
- All of the information you tell us will be confidential.
- If this is a recorded interview, only the researcher and faculty advisor will have access to the recording and it will kept in a secure place.
- If this is a written or online survey, only the researcher and faculty advisor will have access to your responses. If you are participating in an online survey: We will not collect identifying information, but we cannot guarantee the security of the computer you use or the security of data transfer between that computer and our data collection point. We urge you to consider this carefully when responding to these questions.
- I understand that I am ONLY eligible to participate if I am over the age of 18.

Please contact the following investigators with any questions or concerns:

Rebecca Richardson
Email: richardsonr5@udayton.edu
Phone: (937) 733-7589

Dr. Molly Malany Sayre
Email: msayre2@udayton.edu
Phone: (937) 229-1232

If you feel you have been treated unfairly, or you have questions regarding your rights as a research participant, you may contact Candise Powell, J.D., Chair of the Institutional Review Board at the University of Dayton, IRB@udayton.edu; Phone: (937) 229-3515.

Appendix C: Cover Letter

August 27, 2018

Dear Participant:

This survey was created for my senior thesis research at the University of Dayton. Social work is a discipline I am very passionate about, so I wanted my thesis project to contribute to the research being done in the social work field. This research on children services workers will strengthen previous research and contribute to more current research on the opioid epidemic.

If you decide to participate in the study by completing the survey, I ask that you send the survey back in the prepaid envelope provided for you. I am also asking that you return the survey no later than 3 weeks from the day you initially received it.

I want to express my sincere thanks to you for taking time out of your busy schedule to voluntarily complete this survey. If you have any questions or concerns at any point in time, please contact myself at richardsonr5@udayton.edu or my thesis mentor, Dr. Molly Malany Sayre, at msayre2@udayton.edu. Again, thank you for your participation.

Sincerely,

Rebecca Richardson

University of Dayton

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