



# The Role of Trauma-Informed Training in Helping Los Angeles Teachers Manage the Effects of Student Exposure to Violence and Trauma

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## Abstract

Exposure to trauma, such as community violence, has far-reaching effects on childrens' learning and behavior. While schools are a critical place to provide positive and safe spaces for students, teachers have self-reported a lack of knowledge on how to work effectively with traumatized students. In response to this, there has been an increase in teacher training on trauma-related topics. However, it is unclear how training impacts teachers' trauma knowledge and difficulty responding to traumatized students in the classroom. As such, this exploratory study used a survey ( $N=94$ ) with Los Angeles teachers to assess whether training on violence and trauma is related to trauma knowledge and reported difficulty responding to traumatized students. Regression analyses indicate that total training increased teachers' trauma knowledge, which was found to mediate teachers' difficulty responding to traumatized students. Findings from this study support the need for a focus on trauma-informed training within the education context.

**Keywords** School social work · Community violence and trauma exposure · Educational implications of trauma · Trauma trainings · Teacher trainings

## Community Violence and Trauma: Prevalence and Correlates

The effects of children's exposure to violence within the community are far-reaching and well documented. In the US, 60% of youth are exposed to violence within a year and 59% report witnessing community violence within their lifetime (Finkelhor et al. 2015). In particular, violent crimes in Los Angeles are reported at 1.4 times higher than the national average (FBI 2017). Each year violence has a significant physical, mental, and economic impact on young children in schools and communities (Finkelhor et al. 2015).

Post-traumatic stress in particular is a common outcome of community violence exposure (Fowler et al. 2009; McGill

et al. 2014). Violence exposure can result in children feeling hyper-vigilant and focused on detecting threats, making them unable to let their guard down (US Department of Justice, Task Force on Children Exposed to Violence 2012). Without adequately addressing trauma, children's prefrontal cortex continues to be underutilized (van der Kolk et al. 2005), which may result in youth becoming stuck in the fight or flight response, having difficulty think logically and rationally and regulating their emotions (McCoy et al. 2015; Thomason and Marusak 2017).

## Trauma and Educational Outcomes

Children exposed to violence are at increased risk for difficulties in school such as misbehavior, low GPA, poor school attendance, and decreased standardized test scores (Loomis et al. 2020; Busby et al. 2013; Gonzalez et al. 2016; Hurt et al. 2001; McGill et al. 2014; Voisin et al. 2016), all of which impact educational attainment and future academic success. Students exposed to community violence also often exhibit behaviors that interfere in the classroom setting and may,

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therefore, present a significant challenge for teachers (Alisic et al. 2012).

Research indicates that the relationship between community violence exposure and poor school performance may be mediated by symptoms of post-traumatic stress (Mathews et al. 2009). Furthermore, research shows that unresolved trauma can lead to negative academic and mental health outcomes among students (Bell et al. 2013). Traumatized students have more discipline issues and referrals, are more likely to miss school, and more likely to be suspended than their non-traumatized peers (Perfect et al. 2016). In the classroom, where traumatic stress symptoms are evident in student behavior, students are likely to be mislabeled with a learning disorder or behavior problems like conduct or attention problems (Goodman and West-Olatunji 2010; Goodman et al. 2012). Trauma-related behaviors may be misattributed by teachers, thus placing students at risk of negative long-term academic outcomes.

## Trauma-Informed Training for Teachers

As teachers interact with students daily and are often trusted by their students, they can aid in student's recovery (Bell et al. 2013). A teacher's ability to identify initial behavioral symptoms associated with traumatic responses to neighborhood violence may facilitate a rapid response to youth who have experienced violence (Fowler et al. 2009). A review of the research emphasizes the need to provide training to teachers that aids in understanding, supporting, and effectively responding to students exposed to trauma (Hobbs et al. 2019). A seminal study highlighting the need for trauma training for teachers came out of the Netherlands in 2012 (Alisic et al. 2012). The majority of teachers in this study self-reported a lack of knowledge and training needed to successfully work with traumatized students (Alisic et al. 2012). Specifically, elementary school teachers stated that due to a lack of guidance, they were both unclear in their role with students and how to effectively assist children following trauma exposure (Alisic et al. 2012). Although schools are identified as an ideal place to provide mental health services, school staff rarely receive training on how trauma may affect students and how staff can aid traumatized children (Crosby 2015).

Further, there are very few empirical studies evaluating trauma-informed trainings across all disciplines, let alone in the education field (Purtle 2020; Overstreet and Dempsey 2010). Findings from a systematic review of research evaluating trauma-informed interventions within schools identified that very few studies in the US have evaluated interventions focused on teachers, compared to those directly targeting children (Zakszeski et al. 2017). This limitation may make it challenging to sustain interventions, as teachers are

often responsible for ensuring the sustainability of social-emotional or trauma-informed interventions but may not know how to support trauma-exposed students (Mancini 2019; Voith et al. 2019).

Several factors may be contributing to the limited evaluation of trauma-informed training provided to teachers. Although many state Departments of Education report using or referencing some type of trauma-informed curricula, there is currently no standardized trauma-informed training for educational settings (Thomas et al. 2019). Furthermore, training resources typically used tend to be borrowed disciplines rather than created specifically for the education field (Thomas et al. 2019). Adapting trauma-informed training from other disciplines into the education sphere may create unique challenges due to the methodological considerations unique to school settings, which can influence the implementation and evaluation of trauma-focused approaches. These methodological considerations include restrictions on the amount of time allotted for trainings due to unions and conflicts between academic and mental health goals (Fabiano et al. 2014). This may make it challenging to translate approaches developed for clinical and other professional settings to school-based settings (Zakszeski et al. 2017).

Another factor limiting the evaluation of trauma-informed training in education settings is the paucity of work evaluating the impact of trauma-informed training on meaningful outcomes for teachers/students (Zakszeski et al. 2017). Additionally, while several measures have been developed to evaluate trauma-informed care, very few of these are designed specifically for education settings compared to child welfare, human service, and behavioral health settings (Champine et al. 2019). More information is needed regarding how teachers' knowledge of trauma-related concepts, such as definitions of trauma and the impact of trauma on child development influences teacher and child outcomes. These limitations make it difficult to understand what trainings teachers may need to work most effectively with students who have experienced trauma.

## Current Study

To date, limited research addresses the difficulties teachers may face when responding to traumatized students and what training will help teachers effectively identify and work with traumatized students in the classroom (Alisic et al. 2012). As the field of trauma-informed care continues to grow, it is necessary to understand educators' trauma knowledge and difficulty responding to traumatized students in the classroom, as well as what factors relate to these outcomes. As such, the study answers the following research questions:

- (1) What is the relationship between training, trauma knowledge, and difficulty

responding to traumatized students?

- (2) Does trauma knowledge mediate the relationship between training and difficulty responding to traumatized students?

The current study helps to fill some of the gaps in the current field by focusing specifically on teachers, evaluating teacher outcomes related to trauma training, and using two trauma-informed measures. It is hypothesized that training will predict higher levels of trauma knowledge and lower perceived difficulty responding to traumatized students. Furthermore, it is hypothesized that trauma knowledge will mediate the relationship between training and difficulty where higher knowledge is related to lower difficulty.

## Methods

### Sample

To answer the above research questions, a survey was administered to K-12 teachers recruited from Los Angeles County, a county burdened with high rates of violent crime. For example, in 2016, there were 22,213 reported violent crimes (LAPD 2018), 1.4 times higher than the national average (FBI 2017). Of these violent crimes, 218 were murders, and 12,054 were aggravated assaults (LAPD 2018), 1.2 times higher than the national average (FBI 2017). The sample was restricted to individuals at least 18 years old at the time of sampling and currently working or had previously worked as a K-12 teacher in Los Angeles County. This included public school teachers as well as charter and private school teachers.

Following IRB approval, the study utilized a nonprobability, convenience sampling method (Dillman et al. 2014). Teachers were recruited through teaching education Alumni Listservs in Los Angeles. The researcher was not given access to the email addresses but instead sent the recruitment email to a staff member for them to forward the email to the listserv. After one week, a reminder email was sent utilizing the same method, and no more than two additional reminder emails were sent (Dillman et al. 2014). To address low response rates, network and snowball sampling methods were also employed (Groves et al. 2009). This included recruiting at teacher union meetings, posting the survey on Facebook and LinkedIn, and sending it to known teachers who were asked to recruit their co-workers or contacts to take part in the survey (Groves et al. 2009). There were 147 survey responses, 94 of which were fully completed.

### Design

Data was collected through a self-administered web-based survey administered using Qualtrics that could be completed on any electronic device. An internet survey was used for three of its main advantages. First, teachers are typically very busy, and utilizing an internet survey allows them the convenience of finishing the survey on their own time and speed. Along with this, the topic of trauma is sensitive and might elicit the desire to respond desirably if a researcher is present. The use of the internet allows the respondents to answer as honestly as possible (Pew Research Center, n.d.). The survey was open from February 2019 to June 2019. Both TinyURL and QR code scans were used for recruitment (Dillman et al. 2014). Incentives were provided for the network and snowball sampling group as the response rate continued to be low (Brick and Williams 2013). The incentive was an entry into a raffle for a chance to win a \$50 Amazon gift card. The data were then imported into STATA for statistical analysis.

### Measures

**Trauma-Informed Training** All respondents were asked to indicate the training they received in pre-service (training received before becoming a teacher) and in-service (training received while teaching). These were measured with seven dichotomous (yes = 1 no = 0) questions asking if respondents received training on the following topics: the impact of violence exposure on student mental health, the impact of violence exposure on student behavior, the impact of trauma on student mental health, the impact of trauma on student behavior, the impact of stress among teachers, tips and tools for reducing stress among teachers, and diversity. Responses were added together to create a composite score of pre-service training and in-service training measured from zero to fourteen training categories. This was then recoded into three equal groups to represent low (0–3), medium (4–6), and high (6–14) amounts of trauma training.

**Trauma Knowledge** Teachers' trauma knowledge was measured using the Teaching Traumatized Students (TTS) Scale (Crosby et al. 2016). The TTS scale was created to measure the construct of teacher's overall knowledge of working with traumatized students (Crosby et al. 2016). The TTS scale presents internalizing and externalizing student behaviors and consists of 9 questions about teachers' overall knowledge and efficacy of student trauma and trauma-related educational needs. It utilizes a 5 point Likert scale going from 1 = strongly disagree to 5 = strongly agree. All the responses are summed with higher scores indicating greater overall knowledge of student trauma and trauma-related educational needs. A preliminary study with 26 teachers in an all-girls alternative school measured the scale's psychometric properties. Each

of the 9 questions had factor loadings greater than 0.30 and had a Cronbach's alpha of 0.91 (Crosby et al. 2016).

**Difficulty Responding to Traumatized Students** Teachers' perceived difficulties responding to traumatized students, referred to as *Difficulty Responding* from here on, was measured using an adapted version of the Teachers' Difficulties Helping Children after Traumatic Exposure Scale. This is a 9 item scale created to measure various aspects of assisting children after being exposed to trauma (Alisic et al. 2012). The original measure started with an introduction of trauma and provided two scenarios with a girl who witnessed violence and a boy who survived a car accident (Alisic et al. 2012); the violence scenario was used for the current study. The measurement tool utilizes a 6 point Likert scale from 1 = not difficult at all to 6 = extremely difficult (Alisic et al. 2012). The scores for each question were examined individually and summed. In a study with 762 teachers in the Netherlands, the survey was found to have a Cronbach's alpha of .82 and greater than or equal to 0.30 with confirmatory principal axis factoring (Alisic et al. 2012). The original survey was in Dutch, but the question stems were presented in English in the original paper.

**Covariates** Covariates included in the analyses were gender, race/ethnicity, years of experience, grades taught, and percent of students exposed to trauma. Race/ Ethnicity is a categorical variable coded as Asian = 1, Black or African American = 2, Hispanic or Latinx = 3, White = 4, Multiracial = 5. The race/ethnicity measure originally had American Indian or Alaskan Native and Native Hawaiian or Other Pacific Islander, but both were dropped during coding as they had zero responses. Grades taught was coded into 4 categories, 1 = Elementary School, 2 = Middle School, 3 = High School, 4 = Multiple Grade Levels. Years of experience was collected as a categorical variable coded as 1–5 years (1), 6–10 years (2), 11–15 years (3), 16–20 years (4), and 21 or more years (5). Teachers were asked to report the percent of students they believed were exposed to trauma, measured as a continuous variable.

## Analyses

First, descriptive analyses were generated to describe the sample and key variables. Bivariate statistics were used to examine the relationship between the two scales, training level, and covariates. To test hypothesis 1, that higher training dosage would be positively related to trauma knowledge and negatively related to difficulty responding to traumatized students, separate multiple regression models were run. To test hypothesis 2, that trauma knowledge would mediate the relationship between training dosage and difficulty responding to traumatized students, we use a path analysis. The high training group was used as the reference group in testing hypothesis 2. Both analyses were estimated with the above-mentioned covariates

and using the MLR estimator, which is robust to missing data, as well as bootstrapping (with 1000 iterations). To determine whether trauma knowledge would mediate the relationship between training and difficulty responding to traumatized students, indirect effects were estimated.

Standardized coefficients ( $\beta$ ) and bootstrapped confidence intervals are reported in Table 6. Standardized coefficients for individual pathways can be interpreted similarly to effect sizes, with values less than .10 indicating a small effect, values around .30 indicating a medium effect, and values over .5 indicating a large effect (Cohen 1988) and according to Kenny (2015) indirect effects can be evaluated as small (.01), medium (.09), and large (.25). The covariates were regressed onto both the hypothesized mediator and outcome variable, resulting in a fully saturated model. Data cleaning and univariate/bivariate analyses were completed using STATA 16.1 and path models were estimated using Mplus 7.1.

## Results

As seen in Table 1, the mean age of the respondents was 38.92, 12.9% of the respondents identified as Asian, 8.6% Black or African American, 30.11% were Hispanic or

**Table 1** Sample descriptives ( $n = 94$ )

Variable	n or M	% or SD.
Gender		
Female	74	78.72%
Male	20	21.28%
Race/Ethnicity		
Asian	12	12.90%
Black or African American	8	8.60%
Hispanic or Latinx	28	30.11%
White	32	34.41%
Multiracial	13	13.98%
Years of Experience		
1–5	22	23.40%
6–10	32	34.04%
10+	40	42.55%
Grades Taught		
Elementary	21	22.34%
Middle School	36	38.30%
High School	29	30.85%
Multiple Grade Levels	8	8.51%
Training Received		
Low	30	31.91%
Medium	37	39.36%
High	27	28.72%
Percent of Students Exposed to Trauma	29.76	59.07%

Latinx, 34.41% identified as white, and 13.98% indicated that they were multiracial. The majority of respondents were female (78.72%), and the remaining 21.28% identified as male. There were a variety of grades taught, the majority of which were Middle School (38%). The majority of respondents have been teaching for more than 10 years (42.55%). The mean percent of students’ teachers believed that they worked with students exposed to trauma was 59.07.

As seen in Table 2, the majority of teachers did not receive pre-service training on the impact of violence exposure on student mental health (78%), the impact of violence exposure on student behavior (78%), the impact of trauma on student mental health (80%), the impact of trauma on student behavior (74%), the impact of stress among teachers (76%), tips and tools for reducing stress among teachers (75%). However, the majority of teachers indicated that they did receive pre-service training on diversity (84%). For in-service training, the results were almost evenly split between receiving training and not receiving. The only topic that the majority did not receive training on was the impact of stress among teachers (67%). Overall, 32% of teachers had reported receiving low (0–3) topic training, 39% had received medium (4–6) topic training, and about 29% had high (6–14) topic training.

Descriptive data for each of the 9 items in the TTS scale can be found in Table 3. On average, teachers identified that they were most knowledgeable of the effects of trauma on the behavior of students in the classroom (4.01), how verbal expressions and tone impact traumatized children (3.95), and how body language and nonverbal expressions impact traumatized children (3.89). On the other hand, teachers were, on average, less knowledgeable that rewarding students help change problematic behavior (3.27) and how to handle difficult behavior related to student’s traumatic stress (3.24). The average total score ( $n = 85$ ) across respondents was 3.68, ranging from 1.78 to 6, which indicates that teachers strongly agreed on most items.

The responses for the nine-question items for the TTS scale are seen in Table 4. On average, teachers rated it most difficult to avoid taking problems home (4.31), decide where their task ends (4.15), to know what is best to do to support traumatized

students (4.2), and to know how to discuss a student’s traumatic experience with them and the rest of the class (4.32). Overall, the mean score for the scale was 3.89 and ranged from 1.78 to 6, indicating that teachers, on average, ranked higher on difficulty responding to traumatized students.

Correlations between key variables are presented in Table 5. There was a negative correlation between teacher difficulty responding to traumatized students and teacher trauma knowledge ( $p < .01$ ) indicating that the less trauma knowledge a teacher had the more difficulty they had. There was a positive correlation between teachers training level and their trauma knowledge ( $p < .05$ ). This indicates that the more training a teacher receives the more knowledge they have of student’s trauma related behavior. Years of experience and exposure to trauma were positively correlated ( $p < .05$ ) indicating that the more years of experience teachers had the more likely they were to report having taught a higher percentage of students exposed to trauma. A positive correlation was found between grades taught and teacher difficulty responding to traumatized students ( $p < .01$ ) indicating that the higher level that a teacher taught the more difficulty they had. This could mean that student’s trauma related behavior can become more challenging for teachers to address once they become older. Finally, grades taught and years of experience were positively correlated ( $p < .05$ ) which can indicate that teachers in high school had more years of experience than teachers that taught at lower levels.

### Multiple Regression: Trauma-Informed Training, Knowledge, and Difficulty

See Table 6 for results from the multiple regression models. The model predicting trauma knowledge explained 27% of the variance in the total trauma knowledge scores ( $p = .001$ ). Teachers in the low training group had significantly lower trauma knowledge compared to teachers in the high training group ( $p = .02$ ) and there was no difference for the medium training group. Compared to White teachers, Asian teachers had significantly higher trauma knowledge ( $p = .001$ ). None of the other included covariates significantly predicted trauma knowledge.

**Table 2** Training teachers reported that they received Pre-Service and In-Service

Topic	Pre-Service	In-Service
The impact of		
... violence exposure on student mental health	21.98%	52.17%
... violence exposure on student behavior	22.22%	52.17%
... trauma on student mental health.	19.78%	59.78%
... trauma on student behavior.	26.37%	59.34%
... stress among teachers.	24.18%	32.58%
Tips and tools for reducing stress among teachers.	24.72%	45.65%
Diversity	83.52%	71.74%

**Table 3** Descriptive data and ratings for Teaching Traumatized Students Scale ( $1 = \text{strongly disagree}$  to  $5 = \text{strongly agree}$ )

Scale Item	<i>M</i>	<i>SE</i>	% rated strongly disagree	% rated disagree
Rewarding students helps change problematic behavior.	3.27	0.1	4.71	18.82
I am aware of the effects of trauma on the behavior of students in my classroom.	4.01	0.08	7.06	9.41
I consider my students' experiences with trauma as I design strategies to engage students in learning.	3.71	0.11	2.35	14.12
I can identify traumatic responses in students.	3.7	0.09	12.94	18.82
I am aware of aspects of the school environment that may trigger trauma reactions in students.	3.67	0.09	1.18	12.94
I know how to handle difficult behavior related to traumatic reactions in students.	3.24	0.1	3.53	21.18
I understand how the brain is affected by trauma.	3.69	0.11	2.38	15.48
I am mindful on how my verbal expressions (tone, language, sarcasm) impact a traumatized child.	3.95	0.08	1.18	4.71
I am mindful of the way my body language and nonverbal expressions impact a traumatized child.	3.89	0.09	1.18	7.06
Overall Score	3.69			

The model predicting difficulty responding to traumatized students explained 22% of the variance in total trauma difficulty ( $p = .009$ ). In the difficulty model, training did not predict difficulty responding to traumatized students. Of the included covariates, only the grades taught predicted difficulty, with middle school teachers reporting significantly lower difficulty responding to traumatized students compared to elementary school teachers ( $p = .002$ ).

### Path Analysis: Trauma-Informed Training, Knowledge, and Difficulty

Fig. 1 shows the path results for the indirect effects model that estimated whether trauma knowledge mediated the relationship between training group and difficulty responding to traumatized students. Being in the low training group was associated with significantly lower trauma knowledge ( $p = .020$ ) and there was no difference for the medium training group

( $p = .798$ ) compared to the high training group. Trauma knowledge was negatively significantly related to difficulty responding to traumatized students ( $p = .009$ ), teachers with higher trauma knowledge reported lower difficulty responding. The indirect effects estimating the pathway from low training to difficulty responding through trauma knowledge were not significant, although trended in the hypothesized direction ( $B = .09$ ,  $SE = .06$ ,  $95\% CI = -.02, .20$ ,  $p = .099$ ). The pathway from medium training to difficulty responding to traumatized students through trauma knowledge was not significant ( $B = .01$ ,  $SE = .05$ ,  $95\% CI = -.21, .36$ ,  $p = .814$ ).

### Discussion

Community violence exposure and its outcomes are well documented throughout the literature; researchers have paid

**Table 4** Descriptive data and ratings for Teachers' Difficulties with Supporting Children After Trauma Scale ( $1 = \text{not difficult at all}$  to  $6 = \text{extremely difficult}$ )

Scale Item	<i>M</i>	<i>SE</i>	% rated difficult	% rated very difficulty	% rated extremely difficult
<i>For me, with children like Lisa it is (Not difficult at all to extremely difficult)...</i>					
...to balance looking after Lisa and looking after the rest of the class.	3.86	0.15	25.56	25.56	12.22
...to balance looking after Lisa and avoiding putting her in a special position.	3.3	0.15	18.89	17.78	7.78
...to balance looking after Lisa and making the situation too heavy.	3.4	0.13	23.33	18.89	3.33
...to avoid taking the problems home.	4.31	0.15	22.99	28.74	21.84
...to decide where my task ends and the task of a social worker or psychologist begins.	4.15	0.15	26.67	20	22.22
...to know what is best for me to do to support Lisa.	4.2	0.13	29.21	28.09	15.73
...to know when Lisa would need mental health care to recover.	3.53	0.18	19.1	16.85	16.85
...to know what to discuss about the trauma with Lisa and the class.	4.32	0.15	23.33	25.56	25.56
...to know where to get answers to my own/parents/children's questions.	3.96	0.14	26.14	26.14	11.36
Overall Score	3.89				

**Table 5** Correlations and associations for Teaching Traumatized Students Scale (*n* = 80)

	1	2	3	4	5	6	7	8
1. Trauma Knowledge	1							
2. Difficulty Responding	−0.34**	1						
3. Exposed to Trauma	0.16	−0.15	1					
4. Gender	0.05	−0.00	0.18	1				
5. Training Level	0.27*	0.25	0.11	0.09	1			
6. Race/ Ethnicity	0.27	0.20	0.30	0.09	0.19	1		
7. Years of Experience	0.16	0.09	0.41*	0.14	0.14	0.30	1	
8. Grades Taught	0.28	0.37***	0.24	0.31	0.17	0.18	0.35*	1

\**p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

particular attention to the impact of exposure to violence within the community on academic outcomes, focusing specifically on the role of post-traumatic stress (Hardaway et al. 2012; Mathews et al. 2009; McGill et al. 2014). Understanding the impact of training on teacher’s ability to properly identify and respond to children exposed to violence and other trauma is essential to determine what action schools should take in supporting students. As such, the current study sought to identify the effects of trauma-informed training on teachers’ trauma knowledge and difficulties when working with traumatized students in the classroom. Findings indicate that while teacher training positively predicts teachers’ level of trauma knowledge it does not directly predict teachers self-reported difficulty working with traumatized students. In this study,

teachers with low levels of trauma-informed training had significantly lower trauma knowledge compared to those with high levels of training. Findings also show that teacher’s trauma knowledge is related to lower levels of difficulty working with traumatized students. Although the indirect effects were not significant in the mediation model, they trended in the hypothesized direction, suggesting value in future work examining whether trauma knowledge mediates the relationship between training and difficulty.

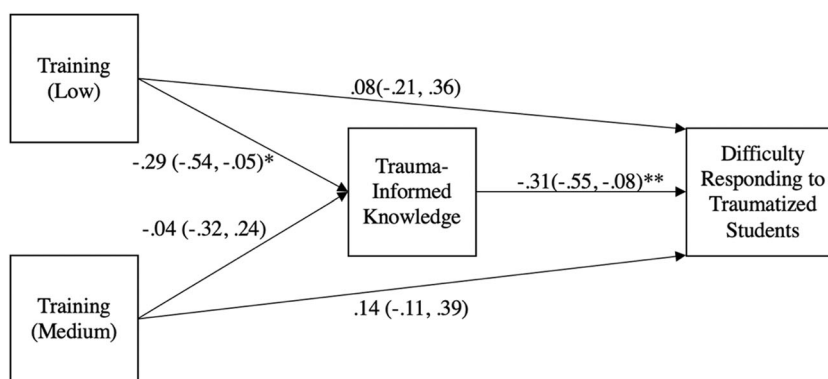
First, the factors that predict teachers’ trauma knowledge and difficulty with responding to trauma traumatized students were examined. Research has begun to emphasize the need to provide teachers with adequate training that allows them to effectively identify and respond to student trauma (Crosby

**Table 6** Multiple regression model results (*n* = 80)

Variable	TI Knowledge			Difficulty Responding		
	<i>B</i>	SE.	95% CI	<i>B</i>	SE.	95% CI
Training Level (High)						
Low	−.29*	.13	−.54, −.05	.17	.15	−.12, .46
Medium	−.04	.14	−.32, .24	.16	.14	−.11, .42
Exposed to Trauma	−.03	.14	−.30, .25	−.06	.15	−.35, .22
Race/Ethnicity (White)						
Asian	.37**	.12	.15, .60	.05	.11	−.18, .27
Black or African American	.08	.10	−.12, .28	−.07	.08	−.23, .08
Hispanic or Latinx	.18	.14	−.08, .45	.11	.14	−.16, .38
Multiracial	.21+	.11	−.01, .43	−.19	.12	−.42, .04
Gender (Male)	−.15	.13	−.40, .10	.10	.13	−.17, .36
Years of Experience (1–5)						
6–10	.29	.18	−.06, .64	−.01	.15	−.30, .29
10+	.30+	.18	−.05, .65	−.04	.14	−.32, .24
Grades Taught (Elementary)						
Middle School	.09	.18	−.27, .44	−.48**	.15	−.78, −.17
High School	.27	.20	−.12, .67	−.31+	.18	−.65, .04
Multiple Grade Levels	.18	.13	−.07, .43	−.11	.19	−.48, .25

+*p* < .1, \**p* < .05, \*\**p* < .01

**Fig. 1** Path Analysis Results.  
Note. \* $p < .05$ , \*\* $p < .01$



2015; Hobbs et al. 2019). In the current study, it was predicted that training would increase teachers' trauma knowledge and decrease their perceived difficulty working with traumatized students. The majority of teachers in the sample indicated that they had received training on 4–6 of the trauma-related topics in the survey. Findings confirm that the level of training received was associated with teachers' trauma knowledge; In this study, teachers with low levels of trauma-informed training (0–3 topics) had significantly lower trauma knowledge compared to those with high levels of training (6–14 topics). These findings suggest that low levels of training may be a risk factor for teachers, and support the call for more training on trauma for teachers. These findings imply that training on a variety of topics around trauma and violence may be explicitly related to greater trauma knowledge as teachers who have a higher level of training have a better knowledge of students' needs. Furthermore, findings indicate that compared to their White counterparts, Asian teachers indicated a higher level of knowledge on how to effectively work with traumatized students. It is unknown why this might be the case in this study, but this may reflect the unique experiences of the population of LA. Perhaps, not surprisingly, teachers' that had 10+ years of experience rated higher trauma knowledge compared to teachers that had between one and five years of experience.

In the path models, teachers' level of difficulty responding to traumatized students was significantly predicted by teachers' level of trauma knowledge. Surprisingly, training did not directly predict teachers' level of difficulty responding to students. While training may translate into trauma knowledge, it may not increase teachers' ability to respond to real-world scenarios accurately. However, in this study trauma knowledge did significantly predict lower levels of difficulty responding, and the indirect effect trended in the hypothesized direction, thus future research should examine this mediation effect in a larger sample. It may be that while training does not directly influence difficulty responding, it does have an influence through increased trauma knowledge, and perhaps associated increases in self-efficacy. This could potentially indicate that current trauma training for teachers focuses on

identifying trauma but not on supporting students after they have been traumatized. Future research should measure the specific training topics and content that teachers received. Furthermore, longitudinal research should examine whether changes in trauma awareness due to trauma training predict changes in teachers' difficulty responding to trauma behaviors over time to flesh out possible mediation effects.

When looking at the descriptive statistics for the TTS scale items it was found that teachers rated themselves highest on the item measuring knowledge on the impact of behavior of students in the classroom but lowest on the item measuring how to handle difficult behavior related to traumatic reactions in students. This could indicate a need to provide teachers with expansive training that goes beyond how to accurately identify trauma symptoms into more skill-focused content. Furthermore, it suggests that a teacher's ability to identify trauma symptoms might not lead to a rapid response to students if they are unaware of how to appropriately respond, as prior research has indicated (Fowler et al. 2009).

Finally, on the Teacher Difficulties Scale teachers ranked it most difficult to avoid taking problems home and knowing how to discuss the trauma with the student and the class. In contrast, teachers reported less difficulty balancing looking after the traumatized student and putting them in a special situation. These findings indicate that teachers had some knowledge of how to respond to the student in the classroom. However, this was surprising as it did not align with how the teachers responded to the Teaching Traumatized Students scale, where teachers indicated that they were unsure of how to respond to trauma related behavior in the classroom. The differences in ranking of difficulties could be attributed to the fact that the Teacher Difficulties Scale utilized a specific scenario, as compared to more general questions found in the TTS scale. Compared to the Teacher Difficulties Scale, the Teaching Traumatized Students scale may tap more into ideals/attitudes versus actual behaviors. This could indicate a need for future trainings to include information on how to respond to students in real-life scenarios rather than focusing only on increasing knowledge.



## Implications

The effects of community violence exposure are far-reaching as violence infiltrates children's learning, behavior, and health. The consequences of exposure and its high incidence among youth require research that can identify comprehensive protective factors that work against outcomes associated with community violence exposure (Chen et al. 2016). Findings from this study aid in this process by determining teachers' self-identified strengths and difficulties in working with trauma-exposed youth.

The results of this study can inform future trainings, school policy, and research. Results indicate that while trainings can impact teacher's level of knowledge of how to respond to traumatized students in the classroom, it does not influence the level of difficulty teachers identify. Activities such as role-playing challenging scenarios may be more effective than more content-focused professional development trainings at reducing difficulties that teachers identify, thus should be examined as potential strategies that could be integrated within trainings and workforce development plans. School policies should seek to increase funding for school social workers and other in class supports for teachers working with traumatized students. Next, teachers should receive trainings that address their self-identified difficulty with responding to student behavior on an individual and classroom level and their struggle with taking student problems home with them.

## Limitations and Future Directions

While the sample of the study present limitations the research is still valuable. In prior school-based work, teachers have identified a need to go beyond interventions solely focused on students to also include teachers in trainings and interventions related to socio-emotional health and trauma (Mancini 2019; Voith et al. 2019). The current study did just that by examining the impact of trauma-informed training for teachers on teacher's trauma knowledge and perceptions of difficulty working with traumatized students. By asking teachers to rate their level of difficulty and knowledge when working with students exposed to violence and/or trauma, the research can guide teachers as they navigate working with this population. Even though the results cannot be generalized to the entire population, it is the first research study of its kind to take place within the United States and can provide pertinent information that will inform future research.

There are several limitations of the current study. First, the study has a small sample size. Before the start of the study, a power analysis was conducted using G\*Power (Erdfelder et al. 1996), to conduct multiple regression analysis and have a power of .80 a sample size of 100 needs to be collected. However, the final sample size ended up being 80. The small sample size could be attributed to the fact that data collection commenced at the same time as the teacher strike in Los Angeles Unified School

District. Although a small sample, the results indicate that there is value in examining these concepts within a larger and more nationally representative sample of teachers.

Next, as the survey was optional, it may be that participants who chose to participate in the survey are most likely individuals that perceive the topic of violence and/or trauma to be significant. As such, the voices of those that do not believe that these topics are important may be missing. This is further enforced through the survey question that asks respondents to rank the importance of each topic as more than 80% of respondents reported them as significant. Future research should seek to increase their sample to include individuals that think the trauma is important as well as those that do not.

Additionally, the training measure was not comprehensive. The training measure only asked participants to indicate whether or not they have received training on the specific topics. This led to a lack of clarity on the extent, content and quality of the trainings. This limits the results as it remains unclear what specific types of trainings could potentially impact teacher's difficulty and awareness of trauma in the classroom. Recent work suggests that self-focused training, such as training on how teachers' own experiences of trauma impact them in the classroom, may have a differential effect on outcomes such as trauma-informed attitudes and stress (Loomis and Felt 2020). Future work should consider the extent to which training content relates to trauma knowledge and difficulty.

Finally, as this study was unable to find many predictors that accounted for significant variance in scores on the Teaching Traumatized Students scale and the Teacher Difficulty scale, future research should seek to identify other factors that may influence these outcomes. Future research should consider analyzing school factors that influence teachers' trauma knowledge and difficulty working with traumatized students as well as the level of supports and resources available to the teachers. Research should also seek to determine the impact of the strength of the student/teacher relationships on how a teacher rates their level of difficulty and knowledge when working with students exposed to trauma in the classroom.

**Code Availability** Not available due to IRB restrictions.

**Data Availability** Data not available due to IRB restrictions.

## Compliance with Ethical Standards

**Conflicts of Interest/Competing Interests** The authors claim no conflicts of interest.

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