Impacts of Peer Relationship and Exposure to Violence on Post-Traumatic Stress for Children In-Risk for Maltreatment

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Introduction

Posttraumatic stress (PTS) symptomology includes ruminating thoughts and feelings around trauma, inability to feel and express emotions, and avoidance of things related to the traumatic event (American Psychiatric Association, 2000). Children and youth exposed to child maltreatment (abuse and neglect) are at higher risk of experiencing PTS. Physical and sexual abuses are studied extensively to understand their role in the development of PTS (Widom, 1999). Victims of sexual and physical abuse show more symptoms of PTS relative to victims of neglect. This is understandable given the physically intrusive nature of sexual and physical abuse (Kearney, et al., 2010). Extra-familial support, including peer support, can reduce post-traumatic stress among youth (Pina et al., 2008). In the present study, both witnessing and experiencing interpersonal violence at home and quality of peer relationships are evaluated as to their relative impact on Posttraumatic stress (PTS) for children and youth in-risk for child maltreatment. Quality of peer relationships is also tested as a moderator of the effects of violence exposures on PTS.

Specific Hypotheses

1. It is hypothesized that due to biological and social resilience factors not evaluated in this study and due to contact with CPS and the associated interventions, post-traumatic stress for the maltreated youth will reduce over time.

2. Moreover there will be a positive relationship between exposure to interpersonal violence (witnessing, victimization and the combination of the two) and post-traumatic stress at baseline and over time.

3. Peer relationship quality at school will have a negative effect on PTS both at baseline and over time. In other words higher scores on peer relationship quality at baseline will predict lower PTS at baseline and more decline in PTS over time. Moreover improving peer relationship quality over time will predict greater decreases in PTS scores over time.

4. It is further hypothesized that positive peer relationship quality at baseline will act as a buffer by dampening the effect of exposure to in-home violence at baseline on post-traumatic stress at baseline and over time.

Data

→Data comes from the National Survey of Child and Adolescent Well-Being II (NSCAW II). NSCAW II was the second nationally representative, cohort sample of children involved with Child Protective Services (CPS) in the United States. Three waves of assessment were obtained starting in 2008 at 18 month intervals. A subsample of 2,151 children who were between the ages of 8 and 17 at any of the 3 waves was used.

Measures

→Average Scores from the VEX-R (Violence Exposure Scale for Children; Fox and Levitt 1995) scale was used to assess Witnessing Exposure to Interpersonal Violence, Victimization due to Exposure to Interpersonal Violence and Both forms of violence exposure at each time point. The item responses included "never" (coded 1), "one time" (coded 2), "A few times" (coded 3) and "Lots of time" (coded 4)

→Average Peer Relationship Quality for each time point was created using all the items from Loneliness and Social Dissatisfaction Questionnaire for Young Children (Asher & Wheeler, 1985). The responses to these items are coded on a 1-5 scale, with "never" being coded as 1, "hardly ever" coded as 2, "sometimes" coded 3, "most of the time" coded 4 and "always" coded as 5.

→Raw total scores from the Trauma Symptom Checklist for Children (Briere, 1996) was used to assess post-traumatic stress at each time point. The Post-traumatic Stress items were scored on a scale of 1-4 with 1 being "never" and 4 being "almost all the time".

Analytic Strategy

A three-process linear latent growth model was fit to the data where PTS, violence exposure type and peer relationship quality trajectories were estimated simultaneously (Model 1). Model 1 did not include any directional estimates, in other words in this model the slopes and intercepts of the three parallel processes were allowed to correlate with each other. This Model was used to assess mean levels at baseline and average change as well as degree of inter-individual difference in levels and change using latent growth variables. In the next model (Model 2) for each type of exposure to violence, directional associations were tested where baseline exposure to violence at home and baseline peer relationship quality predicted PTS at baseline and change over time (slope), and the exposure to violence at home slope and peer relationship quality slope predicted the PTS slope. Finally covariates (Model 3) were added to Model 2. The covariates included baseline age, most severe form of maltreatment reported at baseline, child age and child gender. In Model 4, an interaction between the latent intercept for peer relationship quality and the latent intercept for violence exposure was created and first tested on the PTS intercept and then on the PTS slope. The Model fit assessment indices for Models 1, 2 and 3 include the chi-square test, RMSEA, and the TLI and CFI fit indices (See Table 1).
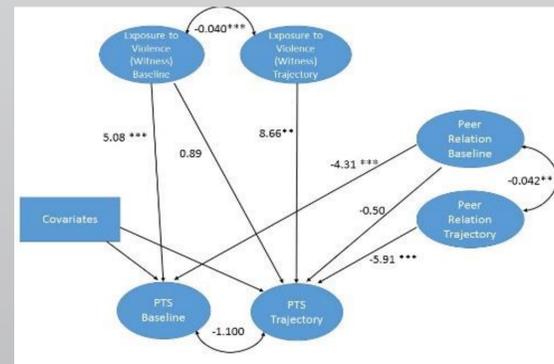
Results

Figure 1. Exposure to Violence: Witnessing and Peer Relationship predicting PTS (Model 3)
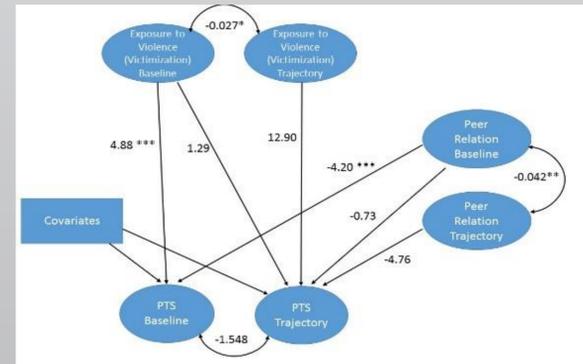

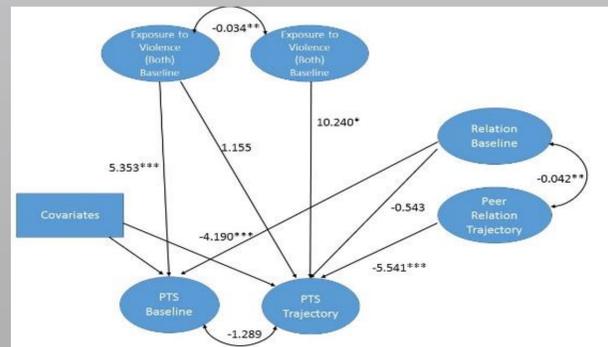*Figure 2.* Exposure to Violence: Victimization and Peer Relationship predicting PTS (Model 3)

Figure 3. Exposure to Violence: Both and Peer Relationship predicting PTS (Model 3).

Table 1

Model Fit

Witnessing Violence at Home	CFI	TLI	χ2	df	RMSEA	90% CI RMSEA [LL, UL]
Model 1	0.99	0.97	28.44	18	0.02	[0.00,0.03]
Model 2	0.99	0.98	28.34	20	0.01	[0.00,0.03]
Model 3	0.98	0.95	61.522 *	41	0.02	[0.01,0.02]
Victimization due to Violence at Home	CFI	TLI	χ2	df	RMSEA	90% CI RMSEA [LL, UL]
Model 1	0.98	0.96	33.36 *	18	0.02	[0.01,0.03]
Model 2	0.98	0.97	32.77 **	20	0.02	[0.01,0.03]
Model 3	0.98	0.95	62.66 **	41	0.02	[0.01,0.02]
Violence at Home both Witnessing Violence and Victimization	CFI	TLI	χ2	df	RMSEA	90% CI RMSEA [LL, UL]
Model 1	0.98	0.96	31.703 *	18	0.02	[0.01,0.03]
Model 2	0.98	0.97	31.53 *	20	0.02	[0.00,0.03]
Model 3	0.98	0.95	63.71 ***	41	0.02	[0.01,0.02]

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

Results

→In Model 1, average PTS at baseline was approximately 9.18 points and PTS decreased 0.58 points per year on average. There was also significant inter-individual variation in baseline PTS and PTS trajectory. Therefore hypothesis 1 is supported.

→ Hypothesis 2 and 3 were both partially supported (See Figures 2, 3, and 4).To test hypothesis 4, the interaction between baseline peer relationship quality and baseline inter-personal violence predicting the PTS intercept (witnessing Model 4: *b* = -0.040, *SE* (*b*) = 1.46, *p* > .05; victimization Model 4: *b* = -0.41, *SE* (*b*) = 1.85, *p* > .05; both forms Model 4: *b* = -0.30, *SE* (*b*) = 1.70, *p* > .05) was included to Model 3. Since this interaction effect was not significant across all three Models, it was removed from the Models. The interaction effect was then tested as a predictor of the PTS slope (witnessing Model 4: *b* = 0.031, *SE* (*b*) = 0.155, *p* > .05; victimization Model 4: *b* = -0.335, *SE* (*b*) = 1.083, *p* > .05; both forms Model 4: *b* = -0.193, *SE* (*b*) = 1.149, *p* > .05) in Model 3. This interaction was also removed from Model 3 for all three types of exposure to violence at home because it was not significant across Models. Therefore, hypothesis 4 is not supported.

Discussion

These findings suggest several possible avenues for intervention for clinicians and help understand the dynamic associations between exposure to violence at home, peer relationship quality and PTS in our sample of children at risk for maltreatment.