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Research article

Trajectories of post-traumatic stress and externalizing psychopathology among maltreated foster care youth: A parallel process latent growth curve model

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ABSTRACT

Few longitudinal studies have analyzed how violence exposure (e.g. child maltreatment, witnessing community violence) influence both externalizing and Post-Traumatic Stress (PTS) symptoms among children in foster care. Data from three waves of the National Survey of Child and Adolescent Well-Being (1999–2007) (NSCAW; National Data Archive on Child Abuse and Neglect, 2002) were analyzed to investigate the change trajectories of both externalizing and PTS symptomatology among children with a substantiated report of child maltreatment by Child Protective Services (CPS) between October 1999 and December 2000. This study uses data collected at three time points: baseline and approximately 18 (Wave 3) and 36 (Wave 4) months post-baseline. The Child Behavior Checklist (CBCL) scale measured externalizing symptoms and the Post Traumatic Stress Disorder section of a version of the Trauma Symptom Checklist for Children (TSCC) provided the measure of current trauma-related symptoms or distress. Analyses were conducted using a parallel process growth curve model with a sample of $n = 280$ maltreated youth between the ages of 8 and 15 following home removal. Findings revealed that initial levels of externalizing and PTS symptomatology were both significantly and positively related and co-develop over time. Externalizing symptom severity remained in the borderline range during the first two years in out-of-home care. Both direct and indirect forms of interpersonal violence exposure were associated with initial level of externalizing symptom and PTS symptom severity, respectively. Taken together, our results suggest an underlying process that links early violence exposure to the co-development and cumulative impact of PTS on externalizing behavior above and beyond experiences of maltreatment. We conclude by discussing the key points of intervention that result from a more nuanced understanding of the longitudinal relationship between PTS and externalizing symptoms and the effect of complex trauma on growth in these symptoms over time.

1. Introduction

In 2015, almost three quarters of a million children and adolescents had contact with foster care (AFCARS, 2016). Foster youth experience high levels of violence exposure as witnesses, victims or both (Kolko et al., 2010), placing them at an increased risk for developing a range of internalizing and externalizing symptoms including post-traumatic stress, aggression and/or conduct disorder (Burns et al., 2004; Dorsey et al., 2012; Greeson et al., 2011; Harman, Childs, & Kelleher, 2000; Kisiel, Fehrenbach, Small, & Lyons,

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2009; Pecora, Jensen, Romanelli, Jackson, & Ortiz, 2009a; Pilowsky & Wu, 2006; Urquiza, Wirtz, Peterson, & Singer, 1994). While a cross-sectional relationship between violence exposure and externalizing and PTS symptoms in foster care youth has been independently established, a better understanding of the longitudinal interrelationship and co-development of PTS and externalizing symptoms represents an important step in further addressing their unique needs. Using a parallel growth curve model (PGCM), the present study investigated the level and change in PTS and externalizing symptoms among a nationally representative sample of foster care youth (i.e. children and adolescents) in the United States conditional on experiences with violence exposure, as both victims and witnesses.

1.1. Violence exposure among foster care youth

Both direct and indirect forms of violence exposure are DSM-qualifying traumatic experiences (Finkelhor, Turner, Ormrod, & Hamby, 2009). Child maltreatment is direct interpersonal victimization that typically serves as the precipitating event triggering home removal (Harpaz-Rotem, Berkowitz, Marans, Murphy, & Rosenheck, 2008; Greeson et al., 2011). The most commonly recognized domains of child maltreatment that prompt a CPS investigation include physical abuse, sexual abuse, emotional abuse, and neglect (United States Department of Health & Human Services, 2003). Previous research has shown that as many as 85% of foster care youth are emotionally abused and as many as 50% have suffered physical abuse, sexual abuse or neglect from their primary caregiver. In addition to experiences with child maltreatment, children in foster care often experience indirect victimization such as witnessing acts of community-based violence (Oswald, Fegert, & Goldbeck, 2010; Ko et al., 2008; Riebschleger, Day, & Damashek, 2015). Studies of children in foster care report that between 30 and 87% have been a witness to or victim of assaultive, criminal or weapon-related violence during their lifetime (Giaconia et al., 1995; Stein et al., 2001; Copeland, Keeler, Angold, & Costello, 2007) including learning about an unexpected death (51.9%) and witnessing someone being killed or seriously injured (35.9%) (Breslau, Wilcox, Storr, Lucia, & Anthony, 2004).

Previous research has shown that most youth who experience at least one type of maltreatment typically experience at least one additional type (Ney, Fung, & Wickett, 1994; Pears, Kim, & Fisher, 2008; Barboza, 2017). Extant literature refers to recurrent patterns of direct and indirect traumatic experiences early in life as either “complex trauma,” “polyvictimization,” or “adverse child experiences” (ACEs) (Felitti et al., 1998; van der Kolk, 2005; Ford, Chapman, Mack, & Pearson, 2006; Greeson et al., 2011). Despite different conceptualizations and operational definitions, research within these traditions converges around one fundamental notion: violence exposure among at risk populations is co-occurring, chronic and interferes with healthy development across a range of developmental domains (Cook et al., 2005; Finklehor et al., 2007). A recent study found that 80.3% of foster care youth had experienced at least one DSM-qualifying trauma in their lifetime and almost two-thirds (61.7%) had experienced two or more (Salazar et al., 2013).

1.2. PTS and externalizing symptom prevalence among foster care youth

High levels of trauma exposure, including the frequency and type of violent victimization events in the home, disproportionately impact youth involved with the child welfare system (Dovran, Winje, Arefjord, & Haugland, 2012; Keller, Salazar, & Courtney, 2010; Kolko et al., 2010; McMillen et al., 2005; Riebschleger et al., 2015). Studies of children and adolescents exposed to violence have reported that between 35 and 60% of maltreated foster care youth have heightened PTS (Leslie et al., 2003; Burns et al., 2004; Dovran et al., 2012) and that between 9 and 30% meet lifetime diagnostic criteria for PTSD. In contrast, lifetime prevalence of PTSD among youth in the general population is estimated to be between 0.5–9% (Kolko et al., 2010; Salazar et al., 2014). Studies using behavioral checklists have found that as many as fifty percent of youth aged 11 or older enter foster care with behavioral problems (Pecora, White, Jackson, & Wiggins, 2009b) and as many as 25–50% have significant longer-term behavioral issues including conduct (CD) and aggressive disorder (Burns et al., 2004; Garland et al., 2001; Leslie, Hurlburt, Landsverk, Barth, & Slymen, 2004; McIntyre & Keesler, 1986). The prevalence of externalizing symptoms among the general youth population, however, is significantly lower (3–6%) (Achenbach & Edelbrock 1981; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Pecora et al., 2009b). PTS and externalizing symptoms are highly co-morbid. Studies have shown that up to 40% of maltreated children meet the criteria for externalizing disorders in addition to PTSD such as conduct or disruptive behavior disorder (Ackerman, Newton, McPherson, Jones, & Dykman, 1998; Copeland et al., 2007). Studies of developmental continuity have shown that about 50% of adults with PTSD have histories of childhood conduct and oppositional defiance disorder and high levels of criminal justice involvement (Van der Kolk, 2005; Koenen, Moffitt, Poulton, Martin, & Caspi, 2007).

Disentangling the effect of violence exposure on heightened PTS and externalizing symptoms is complicated by three key findings. First, only a small subset of individuals with a DSM-qualifying traumatic experience develop PTSD (Copeland et al., 2007; Denton, Frogley, Jackson, John, & Querstret, 2017). Second, PTSD is not the most common diagnosis among trauma exposed foster youth (Rayburn, McWey, & Cui, 2016; van der Kolk, 2005). Instead, many studies have found disorders of adjustment, disruptive behavior, impulse-control, and substance use to be relatively more common among foster care youth (Blumberg et al., 1996; Halfon, Berkowitz, & Klee, 1992; Harman et al., 2000; McMillen et al., 2004; Pilowsky, 1995; Racusin et al., 2005). Finally, as others have noted, given high levels of symptom co-morbidity, existing diagnostic criteria may not capture impairments related to emotional regulation and interpersonal behaviors following complex trauma (Briere & Spinazzola, 2005; Cloitre et al., 2009; Van der Kolk, 2005; Van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005).

Developmental Trauma Disorder has been proposed to create conceptual coherence to the manifestations of PTSD symptoms as well as the causal mechanisms undergirding a single traumatic stress diagnosis (Cloitre et al., 2009). Developmental Trauma theorists