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Post-traumatic stress symptom development as a function of changing witnessing in-home violence and changing peer post-traumatic stress symptom development as a function of changing witnessing in-home violence and changing peer relationship quality: Evaluating protective effects of peer relationship quality

Aura A. Mishra[a,d,*], Sharon L. Christ[a,b], Laura M. Schwab-Reese[c,d], Nayantara Nair[a]

[a] Department of Human Development and Family Studies, Purdue University, West Lafayette, IN, USA
[b] Department of Statistics, Purdue University, West Lafayette, IN, USA
[c] Department of Health & Kinesiology, Purdue University, West Lafayette, IN, USA
[d] Public Health Graduate Program, Purdue University, West Lafayette, IN, USA

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ABSTRACT

In the present study, witnessing in-home violence and peer relationship quality are evaluated as to their relative impact on Post Traumatic Stress (PTS) symptoms among children aged 8 to 17 investigated by child protective services (CPS) for maltreatment exposure. The sample included 2151 children from the National Survey of Child and Adolescent Well-Being II (NSCAW II). Linear growth models were estimated to assess associations between changes in PTS symptoms, witnessing in-home violence, and peer relationship quality over time. Greater frequency of witnessing in-home violence at baseline (i.e. wave 1) was associated with higher baseline PTS symptoms ($\beta = 0.44$). Increases in witnessing in-home violence frequency over time (average annual change across three years) had a strong association with increases in PTS symptoms over time ($\beta = 0.88$). Baseline peer relationship quality was associated with fewer PTS symptoms at baseline ($\beta = -0.45$). Increases in peer relationship quality over time were strongly associated with declines in PTS symptoms over time ($\beta = -0.68$). Peer relationship quality at baseline did not moderate baseline or over time associations between witnessing in-home violence and PTS symptoms. The average decline in PTS symptoms due to decreases in witnessing in-home violence and increases in peer relationship quality was 0.51 and 0.65 standard deviations respectively, over the three-year study period. Reducing chronic witnessing in-home violence and promoting the development of healthy social relationships with peers are critical for PTS symptom recovery.

1. Introduction

An estimated 26% of children are exposed to family violence each year and 30 million children in the United States will witness some form of in-home violence before they reach the age of 17 (Child Welfare Information Gateway, 2014). Children and adolescents may be exposed to violence in various contexts, but witnessing in-home violence is the most common (Howell, Barnes, Miller, &

* Corresponding author at: Purdue University, Hanley Hall, #157, 1202 West State St., West Lafayette, IN, 47907-2055, USA.
E-mail address: Auraankita@gmail.com (A.A. Mishra).

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Graham-Bermann, 2016; Van der Kolk, 2017). Some research suggests that witnessing in-home violence may have even more severe consequences than direct violence victimization (Evans, Davies, & DiLillo, 2008). Witnessing in-home violence can impair multiple domains of functioning among children and adolescents, and this impairment can have long-term influences on mental health (Roberts, Gilman, Fitzmaurice, Decker, & Koenen, 2010; Van der Kolk, 2017).

1.1. Witnessing in-home violence and PTS

Post-traumatic stress (PTS) symptoms are a common consequence of witnessing in-home violence (Barboza & Dominguez, 2017; Milan, Zona, Acker, & Turcios-Cotto, 2013). Some studies report that nearly 40% of children who witness in-home violence also experience PTS symptoms (Howell et al., 2016). PTS symptoms include ruminations and feelings around trauma experiences, an inability to feel and express emotions, and avoidance of things related to traumatic events (American Psychiatric Association, 2013; Kearney, Wechsler, Kaur, & Lemos-Miller, 2010). PTS occurs because of direct or threatened injury to self or others (American Psychiatric Association, 2013; Kearney et al., 2010). For a child to develop PTS symptoms they need not experience direct injuries themselves; in fact, watching the victimization of a family member may also trigger symptoms associated with PTS (Kearney et al., 2010), including flashbacks, resignation, avoidance of traumatic experiences, and fear among children (Van der Kolk, 2017).

Witnessing in-home violence as a child may produce enduring PTS symptoms. Children displayed high levels of PTS symptoms two years after their last witnessing of in-home violence (Chemtob & Carlson, 2004), and adults with a childhood history of witnessing in-home violence also display high levels of PTS symptoms (Davies, DiLillo, & Martinez, 2004; Feerick & Haugaard, 1999; Rivera et al., 2015). Moreover, witnessing in-home violence may have a unique contribution to PTS symptoms, even in the presence of direct violence victimization. Adolescents who witnessed in-home violence were two times more likely to suffer from PTS even after controlling for experiences of other victimization (Ghasemi, 2009; Zinzow et al., 2009). Since witnessing in-home violence is defined as an "ongoing, complex, and chronic trauma" experience that can produce several symptoms associated with PTS (Van der Kolk, 2017), studying the ongoing effects of this trauma (i.e. ongoing witnessing of in-home violence) may be critical for understanding the progression of PTS symptoms and may require a study design that is different than those traditionally used to assess single-event traumatic experience (Howell et al., 2016; Van der Kolk, 2017). To our knowledge, no study includes an estimation of the association of changes in witnessing in-home violence with changes in PTS symptoms among children.

Some studies include measures of enduring or long-term effects of witnessing in-home violence during childhood (e.g. Cater, Miller, Howell, & Graham-Bermann, 2015; Evans, Steel, Watkins, & DiLillo, 2014; González et al., 2016), but these studies typically observed PTS symptoms at a later, single time-point rather than evaluating changes in PTS over time concurrently with changes in witnessing in-home violence. Although one recent study did include trajectories of PTS symptoms over time for children with exposure to maltreatment and witnessing in-home violence (Barboza & Dominguez, 2017), changes in witnessing in-home violence were not assessed in the study. As a result, little is known about the longitudinal association between changes in witnessing of in-home violence and changes in PTS symptoms during childhood. Such dynamic associations are not only a normative part of human experience, (i.e. human beings are continuously interacting with their environments and the environment is continually influencing the individual; Bandura, 1986; Bronfenbrenner, 2009), but are also critical for understanding the progression of mental health problems resulting from continued witnessing in-home violence (Howell et al., 2016). Therefore, it is important to understand the developmental progression of PTS symptoms among children whose experiences with witnessing in-home violence also change over time; and this understanding will help tailor appropriate intervention strategies (Howell et al., 2016).

1.2. Peer relationship quality and PTS

PTS symptoms during childhood may be part of the causal mechanism between trauma exposure at home during childhood and subsequent mental health problems (Barboza & Dominguez, 2017; Yoon, Steigerwald, Holmes, & Perzynski, 2016; Zahradnik, Stewart, Sherry, Stevens, & Wekerle, 2011). According to the developmental traumatology model (De Bellis, 2001), witnessing in-home violence increases PTS symptoms during childhood and PTS symptoms during childhood is implicated for other mental health problems in adulthood (De Bellis, 2001); it is therefore also important to identify protective factors for PTS symptoms during childhood. Identifying protective factors for PTS symptoms among children who witness in-home violence will not only help reduce PTS symptoms during childhood but could also lead to increased levels of adjustment and long-term well-being.

In spite of a high severity of witnessing in-home violence, some children have shown adaptive outcomes and improvement of PTS symptoms likely due to the presence of potential socio-ecological protective factors (Belsky, 1993; Howell et al., 2016). Existing research demonstrates that higher levels of social support may be associated with better mental health of children and adolescents experiencing adversity (Dalgard, Bjørk, & Tambs, 1995; Sirin, Ryce, Gupta, & Rogers-Sirin, 2013). One source of social support for children is their peers, particularly among school-aged children (Bronfenbrenner & Morris, 1998; Eccles, 1999). Supportive peers and high-quality peer relationships have strong influences on the behavioral and cognitive development of children and adolescents (Bronfenbrenner, 2009; Bandura, 1986; Bronfenbrenner, 1979; Crick & Dodge, 1994).

Researchers demonstrate that, from middle childhood onwards, children spend more time with their peers (approximately 30–40% of their time) relative to their family (Larson & Richards, 1991; von Salisch & Zeman, 2018). Supportive peer relationships are associated with better psychosocial adjustment and fewer negative outcomes, such as school problems, depression, and anxiety (Bukowski, Hoza, & Boivin, 1993; Goodearl, Salzinger, & Rosario, 2014; Nickerson & Nagle, 2005; Reis & Shaver, 1988). However, the role of peer relationships in reducing trauma symptoms remains understudied, especially among children at higher risk for witnessing in-home violence. Much of the existing studies on the benefits of peer relationship quality for at-risk youth evaluate such