Child Abuse & Neglect 38 (2014) 1569–1580

Contents lists available at ScienceDirect

Child Abuse & Neglect

Posttraumatic stress mediates the relationship between childhood victimization and current mental health burden in newly incarcerated adults☆

Carolyn A. Greene[a,*], Julian D. Ford[a], Dorothy B. Wakefield[b], Lisa C. Barry[a]

[a] Department of Psychiatry, University of Connecticut Health Center, Farmington, CT, USA
[b] Center for Public Health & Health Policy, University of Connecticut Health Center, Farmington, CT, USA

ARTICLE INFO

Article history:
Received 26 March 2014
Received in revised form 2 July 2014
Accepted 8 July 2014
Available online 26 July 2014

Keywords:
Childhood trauma
Posttraumatic stress
Mental health
Incarcerated adults

ABSTRACT

The purpose of this study was to evaluate the interrelationship among childhood abuse and traumatic loss, posttraumatic stress symptoms (PTSS), and Axis I psychiatric disorders other than PTSD among newly incarcerated adults, and to test a proposed model in which the severity of PTSS mediates the relationship between childhood abuse/loss and adult psychiatric disorders. Four hundred sixty-five male and female inmates participated in a structured clinical research interview. Four types of interpersonal potentially traumatic experiences (physical abuse, sexual abuse, emotional abuse, and traumatic loss) were assessed for occurrence prior to the age of 18 years old. Current psychiatric disorders and PTSS were also assessed by structured interview. Negative binomial regression was used to evaluate the association between the cumulative number of types of childhood abuse/loss experienced and number of current Axis I disorders, and to test the mediation model. Approximately half of the sample (51%) experienced 1 or more types of childhood abuse/loss, and 30% of the sample had at least one psychiatric disorder other than PTSD. For both men and women, childhood physical abuse and childhood sexual abuse were independently associated with psychiatric morbidity, and an increasing number of types of childhood trauma experienced was associated with an increase in the number of current Axis I diagnoses. However, these associations were no longer statistically significant when severity of PTSS was added to the model, providing support for the proposed mediation model. Implications for secondary prevention services for at-risk inmates are discussed.

Childhood exposure to abuse, violence, and neglect in the United States is prevalent, with results from a national survey indicating that in the past year nearly 1 in 10 children and adolescents (age ≤18) had experienced maltreatment and an equal number had witnessed violence within their families (Finkelhor, Turner, Ormrod, Hamby, & Kracke, 2009). Findings from other community samples indicate that lifetime prevalence of children's exposure to interpersonal victimization ranges from 7.2% to 16.1% for physical abuse or assault, from 10.7% to 22.0% for sexual victimization, from 10.3% to 11.9% for emotional abuse, from 3.6% to 15.4% for neglect, and from 7.5% to 25.6% for witnessing domestic violence (Copeland, Keeler, Angold, & Costello, 2007; Felitti et al., 1998; Finkelhor, Turner, Ormrod, & Hamby, 2009; Gilbert et al., 2009; Hamby, Finkelhor, Turner, & Ormrod, 2011; Margolin & Vickerman, 2007; McLaughlin et al., 2013), with children frequently having been exposed

☆ This study was funded in part by the National Institute of Justice (Julian D. Ford, PhD and Robert L. Trestman, MD, PhD, Principal Investigators) (2000-IJ-CX-0044).
* Corresponding author address: Department of Psychiatry, University of Connecticut Health Center, 65 Kane Street, West Hartford, CT 06119-7120, USA.

http://dx.doi.org/10.1016/j.chiabu.2014.07.006
0145-2134/

to more than one type of victimization (Chapman, Dube, & Anda, 2007; Ford, Grasso, Hawke, & Chapman, 2013; Walsh, Gonsalves, Scalora, King, & Hardyman, 2012).

Childhood victimization is independently associated with increased risk of mental health problems during adolescence and adulthood, including post-traumatic stress disorder (PTSD), depression, anxiety, suicidality, and substance abuse (Afifi et al., 2008; Felitti et al., 1998; Young & Widom, 2014), with particularly high risk among those who experienced interpersonal violence or violation of self (Alisic et al., 2014; Briggs-Gowan et al., 2010; Ford, Stockton, Kaltman, & Green, 2006; McLaughlin et al., 2013). There appears to be a cumulative effect of exposure to victimization among children, with risk of mental health problems and comorbid behavioral problems increasing as the number of types of victimization experienced increases (Anda et al., 2006; Cloitre et al., 2009; Edwards, Holden, Felitti, & Anda, 2003; Ford, Elhai, Connor, & Frueh, 2010; Turner, Finkelhor, & Ormrod, 2006). In fact, the number of categories of trauma experienced, and poly-victimization specifically, has been found to be a stronger predictor of impairment than any one type of trauma (Finkelhor, Hamby, Ormrod, & Turner, 2005).

Further, there is also a well-documented association between childhood victimization and increased risk of delinquency in adolescence (Ford et al., 2010; Wilson, Stover, & Berkowitz, 2009) and criminality in adulthood (Wolff & Shi, 2012; Wolff, Shi, & Siegel, 2009). It is not surprising, therefore, that among incarcerated men and women the lifetime prevalence estimates of childhood victimization exceed 60% in some studies (Browne, Miller, & Maguin, 1999; Messina & Grella, 2006; Wolff & Shi, 2010; Zlotnick, 1997), and rates of PTSD and other mental health problems are 1.5–4 times higher than those of the general population (Fazel & Seewald, 2012; James & Glaze, 2006; Kessler, Berglund, et al., 2005; Kessler, Chiu, Demler, & Walters, 2005; Teplin, Abram, & McClelland, 1996; Trestman, Ford, Zhang, & Wiesbrock, 2007; Veysey & Bichler-Robertson, 2002).

Several studies of incarcerated persons report that PTSD often presents concurrently with other mental health conditions (Gibson et al., 1999; Sacks et al., 2008; Wolff et al., 2011). Sacks et al. (2008), for example, found that among substance-abusing female offenders, more than half of the participants had two or more co-occurring Axis I diagnoses. Within this group more than 70% had PTSD, and, in fact, an increase in the number of Axis I diagnoses was associated with an increased likelihood of PTSD. Zlotnick (1997) found that incarcerated women with histories of childhood physical and sexual abuse were more likely than their non-victimized counterparts to be diagnosed with PTSD and to report symptoms of affect dysregulation, dissociation, and somatization. This same study found that incarcerated women with past or current PTSD, in comparison to those without PTSD, were more likely to have comorbid current major depression, borderline personality, and lifetime substance abuse. In addition, Gibson et al. (1999) found higher rates of mood disorders, anxiety disorders, and antisocial personality disorder among male inmates with a diagnosis of PTSD compared to incarcerated men without PTSD.

Evidence from community and veteran studies suggests that the comorbidity between PTSD and other mental health problems may not be due solely to a shared vulnerability; rather, for at least some individuals, the development of PTSD following trauma may incur an increased risk of other mental health disorders (Breslau, Davis, Peterson, & Schultz, 2000; Ginzburg, Ein-Dor, & Solomon, 2010; Wittmann, Moergeli, Martin-Soelch, Znoj, & Schnyder, 2008). In a 5-year longitudinal study that compared subsets of individuals who developed PTSD following trauma exposure with those who did not develop PTSD, Breslau et al. (2000) found increased risk for first-onset major depression following trauma exposure only for the subset of individuals who developed PTSD, suggesting that PTSD might lead to major depression. Similarly, in a study of adult survivors of the Oklahoma City bombing, North et al. (1999) found a significantly higher rate of non-PTSD diagnoses among survivors who developed PTSD as compared to those who did not develop PTSD (63% vs. 9%). Similar results have been found for the development of substance use disorders (Chilcoat & Breslau, 1998).

Children who experience abuse also are at risk for losses of caregivers and other important relationships early in life (Casanueva et al., 2014) and throughout childhood and adolescence (Ford, Grasso, et al., 2013; McLaughlin et al., 2013). Traumatic loss in childhood is associated with psychosocial impairments in adulthood that are distinct from but parallel those of abuse (Cournos, 2002). Although childhood physical or sexual abuse has been found to be associated with severe adult psychopathology such as suicidality (Ystgaard, Hestetun, Loeb, & Mehlum, 2004), abuse and traumatic loss in childhood may have additive (Bruskas & Tessin, 2013; Tyrka, Price, Marsit, Walters, & Carpenter, 2012) or interactive (Hagan, Luecken, Sandler, & Tein, 2010) long-term psychobiological effects. Traumatic loss also has been specifically linked to risk of PTSD in adults (Ford & Fournier, 2007; Momartin, Silove, Manicavasagar, & Steel, 2003).

Together, these studies document the increased vulnerability of individuals with PTSD, thereby suggesting the possibility that PTSD is an indirect pathway between childhood victimization or loss and other psychiatric disorders, and that the effect of PTSD in this relationship may be particularly salient among incarcerated persons. Kerig, Ward, Vanderzee, and Moeddel (2009) found evidence for the relationship between PTSD, other disorders, and antecedent trauma in a juvenile justice population. However, PTSD has not been evaluated as a mediator of the relationship between childhood interpersonal trauma and subsequent mental illness in incarcerated adults. In fact, although many studies have examined the prevalence of past exposure to traumatic events, PTSD, and other mental health problems among incarcerated men and women, their interrelationship has not been evaluated.

The current study therefore seeks to test the following hypotheses with a representative sample of a vulnerable adult population, newly incarcerated men and women:

1. The number of current Axis I disorders other than PTSD (i.e., mental health burden) will increase as the number of types of childhood victimization (i.e., physical abuse; sexual abuse; emotional abuse) and traumatic loss experienced during childhood increases.