



Unique versus cumulative effects of physical and sexual assault on patterns of adolescent substance use



Ruby Charak^{a,*}, Hans M. Koot^b, Robert D. Dvorak^c, Ask Elklit^d, Jon D. Elhai^e

^a Department of Psychology, University of Nebraska-Lincoln, 238 Burnett Hall, Lincoln, NE, USA

^b Department of Developmental Psychology, VU University Amsterdam, The Netherlands

^c Department of Psychology, North Dakota State University, Fargo, ND, USA

^d National Centre for Psychotraumatology, Department of Psychology, University of Southern Denmark, Campusvej, Denmark

^e Department of Psychology, and Department of Psychiatry, University of Toledo, Toledo, OH, USA

ARTICLE INFO

Article history:

Received 5 March 2015

Received in revised form

29 October 2015

Accepted 9 November 2015

Available online 11 November 2015

Keywords:

Physical assault

Sexual assault

Multiple type of assault

Gender

LCA

Substance-use

Adolescents

ABSTRACT

The present study assessed the unique versus cumulative effects of physical and sexual assault, on patterns of substance-use in adolescents. It was hypothesized that experiencing a single assault (physical or sexual) when compared with exposure to both physical and sexual assault would be more strongly related to membership of polysubstance use classes. From the National Survey of Adolescents-1995 ($N=4023$) 918 adolescents (age range = 12–17 years, $M=14.92$, 49.6% female) with reports of physical assault and/or sexual assault were selected. Using information on alcohol-use, cigarette-smoking, chewing tobacco, non-prescribed use of medicines, and drug-use, latent class analysis indicated a three class solution for substance-use, namely, *Experimental use*, *Light polysubstance-use*, and *Polysubstance-use*. Multinomial logistic regression analyses indicated that as compared to adolescents exposed to a single type of assault those exposed to both physical and sexual assault were two-to-three times more likely to be in the heavier polysubstance-use class. Females were more likely to be members of the *polysubstance-use* class than of the *experimental use* class. Gender did not emerge as a significant moderator. It was concluded that assessing for single type or co-occurring assault can facilitate identification of adolescents at elevated risk for polysubstance-use.

© 2015 Elsevier Ireland Ltd. All rights reserved.

1. Introduction

It is well documented that child maltreatment, including assault is associated with a myriad of psychopathology related outcomes across the lifespan, including anxiety, depression, post-traumatic stress disorder (PTSD), personality pathology, eating disorders, and substance use disorders (Ackard and Neumark-Sztainer, 2002; Danielson et al., 2009; Shin et al., 2009; Charak and Koot, 2015). In the past, most studies addressing these associations assessed the impact of a single specific type of maltreatment or assault (e.g., sexual assault) on outcomes rather than assessing the co-occurrence of different types of maltreatment and their cumulative effects.

1.1. Physical assault and sexual assault

Reports published by the U.S. Department of Justice indicate that 32.8% of the adolescents in the age group of 12–17 years face

some kind of sexual assault, and this is the highest prevalence across all age groups (Snyder, 2000). Furthermore, the report indicated the presence of physical assault ranging from the use of hands, feet, or fist to the use of firearms and knives/clubs in 1% and 4% of the sexual assault victimizations, respectively. Another report based on the National Survey of Children's Exposure to Violence (NatSCEV-2008) conducted on 4549 children under the age of 17 years, found that children with lifetime physical assault were more than six times as likely to have been sexually victimized during their lifetime (Finkelhor et al., 2009). These reports suggest the presence of physical assault in some victims who also experience or have experienced sexual assault, thus highlighting that the experience of multiple types of maltreatment in adolescence is far from a rarity.

1.2. A cumulative risk model of assault

Originating from the classic Isle of Wight study (Rutter, 1979), the cumulative risk model demonstrates that the higher the number of risk factors a person is exposed to, the higher the potential for negative outcomes is (Appleyard et al., 2005). In line with this, studies consistently indicate higher rates of

* Corresponding author.

E-mail address: charakruby@gmail.com (R. Charak).

psychological problems in individuals who have been exposed to multiple types of assault when compared to those exposed to single type of assault (Ackard and Neumark-Sztainer, 2002; Danielson et al., 2009; Charak and Koot, 2015). For example, in a study on 81,247 school-going adolescents from Minnesota, indicated that in contrast to their peers with single or no assault experience, those who had experienced date violence and rape (i.e., physical and sexual assault) were more likely to report disordered eating behavior (e.g., binge eating, use of laxatives) and suicidal thoughts or suicidal attempts (Ackard and Neumark-Sztainer, 2002). Most studies addressing the cumulative effect of multiple types of maltreatment on psychopathology have either used a non-maltreated group for comparison which can inflate the associations between maltreated group and the outcome variable (Litrownik et al., 2005), or have not compared the cumulative effect of multiple types of maltreatment against the effect of a single or two types (Clemmons et al., 2007; Shin et al., 2010). To test the incremental or cumulative effect of experiencing multiple types of maltreatment when compared to exposure to a single type on substance use here we used a nationally representative sample of adolescents from the United States (NSA; Kilpatrick and Saunders, 1995) with at least one experience of physical and/or sexual assault.

1.3. Substance use in adolescents: role of multiple types of assault and gender

Substance use typically commences and increases during adolescence. Not surprisingly, studies indicate that the association between childhood assault and problems of substance use become visible in adolescence (Danielson et al., 2009; Thornberry et al., 2010). There are many theories that attempt to explain why individuals abuse/use substances. Two micro-level theories with focus on substance use as a self-soothing agent are discussed here. Influenced by stress-, equity/justice- and aggression theories, the *general strain theory* posits that exposure to violence and victimization leads to the development of antisocial behavior/delinquent behavior and substance use via feelings and emotions of frustration and anger (Agnew, 2001). This theory focuses on delinquent behavior including substance use in an adolescent as a result of *strain* caused by being in a difficult environment (e.g., abusive environment). Another theory of substance use – the *self-medication hypothesis* – derived primarily from clinical observations of patients with substance use disorders, states that many of the individuals with mental illnesses seek relief through the use of alcohol and other illicit substances (Khantzian, 2003). These two theories converge at the point of *presence of distress* and postulate that in order to overcome general distress or painful experiences, individuals resort to the use of illicit substances. However, the theories differ in their focal-point regarding the causation of general distress/strain. The general strain theory identifies environmental risk factors (e.g., community violence, abusive parenting) leading to substance use; the self-medication hypothesis assesses the role of psychiatric illness (e.g., PTSD, depression) leading to substance use. Based on the general strain theory, the present study focuses on assault experiences being a risk factor of substance use in adolescents.

Most studies investigating the cumulative effect of multiple types of victimization on substance use assess the use of one or two types of substances (e.g., alcohol and illicit drugs; Danielson et al., 2009). Recent studies on adolescent substance use indicate that the use of one illicit substance leads to an increase in likelihood of use of other illicit substances resulting in polysubstance use (Palmer et al., 2009; Shin et al., 2010). Moreover, some adolescent substance use may simply reflect experimental behavior, while other more pathological forms of use may indicate the early

stages of addictive processes, or serious polysubstance-use (Dierker et al., 2007). Thus, predictors of substance use in adolescence must account for varying patterns of use when addressing associations with maltreatment. Consistent with this approach, studies indicate that childhood trauma is more common in individuals with polysubstance-use rather than those with monosubstance-use (Martinotti et al., 2009; Hakkansson et al., 2011; Armour et al., 2014). Thus, it is pertinent to study patterns of use of a range of substances (e.g., alcohol, cigarette smoking, chewing tobacco, drug-use) in victimized adolescents with single or multiple-types of assaults.

In addition, several cross-sectional studies have reported higher mean levels of substance use in males (Wallace et al., 2003; Leatherdale and Burkhalter, 2012). Longitudinal studies suggest that girls report higher or similar levels of substance use compared to boys during early and middle adolescence, whereas boys have greater increases in substance use over time (Chen and Jacobson, 2012). On the other hand, rates of physical abuse and assault are reported to be higher in males than in females (Finkelhor et al., 2009; Charak and Koot, 2014), and rates of sexual assault are reportedly higher in females (Snyder, 2000; Sinozich and Langton, 2014). Studies investigating the role of gender on the relation between child maltreatment and substance use behavior indicate mixed results (see for a review: Kristman-Valente and Wells (2013)). Some prospective studies point towards a *gender differential* effect whereby males report more substance use overall, but early physical abuse increases the risk for substance use only for females (Lansford et al., 2010) and sexual abuse increases the risk for substance use in men (Schilling et al., 2007). Other studies find no differential effect of gender in the association between childhood maltreatment and substance use behavior (Kristman-Valente and Wells, 2013). Against these contrasting findings, we decided to assess the association between gender and substance-use classes, and if gender has a differential effect on the association between maltreatment type (single vs. multiple) and membership of a substance-use latent class.

With this background, the present analysis identified profiles of substance-use utilizing latent class analysis (e.g., Shin et al., 2010) in a large sample of adolescents with at least one experience of physical and/or sexual assault. Based on the cumulative risk theory and past literature (e.g., Ackard and Neumark-Sztainer, 2002), we first hypothesized that in contrast to adolescents with single type of assault those exposed to both physical and sexual assault would be classified more often in substance-use classes with use of different substances. Second, we expected that more males than females would belong to the substance-use classes with use of different substances (Wallace et al., 2003; Leatherdale and Burkhalter, 2012). Finally, the “gender paradox” effect (Loeber and Keenan, 1994) states that in disorders with an unequal gender ratio, members of the gender with the lower prevalence rate tend to be more seriously affected in terms of comorbidity and poor outcome. In analogy with this, we expected that gender non-congruent exposure to single types of assault (i.e., exposure to physical assault in females; exposure to sexual assault in males) would result in use of different substances in the exposed gender, but that effects of exposure to both types of assault would not be moderated by gender.

2. Method

2.1. Participants

From the National Survey of Adolescents dataset of 1995 (NSA; Kilpatrick and Saunders, 1995; $N=4023$) we selected adolescents with reports of physical assault and/or sexual assault who were

Download English Version:

<https://daneshyari.com/en/article/6813680>

Download Persian Version:

<https://daneshyari.com/article/6813680>

[Daneshyari.com](https://daneshyari.com)