Drug and Alcohol Dependence 133 (2013) 420–426

Contents lists available at ScienceDirect

Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep

Childhood physical abuse, non-suicidal self-harm and attempted suicide amongst regular injecting drug users

Shane Darke*, Michelle Torok

National Drug and Alcohol Research Centre, University of New South Wales, Australia

ARTICLE INFO

Article history:
Received 23 April 2013
Received in revised form 26 June 2013
Accepted 26 June 2013
Available online 29 July 2013

Keywords:
Childhood physical abuse
Self-harm
Attempted suicide
Substance use
Correlates

ABSTRACT

Background: Childhood physical abuse (CPA), non-suicidal self-harm and attempted suicide are all highly prevalent amongst injecting drug users (IDU). This paper reported on the association of CPA with self-harm and attempted suicide.
Methods: Cross-sectional study, with 300 IDU administered a structured interview examining the prevalence of CPA, non-suicidal self-harm and suicide attempts.
Results: CPA was reported by 74.3%, and severe CPA by 40.3%. A history of non-suicidal self-harm was reported by 23.7%, and 25.7% had attempted suicide. Non-suicidal self-harm preceded the suicide attempt in 83.3% of cases where both had occurred. Independent correlates of non-suicidal self-harm were: female gender (OR 3.62), avoided home due to conflict (OR 2.28) and more extensive polydrug use (OR 1.32). Independent correlates of attempted suicide were: severe CPA (OR 3.18), frequent CPA (OR 2.54), avoided home due to conflict (OR 3.95), female gender (OR 2.99), a positive screen for Conduct Disorder (OR 3.53), and more extensive polydrug use (OR 1.52).
Conclusions: Those presenting to treatment agencies are highly likely to have a history of CPA, that may still influence their behaviours. Screening for histories of CPA and non-suicidal self-harm appears warranted when determining suicide risk for this population. At the population level, reductions in the rate of CPA, could possibly reduce the rate of subsequent suicidality.

1. Introduction

Childhood physical abuse (CPA) is highly prevalent amongst injecting drug users (IDU), with half or more reporting such abuse (Bartholomew et al., 2002; Conroy et al., 2009; Darke et al., 2010; Klein et al., 2006; Maloney et al., 2010; Rossow and Lauritzen, 2001; Roy, 2004, 2009, 2010). By contrast, estimates of CPA prevalence amongst the general population typically lay within the 5–20% range (Brier and Elliott, 2003; Cohen et al., 2006; Price-Robertson et al., 2010). This picture of widespread abuse has been termed 'shattered childhood' (Rossow and Lauritzen, 2001), and such backgrounds have been argued to be a factor leading to dependent drug use in later life, with drug use serving the function of self-medication, or numbing, of painful affect (Darke, 2012; Khantzian and Albernese, 2008).

High rates of CPA are of clinical relevance, as such abuse has been associated with an increased risk for attempted and completed suicide (Bebbington et al., 2009; Darke et al., 2010; Joiner et al., 2007; Meltzer et al., 2002; Maloney et al., 2010; Rossow and Lauritzen, 2001; Roy, 2004, 2009, 2010). Rates of lifetime suicide attempts amongst IDU are consistently reported in the 20–40% range (Darke et al., 2007, 2010; Darke and Kaye, 2004; Rossow and Lauritzen, 2001; Roy, 2010), compared to fewer than 5% of the general population (Borges et al., 2000; Johnston et al., 2009).

A related set of pathological behaviours, non-suicidal self-harm, also appears prevalent amongst IDU (Darke et al., 2010; Evren and Evren, 2005; Harned et al., 2006; Maloney et al., 2010). Lifetime rates ranging from 20 to 35% (Darke et al., 2010; Evren and Evren, 2005; Harned et al., 2006; Maloney et al., 2010), compared to 2–5% of the general population (Klonsky and Moyer, 2008; Madge et al., 2008; Meltzer et al., 2002; Moran et al., 2012). The association of CPA with non-suicidal self-harm appears more ambiguous than with attempted suicide. Whilst CPA has been associated with later non-suicidal self-harm in population samples (Akyuz et al., 2005), both significant (Evren and Evren, 2005) and non-significant (Maloney et al., 2010) associations have been reported amongst drug users.

Whilst CPA, non-suicidal self-harm and attempted suicide are highly prevalent amongst IDU, the associations of CPA with these behaviours remain unclear. Studies of IDU have rarely examined the co-occurrence and correlates of these two behaviours within a sample (Darke et al., 2010; Maloney et al., 2010). What is of interest is whether CPA is associated with non-suicidal self-harm and

* Corresponding author at: National Drug and Alcohol Research Centre, University of New South Wales, NSW 2052, Australia.
E-mail address: s.darke@unsw.edu.au (S. Darke).

0376-8716/$ – see front matter © 2013 Elsevier Ireland Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.drugalcdep.2013.06.026

attempted suicide that occurred later in the person's life. There are theoretical reasons to suppose a relationship. Joiner and colleagues (Joiner, 2005; Joiner et al., 2007), for instance, argue that painful experiences, such as CPA, lead to an habituation to the pain and fear of self-harm. The "shattered childhood" referred to above might thus be seen to have effects on both substance use and self-injurious behaviours. A second question concerns whether non-suicidal self-harm and attempted suicide should be seen as distinct behaviours, or as part of a continuum (Butler and Malone, 2013; Okifuji and Benham, 2011). If the latter is the case, similar predictors would be expected.

In examining the association of CPA with these behaviours, a range of other long-standing risk factors that occur amongst IDU need to be taken into account, including psychopathology, personality traits, and drug use histories themselves. Thus, IDU have rates of Borderline Personality Disorder [BPD] and Conduct Disorder [CD], both of which are associated with non-suicidal self-harm and attempted suicide (Bargagli et al., 1999; Conroy et al., 2009; Darke, 2011; Darke et al., 2010; Gossop et al., 2002; Maloney et al., 2010; Roy, 2004, 2009, 2010). They also have high trait impulsivity, a risk factor for both substance use and attempted suicide (Braquehais et al., 2010; Dawe and Loxton, 2004; Maloney et al., 2009). IDU are also at risk of harm due to the vicissitudes of drug dependence, including imprisonment and the high likelihood of drug-related violence, and immediate (or proximal) risk due to intoxication or withdrawal (Darke, 2011; Darke et al., 2010). Importantly, they also typically exhibit extensive polydrug use (Bargagli et al., 1999; Darke et al., 2010; Gossop et al., 2002; Hubbard et al., 1997), which has been associated with non-suicidal self-harm and attempted suicide (Borges et al., 2000; Darke et al., 2007; Moran et al., 2012).

The current study aimed to examine whether CPA had significant associations with non-suicidal self-harm and attempted suicide amongst regular IDU, and whether they do so after taking other potential risk factors into account that occur at elevated rates amongst IDU. For the purposes of the study, a "regular drug user" was defined as having injected drugs at least weekly over the preceding 12 months. Specifically, the study aimed to: (1) Examine the prevalence, by gender, of CPA, non-suicidal self-harm and attempted suicide; and (2) identify factors independently associated with non-suicidal self-harm and attempted suicide.

2. Methods

2.1. Procedure

A sample of 300 IDU (201 males, 99 females) was recruited from needle and syringe programs located throughout the greater Sydney metropolitan area. All participants were screened for eligibility, either in person or by phone, prior to being given an interview appointment. To be eligible, participants were required to be aged ≥18 yrs. They also had to have injected drugs on a weekly or more frequent basis over the preceding 12 months ("regular"). This could include the injection of any substance, licit or illicit. Eligible participants were administered a structured face-to-face questionnaire which took, on average, 30 min to complete. Interviews were conducted in public locations convenient to the participant, such as parks and cafes. Data collection took place between August 2011 and August 2012. Participation was voluntary, and participants were assured of both confidentiality and anonymity. Upon completion of the interview, participants were reimbursed AU$30. Ethical approval was obtained from University of New South Wales and Sydney South West Area Health Service Human Research Ethics Committees.

2.2. Structured interview

The interview covered demographics, substance use and treatment histories, CPA, BPD, CD, attempted suicide, non-suicidal self-harm, and trait impulsivity. Questions were asked about lifetime and past six month use of alcohol, tobacco, opioids, methamphetamine, cocaine, ecstasy, benzodiazepines, hallucinogens, antidepressants, inhalants, and cannabis, using the drug history section employed in the Australian Treatment Outcome Study (Ross et al., 2005). Questions on CPA were taken from the Christchurch Trauma Assessment (Fergusson et al., 1989), used in previous research on IDU (Conroy et al., 2009). Specifically, participants were asked whether, prior to the age of 18, they had ever been physically abused in childhood (beaten, severely beaten, kicked, burnt with hot objects) by a parent or guardian. They were also asked whether any of the abuse they had experienced would be rated by them as having been "severe". Questions were also asked about the frequency of abuse across childhood, whether they had been injured as a result of such abuse, and whether they had been medically treated for injuries. They were also asked whether they had a close relationship with their parents/guardians, and whether they had avoided home as a child due to conflict and/or violence. It should be noted that this was a study of CPA, and did not address sexual abuse. Interviews were conducted in public locations, and there was ethical concern regarding participant welfare in examining childhood sexual abuse in such unsupported locations, given the potential for adverse reactions.

Consistent with previous work (Darke and Kaye, 2004; Darke et al., 2007, 2010), attempted suicide was defined as deliberate self-harm with the intention of causing death. Also consistent with previous work (Darke et al., 2010; Maloney et al., 2010), non-suicidal self-harm was defined as the deliberate destruction of body tissue without conscious suicidal intent. The questions on non-suicidal self-harm and attempted suicide were identical to those used in previous studies (Darke and Kaye, 2004; Darke et al., 2007, 2010; Maloney et al., 2010). For attempted suicide, participants were asked: (i) Have you ever attempted suicide?, (ii) How long is it since your last attempt?, (iii) How many attempts have you made?, and (iv) How old were you when you first attempted suicide? For non-suicidal self-harm, participants were asked: (i) Have you ever deliberately harmed yourself, without the intention of killing yourself?, (ii) How long is it since this last happened?, (iii) How times has this happened?, and (iv) How old were you when you first deliberately harmed yourself without the intention of killing yourself?

BPD was screened on ICD-10 criteria, using the International Personality Disorders Examination Questionnaire from the National Survey of Mental of Health and Wellbeing ICD-10 (Andrews et al., 1999). Questions are asked about each diagnostic symptom, and a presumptive diagnosis made with respect to the diagnostic criteria. Retrospective screens for symptoms of DSM IV CD (American Psychiatric Association, 2000) were obtained using a modified version of the Diagnostic Interview Schedule employed in previous research on this topic (Robins et al., 1981; Torok et al., 2011). Questions are asked about each diagnostic symptom, and a retrospective diagnosis made with respect to the diagnostic criteria. Trait impulsivity (a consistent tendency to act on a whim, displaying behaviour characterized by little or no forethought, reflection, or consideration of consequences) was measured using the Barratt Impulsiveness Scale-Short Form (BIS), which ranges from 15 to 60, with higher scores representing higher trait impulsivity (Spinella, 2007). The mean score in a non-institutionalized, community sample was 32.8 (SD 6.9) (Spinella, 2007).

2.3. Statistical analyses

Means and standard deviations (SD) were reported for continuous variables. *T*-tests were used for group comparison of continuous data. Dichotomous categorical variables were analysed using odds ratios (OR) and 95% confidence intervals (CIs). Simultaneous logistic regressions with backwards elimination were used to examine whether aspects of CPA were independent correlates of non-suicidal self-harm and attempted suicide, after controlling for potential confounders observed from bivariate analyses. CPA variables entered into the models were having experienced severe abuse (yes = 1, no = 0), having experienced frequent abuse (i.e. weekly) (yes = 1, no = 0), and having suffered an injury from abuse (yes = 1, no = 0). Any reported CPA per se was not included in these analyses as it was not significantly in bivariate comparisons, whilst medical treatment for injury represented a subset of overall injuries. Other variables entered in the model were those shown to be significant in bivariate comparisons. The Hosmer–Lemeshow chi square was used to determine model fit, and colinearity was tested. All analyses were conducted using IBM SPSS Statistics 20.0 (SPSS, 2011).

3. Results

3.1. Sample characteristics

The sample consisted of 300 regular IDU, with a mean age of 37.1 yrs (SD 7.9, range 21–62 yrs), and 69.7% male. They had completed a mean of 9.8 yrs (SD 1.4, range 6–12 yrs) of school education, 34% had completed a trade/technical course, and 2% a university degree. The majority were unemployed (83.0%), with 12.0% in part time employment, 5.0% in full time employment and 3.0% performing home duties. A history of incarceration was reported by 66.0% (males 67.5%, females 62.6%).

Mean age at first intoxication was 14.5 yrs (SD 2.7, range 6–26 yrs), and 19.8 yrs (SD 4.7, range 10–43 yrs) at first injection. The lifetime mean number of drug classes used was 9.1 (SD 1.8, range 4–12), with 5.9 (SD 1.7, range 2–9) having been used in the preceding six months. Substances used in the preceding 6