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Drowning the pain: Intimate partner violence and drinking to cope prospectively predict problem drinking☆

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HIGHLIGHTS

- Two models were proposed: an intoxication–violence model and a self-medication model.
- Findings provide support for the self-medication model.
- Drinking to cope mediated the association between violence and drinking problems.

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ABSTRACT

Introduction: The present study examined the longitudinal association among drinking problems, drinking to cope, and degree of intimate partner violence (IPV). Two competing models were tested; the first model posited that drinking to cope leads to greater drinking problems and this subsequently leads to more violence in the relationship (an intoxication–violence model). The second model speculated that violence in the relationship leads to drinking to cope, which in turn leads to greater drinking problems (a self-medication model).
Methods: Eight hundred and eighteen undergraduate students at a large north-western university participated in the study over a two year period, completing assessments of IPV, alcohol related problems and drinking to cope at five time points over a two year period as part of a larger social norms intervention study.
Results: Analyses examined two competing models; analyses indicated that there was support for the self-medication model, whereby people who have experienced violence have more drinking problems later, and this association is temporally mediated by drinking to cope.
Discussion: The current results are discussed in light of past research on the self-medication model.

1. Introduction

Intimate partner violence (IPV) occurs at alarming rates among adolescents and college-age young adults, with approximately one in three dating couples experiencing violence (Straus, 2008; White & Koss, 1991), and many experience repeated victimization (Bonomi, Anderson, Rivara, & Thompson, 2007; Breiding, Black, & Ryan, 2008). Equal rates have been found for men and women, with as many as 42% of women and 37% of men report perpetrating dating violence and 37% of women and 45% of men report having been a victim of dating violence (Arias, Samios, & O'Leary, 1987; Cyr, McDuff, & Wright, 2006; Luthra & Gidycz, 2006; Magdol, Moffitt, Newman, Fagan, & Silva, 1997; Muñoz-Rivas, Graña, O'Leary, & González, 2007; Riggs, O'Leary, & Breslin, 1990; White & Koss, 1991). Moreover, approximately 30 to 40% of perpetrators report drinking at the time of perpetration (Caetano, Schafer, & Cunradi, 2001) and violent incidents involving alcohol are more likely to lead to more severe forms of violence and to result in more severe injuries to the partner (Sorenson, Upchurch, & Shen, 1996).

Most examinations look at either victimization or perpetration. However, in young adult relationships, such behaviors (being the victim or being the perpetrator) often co-occur (Stets & Straus, 1989; Testa, Hoffman, & Leonard, 2011), and perpetration by one partner is the strongest predictor of perpetration by the other partner (Baker & Stith, 2008; Harned, 2002). This paper aims to examine both IPV victimization and perpetration among college students. Specifically, we propose two competing mediation models for both perpetration and victimization. The first model is the 'intoxication–violence model' (built on Kantor and Straus's (1989) intoxication–victimization model). This model posits that because one drinks to cope, one experiences more drinking

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problems and this drinking contributes to being in situations that increase one's risk of experiencing IPV. The second model is a 'self-medication model' (built on Khantzian's (1985) and Duncan's (1974a,b) 'self-medication hypothesis'; for a similar hypothesis, see Stappenbeck and Fromme (2010)) whereby an individual uses alcohol to deal with negative events and affect.

1.1. Drinking as a risk factor for violence

Within the IPV literature, there is strong and consistent evidence that alcohol use is associated with relationship violence (Foran & O'Leary, 2008; Leonard, 1993; Stuart et al., 2013). A recent meta-analysis (Foran & O'Leary, 2008) found a small to moderate effect size for male perpetrated IPV and a small effect size for female perpetrated IPV in the association between alcohol use and IPV. Moreover, Leonard (2005) concluded in an extensive review of the literature that heavy drinking was a contributing factor in relationship violence. Similarly, Smith, Homish, Leonard, and Cornelius (2012) found that alcohol use disorders were robustly associated with both IPV perpetration and victimization. Although they found gender differences in the association between alcohol use disorders and victimization, suggesting that the effect of alcohol use disorders on violence was stronger for women than for men, this difference disappeared when controlling for perpetration. Thus, the authors conclude that alcohol use may be related to mutual IPV, rather than male-only violence.

1.2. Drinking in response to violence

Although alcohol use may be an antecedent of relationship violence, it may be that individuals who experience IPV in their relationship use alcohol as a consequence of their violence experience (Burnam et al., 1988; Miller & Downs, 1993; Temple, Weston, Stuart, & Marshall, 2008; Testa & Leonard, 2001; Testa, Livingston, & Leonard, 2003). Indeed, some researchers postulate that alcohol is used as a means of self-medication. That is, individuals who report chronic traumatic events (e.g. IPV, repeated sexual assault) report using alcohol as a way of coping with negative affect (Cannon et al., 1992), sleep difficulties (Nishith, Resick, & Mueser, 2001) and other hyper-arousal symptoms (Stewart, Conrod, Samoluk, Pihl, & Dongier, 2000). In fact, research has found that drinking to cope partly explained the association between victimization and alcohol problems (Goldstein, Flett, & Wekerle, 2010; Grayson & Nolen-Hoeksema, 2005; Kaysen et al., 2007), such that victimization led to increased alcohol problems, because people drank to cope with their victimization. Little research has directly examined drinking to cope in connection with IPV perpetration. Some research has indicated that perpetrators also drink as a consequence of violence, as they may attempt to cope with relationship problems (Testa & Leonard, 2001; Testa et al., 2003) or with the negative affect experienced about or during the incident (Anderson, 2002; Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997).

1.3. Present study

As indicated in the Introduction, rates of IPV and drinking are especially high in late adolescent and college-age populations. Thus, we decided to examine prospective associations among intimate partner violence, drinking to cope and drinking problems in such a population. Based on previous literature, we hypothesized two potential models (see Fig. 1). In the first model, an intoxication–violence model (Fig. 1, top), we hypothesized that drinking to cope would lead to later drinking problems, and drinking problems would lead to greater victimization/perpetration in the relationship. The second model we proposed, the self-medication model (Fig. 1, bottom), posited that victimization/perpetration in the relationship would lead to subsequent drinking to cope, and this drinking to cope would lead to later drinking problems. Furthermore, as previous research has found gender differences in associations between IPV and drinking problems, we examined whether gender moderated the associations.

2. Materials and methods

2.1. Procedures

In the fall of 2005, all incoming freshman students were invited to participate in a social norms alcohol intervention study. Students were first invited to complete a 20-min, web-based screening survey. Invitations for the screening survey were sent by e-mail and U.S. post and included a brief description of the survey. Participants were informed that the survey would ask about their personal characteristics, drinking patterns, alcohol-related consequences, and perceptions of other students' drinking on their campus. Participants were also informed that if they qualified, they would be invited to complete a 50-min survey immediately following the 20-min screening survey (or within 2 weeks) and four additional 50-min surveys at 6-month intervals. Of those that qualified for the study, 91.09% completed the baseline survey; retention rates were 92%, 97%, 85%, and 82% of the original 818 participants at 6, 12, 18, and 24 month follow-ups, respectively (for complete study details, including participation rates, comparison with non-respondents and experimental conditions, please see Neighbors et al., 2010).[1] A Federal Certificate of Confidentiality (AA-79-2005) was obtained to help ensure privacy of research participants. All procedures were approved by the university's Institutional Review Board. No adverse events were reported. All measures and interventions were completed entirely via the Internet.

2.2. Participants

Participants for the present study included 818 students (42.42% men and 57.58% women) at a large public northwestern university. Students must have reported drinking 4/5 drinks (women/men, respectively; Marlatt et al., 1998; Neighbors, Palmer, & Larimer, 2004; Wechsler & Nelson, 2001) or more on at least one occasion during the past month at the time of screening in order to qualify for the longitudinal study. Participants at baseline were an average of 18.14 ($SD = 0.46$) years of age at the time of the survey. Ethnic representation was 65.3% Caucasian, 24.2% Asian/Pacific Islander, 1.5% Black/African American, 4.4% Hispanic/Latino(a), and 4.2% Other. Incentives for participation were $10 for completing the screening survey, $25 for completing the baseline survey, and $25 for completing each of the follow-up assessments at 6, 12, 18, and 24 months post-baseline.

2.3. Measures

2.3.1. Intimate partner violence

The 20-item short form of the Revised Conflict Tactics Scale (CTS2S; Straus & Douglas, 2004), which measures both IPV perpetration and IPV victimization, was used to assess how often it occurred in participants' current or most recent relationship. Response options at baseline included the following: 0 = *This has never happened before*; 1 = *Not in the past year, but it did happen before*; 2 = *Once in the past year*; 3 = *Twice in the past year*; 4 = *3–5 times in the past year*; 5 = *6–10 times in the past year*; 6 = *11–20 times in the past year*; and 7 = *More than 20 times in the past year*. Follow-up response options were modified to reflect the past 6 months. In scoring the follow-up assessments, the second response option ("Not in the past 6 months, but it did happen before") was assigned a value of 0, such

[1] As the data comes from a larger alcohol prevention study, all analyses were also performed controlling for the intervention conditions (in the level 2 file). Results were not different when controlling for the intervention, and therefore, we report here on the simpler analyses. Details regarding intervention effects are available elsewhere (Neighbors et al., 2010).