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Does alcohol involvement increase the severity of intimate partner violence?

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Abstract

Background—Most studies that have examined alcohol use immediately prior to intimate partner violence (IPV) have been limited to male-to-female partner violence (MFPV) and are subject to a number of methodological limitations. We add new information concerning the relationship between alcohol involvement and severity of IPV, MFPV, and female-to-male partner violence (FMPV).

Methods—We analyzed data from a 1995 US national population-based survey of couples ≥18 years old. We examined 436 couples who reported IPV and had information on alcohol involvement with IPV. We measured IPV using a revised Conflict Tactics Scale, Form R that asked respondents about 11 violent behaviors in the past year. Respondents were classified into mutually exclusive categories as having experienced mild only or mild+severe ('severe') IPV, MFPV or FMPV. Respondents were also asked if they or their partner were drinking at the time the violent behavior occurred and were classified as exposed to IPV with or without alcohol involvement. We estimated proportions, odds ratios, 95% confidence intervals and p-values of the proposed associations, accounting for the complex survey design.

Results—Overall, 30.2% of couples who reported IPV reported alcohol involved IPV; 69.8% reported no alcohol involvement. In adjusted analyses, those reporting severe (vs. mild only) IPV were more than twice as likely to report alcohol involvement. In adjusted analyses, those reporting severe (vs. mild) MFPV or FMPV were more likely to report female but not male alcohol involvement. Though estimates were positive and strong, most confidence intervals were compatible with a wide range of estimates including no association.

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Conclusions—Our findings suggest alcohol involvement of either or both in the couple increases the risk of severe IPV. Our findings also suggest female alcohol use may play an important role in determining the severity of IPV, MFPV or FMPV.

Keywords

alcohol; spouse abuse; partner abuse; abused women

INTRODUCTION

Alcohol misuse is a well-established correlate of intimate partner violence (IPV) (Caetano et al., 2001; Coker et al., 2000; Tjaden and Thoennes, 2000b). In a number of cross-sectional studies, a history of heavy alcohol use or alcohol-related problems has been positively associated with IPV-related injury or severity (Coker et al., 2000; Grisso et al., 1999; Kyriacou et al., 1999). Several studies have expanded upon this research by examining the relationship between alcohol use immediately preceding IPV and IPV severity (Fals-Stewart, 2003; Leonard and Quigley, 1999; Testa et al., 2003; Thompson and Kingree, 2006). Most of these findings focus solely on male-to-female partner violence (MFPV) (Fals-Stewart, 2003; Leonard and Quigley, 1999). Only a few studies from the same data source, the National Violence Against Women Survey (NVAWS), examined both MFPV and female-to-male partner violence (FMPV) (Thompson and Kingree, 2006; Tjaden and Thoennes, 2000b).

Understanding of the relationship between pre-incident alcohol use and IPV is limited, largely because of methodological issues in existing studies. Though studies consistently report that male perpetrator pre-incident alcohol use is positively associated with MFPV, for example, most do not adjust for potential confounders such as female alcohol use or the presence of FMPV (Fals-Stewart, 2003; Leonard and Quigley, 1999; Testa et al., 2003). Only NVAWS analyses examined IPV and adjusted for female victim alcohol involvement and other covariates. Findings from these data indicate male pre-incident alcohol use is positively associated with MFPV (Thompson and Kingree, 2006; Tjaden and Thoennes, 2000b). Evidence linking female victim pre-incident alcohol use to MFPV is inconsistent, some reports suggest female pre-incident alcohol use may be related to MFPV (Leonard and Quigley, 1999; Tjaden and Thoennes, 2000b), while others found no evidence for this relationship (Testa et al., 2003; Thompson and Kingree, 2006). These findings are based on much of the same literature, and subject to the same study limitations as for male perpetrator alcohol use and MFPV. One analysis of NVAWS data on FMPV found that female perpetrator alcohol use did not increase the risk of male victim injury but that male victim alcohol use did (Thompson and Kingree, 2006); the other NVAWS analysis, which combined alcohol and drugs, found that for FMPV both male and female alcohol/drug use increased the risk of male victim injury (Tjaden and Thoennes, 2000b). Additional methodological challenges in the existing literature include non-representative samples of the general population (Fals-Stewart, 2003; Leonard and Quigley, 1999; Testa et al., 2003); small sample size (Testa et al., 2003) or the lack of differentiating alcohol from other drug use (Tjaden and Thoennes, 2000b).

We add new information concerning the relationship between male and/or female alcohol involvement in IPV (MFPV and/or FMPV) and severity of IPV using data from a national population-based survey of couples with detailed information on alcohol involved IPV and IPV severity. We hypothesized that severe violence would be more frequent than mild violence among couples who report alcohol-involved IPV compared to couples who report IPV without alcohol involvement. We also examined the role of male and female alcohol involvement in relation to severity of IPV and in MFPV and FMPV, respectively.

MATERIALS AND METHODS

We analyzed data from a 1995 national population-based survey of couples aged 18 years and older in the 48 contiguous US states using a multistage random probability sampling method. The survey had an overall response rate of 85% and has been described in detail elsewhere (Schafer et al., 1998). Briefly, all 1615 respondents were interviewed face-to-face by a study interviewer in private using a structured questionnaire in either English or Spanish; 449 reported IPV (MFPV and/or FMPV) in the past year. This study is limited to the 436 couples who reported IPV in the past year and had male and/or female information regarding alcohol involvement in the IPV.

We measured MFPV and FMPV by asking participants about a series of physically violent behaviors taken from the Conflict Tactics Scale, Form R, a widely used instrument that measures intimate partner violence (Straus, 1990). Each respondent reported separately on the following behaviors toward their partner and their partner's behavior toward them in the past year: thrown something; pushed, grabbed or shoved; slapped; kicked, bit or hit; hit or tried to hit with something; beat up; choked; burned or scalded; forced sex; threatened with a knife or gun; or used a knife or gun (Straus, 1990). MFPV was considered present if either or both dyad members reported the male had committed any of the specified violent behaviors in the past year; FMPV was considered present if either or both dyad members reported the female had committed any of the listed behaviors in the past year. IPV was considered present if the couple was positive for either or both MFPV and/or FMPV. Each violence measure was categorized according to severity. Respondents were classified into mutually exclusive categories according to the most serious type of violence reported: those who reported having thrown something; pushed, grabbed or shoved; or slapped their partner were classified as having been exposed to 'mild only' violence. Those exposed to any of the other more serious types of violence were classified as having experienced 'severe' violence (Straus et al., 1996).

Immediately following a positive response to any of the 11 violent behaviors, the respondent was asked whether he/she or his/her partner were ever drinking when this type of behavior happened in the past year. A positive report for alcohol use from either or both partners was treated as a positive response for any alcohol-involvement for that type of behavior. Based on alcohol involvement for specific behaviors we classified male and female respondents as either exposed or unexposed to alcohol involvement for mild or severe MFPV (and/or FMPV).

We accounted for the complex survey design and non-response in estimating proportions, odds ratios, 95% confidence intervals and p-values. We calculated unadjusted and adjusted estimates. We adjusted for male alcohol involvement when examining female alcohol involvement (and vice versa); we also adjusted for FMPV when examining MFPV (and vice versa). For example, the association between male alcohol involvement and MFPV accounts for female alcohol involvement, FMPV and potential confounders. We adjusted for the other partner's alcohol and violence behaviors in order to isolate the male (or female) specific association. Though MFPV and FMPV are typically highly correlated, we did not have issues with collinearity in our analysis since our outcome was severity rather than the presence of MFPV (or FMPV). We identified other potential confounders based on *a priori* knowledge. Potential confounding factors (e.g. marital status) that did not meaningfully alter estimated associations were dropped from the models. Other confounders for which we adjusted included couple's race/ethnicity (white non-Hispanic, black non-Hispanic, Hispanic any race and other/mixed non-Hispanic); household income (<$10,000, $10–20,000, $20–30,000, $30–40,000, ≥$40,000); male and female illicit drug use (yes/no); and male and female age (continuous). Stata 10.0 was used for all analyses (College Station, TX).

RESULTS

Overall, 30.2% of couples who experienced IPV reported male and/or female alcohol-involvement; 69.8% reported no alcohol involvement. Over one-third of those reporting severe IPV reported alcohol involvement compared to just under one-quarter among those reporting mild only IPV (Table 1). In most unadjusted adjusted analyses of IPV, those reporting severe IPV were approximately twice as likely to report any, male or female alcohol involvement compared to those reporting mild only IPV. In adjusted analyses of IPV, those reporting severe IPV were more than twice as likely to report any or female alcohol involvement compared to those reporting mild only IPV. However, most point estimates had marginal confidence intervals indicating such estimates may be compatible with no association.

In unadjusted analyses, those reporting severe (vs. mild only) MFPV were more than twice as likely to have had any or male alcohol involvement (Table 1). The unadjusted four-fold increased risk of MFPV associated with female alcohol involvement was particularly strong. After adjusting for confounding factors including female alcohol involvement, there appeared to be no association between male alcohol involvement and severe (vs. mild only) MFPV, though the confidence intervals were compatible with a wide range of estimates, including no association. In adjusted analysis, female alcohol involvement was associated with more than a 3-fold increased risk of severe (vs. mild only) MFPV, though confidence intervals were wide with estimates compatible with no association.

For FMPV, unadjusted analyses suggest alcohol involvement of all types was associated with 1.8 to 2.5-fold increased risk of severe (vs. mild only) FMPV. However, as observed for MFPV, after adjusting for female alcohol involvement and other factors, there was no apparent association between male alcohol involvement and FMPV. Female alcohol involvement remained positively associated with a 2.5-fold increased risk of FMPV after accounting for other factors. As with MFPV, most estimates for FMPV had wide confidence intervals consistent with a wide range of associations.

DISCUSSION

Our findings suggest alcohol involvement of either or both in the couple increases the severity of IPV. Our results are consistent with male or female alcohol involvement increasing the risk of severe (vs. mild only) IPV in unadjusted analyses, and with female alcohol involvement increasing the risk of both MFPV and FMPV, even after adjusting for other factors. Male alcohol involvement appeared to increase the risk of MFPV and FMPV in unadjusted, but not adjusted, analyses. Though the strength of our inference is limited by lack of precision for several estimates, we add new preliminary information to the limited body of knowledge concerning the relationship between couple and sex-specific alcohol involvement with IPV and IPV severity.

Our findings appear somewhat inconsistent with other national studies in showing no apparent association between male alcohol involvement and MFPV severity in adjusted analysis. Other studies based on national surveys have reported that male alcohol involvement is positively correlated with MFPV-related injury even after accounting for other factors including female victim alcohol use (Thompson and Kingree, 2006). Our finding that female victim alcohol involvement was associated with severity of MFPV is consistent with one examination of the NVAWS data (Tjaden and Thoennes, 2000b) but not the other (Thompson and Kingree, 2006). Our estimates do not preclude the possibility that ‘true’ positive associations for our adjusted estimates between male alcohol use and MFPV (and FMPV) may exist; our confidence intervals are consistent with such associations. It is

also possible that the apparent discrepancy could be related to methodological differences between studies. For example, the Thompson and Kingree study (Thompson and Kingree, 2006) was based on NVAWS data which was a telephone survey that interviewed only one in the couple with the respondent providing information about both his/her and his/her partner's alcohol use on each specific IPV incident (Tjaden and Thoennes, 2000a). In comparison, our survey was a private in-person interview conducted with each of the couple separately, with a positive response from either of the couple used to identify alcohol involved IPV and IPV severity. These different approaches may have led to differences in disclosing severity of and alcohol involvement with IPV that may have influenced results. The substantial variation in methods makes it difficult to ascertain the impact these differences would likely have had across findings.

There are limitations to our report. We asked whether specific IPV behaviors had occurred in the past year and for those who reported the behavior whether alcohol had ever been involved in any of the incidents. We did not ask how many times a particular behavior occurred and thus our measure of alcohol involvement is not an incident-specific but rather a behavior-specific measure. Pre-incident alcohol use for a certain type of violence (e.g. mild) does not preclude that other types of violence (e.g. severe) may have also occurred without alcohol involvement. We were unable to tease apart these finer distinctions. Moreover, we did not examine concurrent male and female alcohol use as a separate subgroup because of small numbers. Our survey was limited to cohabiting and married couples and our findings may not be generalizable to other types of intimate partners, such as non-cohabiting partners. The number of reports of MFPV only and FMPV only were small, and we were unable to examine these types of violence separately with sufficient precision, however, we did adjust for FMPV when examining MFPV (and vice versa). Similarly, we controlled for female alcohol use when examining male alcohol use (and vice versa). Despite this, many of our estimates had wide confidence intervals and although our estimates showed consistent strong positive associations for most associations, we are unable to rule out the role of chance in these findings. Moreover, that we detected many strong positive associations despite the inherent limitations to our measurement of pre-incident alcohol use suggests future studies that employ a better measure may well identify stronger associations.

Overall, the findings from our national population-based study of IPV are consistent with other studies suggesting that alcohol involvement in IPV increases the severity of IPV. We demonstrate that female perpetrator or victim alcohol involvement may play an important role in the severity of IPV. This information contributes to the growing body of evidence demonstrating the role that alcohol plays in elevating the severity and risk of injury related to IPV. Future studies should aim to collect more detailed information on incident-specific alcohol use for both males and females and for both MFPV and FMPV using a larger sample size. Such efforts would provide needed information concerning the specific role pre-incident alcohol use plays by each and both in the couple in influencing the occurrence and severity of violence.

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Abbreviations

95% CI	95% confidence interval
FMPV	female-to-male partner violence

IPV	intimate partner violence
MFPV	male-to-female partner violence
NVAWS	National Violence Against Women Survey
OR	odds ratio
US	United States

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TABLE 1

Association between alcohol involvement and severeity of IPV among couples reporting IPV

	IPV (n=436)				MFPV (n=297)				FMPV (n=376)			
	Mild %	Severe %	Unadjusted OR (95% CI)	Adjusted[1] OR (95% CI)	Mild %	Severe %	Unadjusted OR (95% CI)	Adjusted[1,2] OR (95% CI)	Mild %	Severe %	Unadjusted OR (95% CI)	Adjusted[1,3] OR (95% CI)
Any alcohol involvement												
No	75.2	61.2	Ref	Ref	74.2	52.8	Ref	Ref	74.3	61.0	Ref	Ref
Yes	24.8	38.8	1.9 (1.0, 3.8)	2.2 (1.0, 4.9)	25.9	47.2	2.6 (1.2, 5.6)*	2.2 (0.9, 5.6)	25.8	39.0	1.8 (0.8, 4.0)	2.0 (0.8, 5.4)
Male alcohol involvement[4]												
No	84.9	69.7	Ref	Ref	71.8	53.9	Ref	Ref	85.7	70.8	Ref	Ref
Yes	15.2	30.3	2.4 (1.1, 5.3)*	1.8 (0.7, 4.7)	28.2	46.1	2.2 (1.0, 4.8)	1.0 (0.4, 2.9)	14.3	29.3	2.5 (1.0, 6.1)*	1.0 (0.3, 3.0)
Female alcohol involvement[5]												
No	91.5	83.7	Ref	Ref	93.0	75.0	Ref	Ref	89.4	82.1	Ref	Ref
Yes	8.5	16.3	2.1 (0.8, 5.4)	2.4 (0.8, 7.0)	7.0	25.0	4.4 (1.5, 12.8)*	3.7 (0.9, 14.9)	10.6	17.9	1.8 (0.7, 4.9)	2.5 (0.8, 8.1)

Note: % indicates weighted proportion; OR denotes odds ratio; CI denotes confidence interval;

* indicated p-value <0.05

[1] Adjusted for couple's race/ethnicity and household income; and male and female age and history of drug use

[2] Adjusted for female-to-male partner violence (FMPV)

[3] Adjusted for male-to-female partner violence (MFPV)

[4] Adjusted models also adjust for female alcohol-involvement

[5] Adjusted models also adjust for male alcohol-involvement