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Alcohol Use, Alcohol Problems, and Depressive Symptomatology Among Newly Married Couples

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Abstract

Background: Individuals married to heavy drinking spouses often have poorer health compared to those whose spouses are not heavy drinkers. This work examined how one spouse's alcohol involvement and alcohol-related problems affect his/her spouse's depressive symptomatology over time.

Methods: Couples (N = 634) were assessed for past year alcohol involvement and alcohol-related problems (marital and non-marital) and depressive symptomatology when they applied for a marriage license. They were reassessed at their first and second anniversaries. Multilevel models were used to analyze the association between one spouse's alcohol involvement and alcohol problems and his/her partner's depressive symptomatology over time.

Results: Both husbands' and wives' marital alcohol problems were associated with wives' depressive symptoms. Neither spouses' alcohol consumption was associated with wives' depressive symptoms. Husbands' marriage-related alcohol problems and frequency of heavy drinking were related to husbands' depressive symptoms; however, wives' alcohol problems and alcohol use were unrelated to husbands' depression.

Conclusions: In a community sample of married couples, we found that husbands' and wives' marital alcohol problems affect wives' depressive symptoms, but only husbands' marital alcohol problems affect husbands' depressive symptoms. Future work should consider other subgroups of alcohol-related problems in one spouse and their relation to depression in his/her partner.

Keywords

Alcohol use; Alcohol problems; Depression; Marriage

1. Introduction

There are a considerable number of anecdotal reports and research findings that suggest that individuals who are married to alcoholics have poor overall physical and mental health (for example, Kokin and Walker, 1989; Orford, 1990; Wiseman, 1991). Studies of clinical samples of alcoholics clearly indicate that their spouses are often more anxious, involved in fewer social activities, and report more stressful life events (e.g., Moos et al., 1990). Among community samples, there is also clear evidence that alcohol use disorders are associated with partner depression. For example, Maes et al. (1998) found significant correlations between wives' alcoholism and husbands' depression and, similarly, significant correlations were found

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between husbands' alcoholism and wives' depression. Although nearly all of the research documenting an association between heavy drinking and partner's depressive symptomatology is cross-sectional, it is usually presumed that heavy drinking is a causal factor in partner depression. However, there are other alternative hypotheses such as assortative mating that may lead to both heavy drinking and depression.

Assortative mating reflects the non-random pairing of similar individuals (Crow and Felsenstein, 1968), and does not necessarily imply intentional matching. This process may occur with respect to demographic, personality, or life experiences, and can create similarity for substance use behaviors or psychological conditions. For example, husbands and wives are often concordant with respect to depressive disorders (Galbaud du Fort et al., 1998; McLeod, 1993). There is also evidence of assortative mating with respect to heavy alcohol consumption (Leonard and Das Eiden, 1999). There is also considerable comorbidity between alcohol disorders and affective disorders. Kessler et al. (1997) found that nearly one-half of women and one-quarter of men with alcohol dependence also met criteria for depression. Consequently, a relationship between alcohol use disorders and partner depression could be the result of the substantial comorbidity within individuals and assortative mating according to either depression or alcohol dependence.

Whether the relationship between heavy drinking and partner depression reflects a causal influence of heavy drinking or a spurious relationship related to assortative mating or some other factor is not entirely clear. There are two longitudinal studies that have provided evidence supportive of a role for heavy drinking in partner depression (Cronkite and Moos, 1984; Moos et al., 1990), one focused on relapse versus remission among alcoholics and the other focused on average consumption in a community sample. Moos et al. (1990) examined couples in which one member (the male in more than 75% of the cases) was in treatment for alcoholism and a matched group of community control couples. They found that over 2 years and 10 years, spouses of remitted alcoholics reported significantly less depression than spouses of relapsed alcoholics, suggesting that continued alcoholic drinking may play a role in spouse depression. Cronkite and Moos (1984) investigated the relation between typical quantity of alcohol consumed and depression in a one-year longitudinal study of couples. Husbands' typical quantity was positively related to their wives' depression; however, wives' typical quantity was unrelated to their husbands' depression. It is not clear whether other alcohol consumption parameters, such as the frequency of drinking or the frequency of heavy drinking would evidence the same pattern of results.

While these cross-sectional studies are consistent with the hypothesis that alcohol use disorders and alcohol use influence partner depression, and the two longitudinal studies further support the hypothesis, several limitations remain with respect to this issue. First, there remains a paucity of longitudinal studies. Notwithstanding the results from a few longitudinal studies, there are many aspects that remain unexplored. First, it is not clear whether the key variables in predicting partner depression are alcohol use, heavy alcohol use, or alcohol problems. Studies have not distinguished between alcohol use and alcohol-related problems. Zweben (1986) examined the relationship between marital adjustment and the number of heavy-drinking days after treatment for problem drinking and found that the relationship was greatly reduced, and at some time points, eliminated, after controlling for the hardships caused by spousal drinking (e.g., non-involvement in everyday events, aggressive behavior). Second, the available research has focused on samples of somewhat older couples who have been married for a significant amount of time. According to the U.S. Census Bureau, nearly 50% of marriages end in divorce, and half of these marriages end in less than eight years (Kreider and Fields, 2001). However, Cronkite and Moos (1984) studied couples who had been married, on average, more than 15 years. As a result, studies focused on alcohol and partner depression in the most maritally volatile years have not been reported. Third, evidence suggests that men are more at

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risk for heavy drinking (Muthen and Muthen, 2000) and women are more at risk for depression (Harris, 2003), and the results from the two longitudinal studies suggest that the effect may be restricted to husband alcohol use and wife depression. In summary, there is a need for more longitudinal research to examine alcohol use and partner depression among couples in the more volatile years of marriage, with other parameters of drinking patterns and problems, and to determine whether the relationship is comparable for husbands and wives.

Using a longitudinal, community sample of newly married individuals, we investigated alcohol use and depression. In particular, the goal was to understand the relation between alcohol use and alcohol-related problems in one spouse and his/her partner's depressive symptomatology. We hypothesized that alcohol-related problems, but not alcohol consumption, in one spouse would be associated with his/her partner's level of depressive symptomatology over time. On the basis of the earlier research, we expected to find this effect for husbands' alcohol problems and wives' depression, but not for wives' alcohol problems and husbands' depressive symptomatology.

2. Methods

2.1. Participants

Participants for this report are from a longitudinal study of marriage and alcohol involvement. All participants were at least 18 years old, spoke English, and were literate. Couples were ineligible for the study if they had been previously married. These analyses are based on 634 couples. At the initial assessment, the average age of the men [mean (S.D.)] was 28.7 (6.3) years with a range of 18-69 years old and the average age of the women was 26.8 (5.8) years with a range of 18-50 years old. The majority of the men and women in the sample were European American (husbands: 59%; wives: 62%). About one-third of the sample was African American (husbands: 33%; wives: 31%). There were very small percentages of Hispanic, Asian, and American Indian participants. The sample was fairly well educated. About one-third of the husbands (34%) completed college, 58% had only a high school degree, received a high school equivalency, or attended some college (but did not complete it), and 8% did not complete high school. Among wives, 38% completed college, 56% had only a high school degree, received a high school equivalency, or attended some college (but did not complete it), and 6% did not complete high school. Most participants were employed at least part-time (husbands: 89%; wives 75%). At the time of marriage, 38% of the husbands and 43% of the wives were parents. About 70% of the couples were living together prior to marriage, with the cohabiters living together an average of 21 months (S.D.: 34.3). The amount of cohabitation prior to marriage and the number of individuals who had children prior to the current marriage are similar to other recent studies of newlywed couples, particularly those that include a moderate percentage of African American couples. For example, Crohan and Veroff (1989) reported that 54% of their newlywed couples had lived together prior to marriage and Chadiha, Veroff, and Leber (1998) found that approximately 23% of Caucasian couples and 55% of African American couples had children prior to marriage. The Institutional Review Board of the State University of New York at Buffalo approved the research protocol.

2.2. Procedures

After applying for a marriage license, couples were recruited for a 5-10 min paid (US$ 10) interview. The interview covered demographic factors (e.g., race, education, age), family and relationship factors (e.g., number of children, length of engagement), and substance use questions (e.g., tobacco use, average alcohol consumption, times intoxicated in the past year). For interested individuals who did not have time to complete this interview, a telephone interview was conducted later that day or the next day ($N = 62$). In total, 978 couples were screened. Of these, 8 couples were not eligible, and less than 8% of eligible individuals declined

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to participate resulting in 900 eligible couples who were willing to participate. Those who agreed to participate, compared to those who did not, were slightly more likely to have lower incomes (wives, t (965) = -3.23, p <.01; husbands, t (966) = -2.89, p <.01) and the women were more likely to have children (43% versus 27%, p <.01). No other differences were identified in terms of age, race/ethnicity, religion, employment, length of cohabitation or alcohol involvement (average daily volume, frequency of six plus, and frequency of intoxication).

Complete details of the recruitment process can be found elsewhere (Leonard and Mudar, 2000,2003), but briefly, couples who agreed to participate were given identical questionnaires to complete at home and were asked to return them in separate postage paid envelopes (Wave 1 assessment). Participants were asked not to discuss their responses with their partners. Each spouse received US$ 40 for his/her participation. Of the 887 eligible couples who agreed to participate (13 of the original 900 did not marry), data were collected from both spouses for 634 couples (71.5%). The 634 couples are the basis for this report. Couples who returned the questionnaires were more likely to be living together compared to couples who did not return the questionnaires (70% versus 62%; p <.05) and more likely to be European American (husbands: 59% versus 52%, p <.05; wives: 62% versus 53%, p <.05). No other sociodemographic differences existed between the couples who responded compared to those who did not.

At the couples' first and second anniversaries (Waves 2 and 3), they were mailed questionnaires similar to those they received at the first assessments. As with the first assessment, they were asked to complete the forms and return them in the postage paid envelopes. Couple participation was high across the three assessments (74.5%). For the second and third assessments, data were collected from one or both members of 93% of couples who completed the Wave 1 assessment (N = 590). Wives who did not participate in the second and third assessments were slightly younger (26.2 versus 26.9 years old; p <.05) and somewhat less educated than other wives (63% versus 72% completed more than high school; p <.05). Husbands who did not participate were less likely to be European American compared to the other husbands (51% versus 64%; p <.01).

2.3. Measures

2.3.1. Alcohol involvement.—Alcohol involvement consisted of two variables, the usual number of drinks per drinking day and the frequency of heavy drinking. To calculate drinks per drinking day, past year alcohol use was assessed at each wave with beverage-specific questions using standard quantity/frequency questions (Cahalan, Cisin, and Crossley, 1969). Based on the responses to these questions, the average number of drinks per drinking day was calculated. Frequency of heavy drinking was assessed by asking participants how frequently they consumed six or more drinks at a single setting during the past year. Similarly, participants were asked how often they were intoxicated in the past year. For these last two questions, responses were on a 9-point scale that ranged from "did not drink this amount" to "everyday." Heavy drinking was defined as the maximum of these two responses. Drinks per drinking day and frequency of heavy drinking were assessed at each wave and were modeled as time varying covariates in the regression model.

2.3.2. Alcohol problems.—Alcohol problems in the past year were assessed for husbands and wives using items that were modified from the National Alcohol Survey (Clark and Hilton, 1991), the Drinker Inventory of Consequences (Miller and Tonigan, 1995), and the work of Polich and Orvis (1979). This measure contains 25 items that assessed alcohol-related problems. The measure consists of two subscales, alcohol-related marital problems and alcohol-related other problems. Participants were asked to rate how often each of these problems occurred in the past year on 6-point scale that ranged from, "has never happened" to

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"four or more times in the past year." Higher scores indicate a greater level of problem endorsement. The marital alcohol problems subscale consists of seven items. Two items ask how often the participant "hit or got into a physical fight with your partner while you were drinking" and "said harsh or cruel things to your partner while you were drinking." The remaining five items used the stem "How often has your spouse" done the following: "complain or express concern about your drinking," "hit or started a physical fight with you while you were drinking," "gotten angry about your drinking or the way you behaved while you were drinking," "avoided being around you because of your drinking," or "excluded you from activities because of your drinking." The average coefficient alpha across the three waves was 0.85 for husbands and 0.82 for wives. The other alcohol problems subscale consists of 18 items, including items such as "driven a car after drinking enough to be in trouble if a police officer had stopped you," "hit or gotten into a fight with someone other than your partner while you were drinking," "had the quality of your work (at home, school, or on the job) suffer because of drinking." The average coefficient alpha across the three waves was 0.88 for husbands and 0.84 for wives. Because of the highly skewed distribution of both the marital and other alcohol problems scores, both were log transformed for the multilevel regression model. Also, both of these variables were assessed at each wave and were modeled as time varying predictors in the regression model.

2.3.3. Depression.—Depressive symptomatology was assessed at each interview using the Center for Epidemiologic Studies Depression Scale (CES-D, Radloff, 1977). The CES-D is a 20-item self-report questionnaire. Each item is scored 0-3 with a possible total score ranging from 0 to 60. A higher score indicates a greater level of depressive symptomatology. This instrument does not provide a diagnosis of depression, however, in this report the term depression will also be used to indicate depressive symptomatology. The average coefficient alphas across the three assessments were 0.88 for husbands and 0.90 for wives.

2.4. Analysis

Descriptive statistics and correlations were used to characterize husbands' and wives' usual drinks per drinking day, frequency of heavy drinking, marriage-related alcohol problems, other alcohol problems, and level of depressive symptomatology. Paired *t*-tests compared husbands and wives on these variables at each time point. To examine the association between alcohol involvement (drinks per drinking day and frequency of heavy drinking), alcohol problems (marital and other), and depressive symptoms over time, we used multilevel modeling. Multilevel modeling is used to study nested data, such as students within schools, but it can also be applied to longitudinal studies (Hox, 2002). In this report, the repeated assessment of the couples is considered nested within the couple.

The application of multilevel modeling in longitudinal studies has many advantages over traditional analyses. A complete discussion of these advantages is available elsewhere (Hox, 2002; Raudenbush and Bryk, 2002), but briefly, the use of multilevel modeling in longitudinal studies is particularly beneficial in terms of dealing with missing data. With many other methods, participants who did not provide data for each assessment would be considered missing; however; multilevel modeling allows participants with only information from one assessment to be included in the analyses (Raudenbush and Bryk, 2002). Multilevel models also allow for the inclusion of time varying or time invariant predictors (Hox, 2002). Past research on dyadic data has often been conducted by analyzing the data with two models, one for each spouse (for a discussion of this, see Snijders and Kenny, 1999). This procedure fails to capture potentially important cross spouse influences. Multilevel modeling allows for the analysis of interrelated data (e.g., husbands and wives) within one model (Raudenbush et al., 1995). Through this model, it is possible to examine the within-spouse and across spouse influences (e.g., relation between a husband's alcohol use and his depression as well as relation

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between a wife's alcohol use and her husband's depression). Two approaches can be used, a 3 level model (where level 3 is the couple) or a multivariate 2 level model (Atkins, 2005). For this work, we will be following a model that is similar to that proposed by Raudenbush et al. (1995). This approach, a multivariate 2 level model, uses a series of indicator variables to identify wife and husband variables within one model. The multilevel analysis for the current report was conducted with HLM 6.0 (Raudenbush et al., 2004). The dependent variables in the model are husbands' and wives' depressive symptomatology. These two dependent variables were regressed on the basis of both husband and wife levels of heavy drinking, drinks per drinking day, marital alcohol problems, and other alcohol problems. In this multivariate model, husband variables could predict husband and wife depressive symptoms, and, similarly, wife variables could predict husband and wife depressive symptoms within one model. In order to assess how changes in the predictor variables over time were associated with depressive symptoms, the predictor variables were modeled as time varying predictors in the multilevel models.

3. Results

For each assessment, husbands reported a greater number of drinks per drinking day and a greater frequency of heavy drinking in the past year compared to their wives (all p's <.01) (Table 1). Similarly, husbands reported a greater number of marital alcohol problems and other alcohol problems compared to their wives at each assessment (all p's <.001). For both husbands and wives, endorsement of each of the alcohol problems was low across all waves; however, the three most commonly endorsed items for both husbands and wives marriage-related alcohol problems (across all waves) were the items that related to "saying harsh or cruel things", and that one's spouse "has gotten angry" or "expressed concern" about drinking. The least endorsed item for husbands' marriage-related alcohol problems was "how often have you hit or gotten into a physical fight with your spouse" and among women, the least endorsed time was being excluded by one's spouse because of drinking. For other alcohol problems, the most commonly endorsed items for both husbands and wives at all waves were "driven a car after drinking enough to be in trouble with the law" and saying "harsh or cruel things to someone other than your spouse while you were drinking." The least endorsed items for husbands across all waves were "how often have you been arrested for drunken driving" and "how often has drinking hurt your chances for promotion, raises, or better jobs." Among wives, the least endorsed items across waves were frequency of arrests for drunken driving and "how often have you lost or nearly lost a job because of drinking."

At each wave, wives reported significantly greater levels of depressive symptomatology compared to their husbands (all p's <.001) (Table 1). However, for both husbands and wives, the level of depressive symptomatology was fairly low. The mean level of depressive symptoms across time was fairly stable for both husbands and wives.

3.1. Cross-sectional associations for alcohol use, alcohol problems, and depressive symptoms in husbands

Correlation matrices were examined at each wave to assess the relation between the two alcohol problems variables, between the alcohol problem variables and alcohol consumption variables, and between the problem variables, consumption variables, and depressive symptoms. At all waves, husbands' marital alcohol problems and other alcohol-related problems were significantly correlated (correlations: wave 1, r =.67, p< .001; wave 2, r =.78, p <.001; wave 3, r = .72, p <.001). Among husbands, drinks per drinking day was not significantly correlated with either marital alcohol problems (correlations: wave 1, r = -.02, NS; wave 2, r = .03, NS; wave 3, r =.01, NS) or other alcohol-problems (correlations: wave 1, r = -.01, NS; wave 2, r = .01, NS; wave 3, r = .01, NS) at any wave. Frequent heavy drinking was strongly associated with both marital alcohol problems (correlations: wave 1, r = .51, p <.001; wave 2, r = .58, p

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<.001; wave 3, r = .49, p <.001) and other alcohol problems (correlations: wave 1, r = .57, p <.001; wave 2, r = .63, p <.001; wave 3, r = .57, p <.001) at all waves.

Correlations were assessed between the four sets of husband and wife predictor variables (drinks per drinking day, heavy drinking, marital alcohol problems, and other alcohol problems) and husbands' depressive symptoms. At each wave, three husband variables, specifically heavy drinking and both alcohol problems variables were cross-sectionally associated with depressive symptoms (see Table 2). Only one wife predictor, wives' marital alcohol problems, was significantly associated with husbands' depression (see Table 2).

The multilevel model was used to examine both the within spouse effects and the cross spouse effects and husband and wife depressive symptomatology within one model. For clarity, the results will be presented separately by spouse. Further, within-spouse (e.g., husband predictors and husband depression) and across spouse (e.g., wife predictors and husband depression) effects will be presented separately.

3.2. Longitudinal associations for alcohol use, alcohol problems, and depressive symptoms in husbands: within-spouse effects

When considering husband's depressive symptomatology, evidence was found to support two within-spouse predictors. Husbands' frequency of heavy drinking was positively related to husbands' depressive symptomatology (β = 0.65, p < .01) (Table 3). There was a significant positive association between husbands' marital alcohol problems and depressive symptomatology (β = 1.07, p < .05) (Table 3). Husbands' report of other alcohol problems was not longitudinally associated with husbands' depressive symptoms. Additionally, husbands' drinks per drinking day was also not associated with their depressive symptoms.

3.3. Longitudinal associations for alcohol use, alcohol problems, and depressive symptoms in husbands: across spouse effects

Wives' alcohol consumption was not longitudinally associated with their husbands' depressive symptoms. This was true for both wives' drinks per drinking day as well as wives' frequency of heavy drinking. Similarly, wives' report of marital alcohol problems and other alcohol problems were also not significantly associated with husbands' depressive symptoms.

3.4. Cross-sectional associations for alcohol use, alcohol problems, and depressive symptoms in wives

Similar to the findings for the husbands, wives' marital alcohol problems and other alcohol problems were significantly correlated at all waves (correlations: wave 1, r = .60, p < .001; wave 2, r = .76, p <.001; wave 3, r = .69, p <.001). Among wives, drinks per drinking day was not significantly associated with either marital alcohol problems (correlations: wave 1, r = .06, NS; wave 2, r = -.01, NS; wave 3, r = .01, NS) or other alcohol-problems (correlations: wave 1, r = -.06, NS; wave 2, r = .04, NS; wave 3, r = .00, NS) at any assessment. Wives' report of-frequent heavy drinking, however, was significantly associated with marital alcohol problems (correlations: wave 1, r = .38, p <.001; wave 2, r = .51, p <.001; wave 3, r = .37, p <.001) and other alcohol problems (correlations: wave 1, r = .49, p <.001; wave 2, r = .54, p <.001; wave 3, r = .49, p <.001) at each wave.

The relation between husband and wife predictors and wives' depressive symptomatology was cross-sectionally examined with correlation matrices (Table 4). Wives' heavy drinking, marital alcohol problems, and other alcohol problems were significantly associated with their own depressive symptoms at each wave (Table 4). Additionally, several of the husband predictor variables were significantly associated with wives' depression in the cross-sectional analysis (Table 4). At each assessment, husbands' marital alcohol problems were significantly

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associated with wives' depression. Husbands' heavy drinking was related to wives' depression, but this relation existed only at waves 2 and 3. Husbands' wave 3 other alcohol problems was significantly associated with wives' wave 3 depression.

3.5. Longitudinal associations for alcohol use, alcohol problems, and depressive symptoms in wives: within-spouse effects

When considering wives' depressive symptoms over time, a significant within-spouse effect was identified (Table 5). Wives' marital alcohol problems were positively associated with wives' depression ($\beta = 1.51$, $p < .05$); however, wives' other alcohol-related problems were not significantly associated with their depressive symptoms. Although frequency of heavy drinking was a within-spouse predictor of husbands' depression, wives' frequency of heavy drinking was not associated with wives' depressive symptoms. Similarly, wives' drinks per drinking day was not significantly associated with their depression.

3.6. Longitudinal associations for alcohol use, alcohol problems, and depressive symptoms in wives: across spouse effects

Husbands' marital alcohol problems were significantly associated with wives' depressive symptoms over time, with a greater frequency of husbands' alcohol problems associated with increased depressive symptoms in women ($\beta = 1.55$, $p < .01$) (Table 5). However, husbands other alcohol problems were not associated with wives' depressive symptoms. Husbands alcohol consumption (both drinks per drinking day and frequency of heavy drinking) was not significantly associated with wives depressive symptoms.

4. Discussion

Research has documented that depressive symptoms can arise or become exacerbated in the context of a variety of different interpersonal stressors (e.g., Brown and Harris, 1978; Davila et al., 1995). Many of these interpersonal stressors reflect behaviors by intimate partners that have implications for the relationship. For example, Beach et al. (2003) have found that marital discord is longitudinally predictive of husband and wife depression. Cano and O'Leary (2000) reported that women who acknowledged humiliating marital events, specifically, husbands' infidelity and threats of separation, were more likely to be diagnosed with a current major depression than women who, despite similar levels of marital discord, had not suffered a humiliating marital event. Marital aggression has also been linked to depressive symptoms (Beach et al., 2004), and desistance of marital aggression is associated with decreases in wives' depression (Quigley and Leonard, 2000). The present study indicates that alcohol problems specific to the marital relationship are predictive of wives' depression, but that this relationship does not extend to heavy drinking or more general alcohol problems, nor does it extend to husbands' depression.

A potential explanation for the relationship between heavy drinking and partner depression is that the common life experiences of couples may influence one partner's drinking and the negative affect of the other partner, although this may be more true for the cross-sectional findings than for the longitudinal findings. Negative life events, either in terms of a single trauma, an accumulation of major negative events, or the experience of minor daily stresses, have been linked to drinking, in both men and women. Similarly, these experiences may exacerbate depressive symptoms. In the context of the shared stresses of the couple, one spouse's response to those adverse responses may be an increased propensity to experience negative affect, while the other's response is an increased use of substances as a way of coping with negative affect.

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It is of importance that marital alcohol problems was predictive of wives' depression, while measures of heavy drinking were not. One perspective on the influence of drinking behaviors in the context of the relationship has focused on the "drinking partnership" established by a marital couple. In particular, certain patterns of heavy consumption by husbands and wives may not be experienced as stressful, but rather may serve a positive, supportive function in the relationship. Roberts and Leonard (1998) delineated five types of drinking partnerships. The Frequent Intimate pattern was characterized by very high levels of drinking frequency, above average levels of usual consumption, and predominant consumption at home with one's partner. These couples could not be distinguished from Light Intimate drinkers with respect to depression. In contrast, wives in couples marked by Heavy Drinking Husbands/Light Drinking Wives had significantly higher depression scores than any of the other groups. From this perspective, high levels of drinking would not necessarily be stressful to marital partners, and thereby, might not be predictive of partner depression.

It is also of interest that marital alcohol problems was predictive of wives' depression, while other alcohol problems were not. Even cross-sectionally, the other alcohol problems were either unrelated to wife depression, or evidenced a very small correlation. While some of these other alcohol problems are quite severe, these other alcohol problems may not have been as stressful for the wives. It could also be that marital alcohol problems present a more direct threat to the relationship. Given current theorizing with respect to the role of attachment security in the impact of interpersonal stress on depression, it seems likely that events that threaten relationship bonds may have a greater impact on depression than events that do not threaten these bonds.

Our findings also suggest that the effect of marital alcohol problems on partner depression has an asymmetrical association; that is, the association is confined to husband's alcohol problems and wife's depression. This pattern of results confirms the findings of previous work. For example, Cronkite and Moos (1984) examined the relation between alcohol use and depressive symptoms in a sample of 267 married couples and found that husbands' alcohol consumption was positively associated with wives' depressive symptoms, but that no relation existed between wives' alcohol consumption and husbands' depressive symptoms. In addition, it is worth noting that a similar gender difference has been observed with respect to husband's physical aggression (Beach et al., 2004). The reason for this asymmetry is not clear. It may be due to the fact that life events more generally and interpersonal life events are more strongly related to depression in females than males (e.g., Rudolph and Hammen, 1999;Windle, 1992) and may relate to a stronger affiliative need in women compared to men (Cyranowski et al., 2000). It is also possible that because women are less likely to have alcoholrelated problems compared to men, the association between wives' alcohol problems and husbands' depression is more difficult to detect.

Several limitations must be considered when interpreting this work. Although we used a widely known, reliable instrument to measure depressive symptoms, we did not have diagnostic information about depression. Nonetheless, identifying factors that can predict psychological distress are essential for not only the health of individuals, but also of their families. Our sample consisted of couples in the early years of marriage so we cannot generalize our findings to relationships of longer duration. Additionally, the sample selection procedures excluded participants who were previously married or illiterate. It is possible that individuals with higher levels of alcohol use, alcohol problems, and depressive symptoms were thus excluded due to our sampling selection. In this report, we found that marital alcohol problems in husbands were predictive of depressive symptomatology in their wives. It is possible, however, the reverse relationship exists, that is, that depression predicts alcohol involvement or alcohol-related problems. Cronkite and Moos (1984) found a husband's depressive symptoms predicted wife's alcohol consumption. Wife's depression, however, was unrelated to her husband's alcohol

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consumption. However, other work with the current sample has found that depression was not predictive of either husbands' or wives' alcohol involvement (Leonard and Mudar, 2000).

Despite these limitations, this work used a large, community sample of newly married couples to examine the relation between alcohol involvement and alcohol-related problems in one spouse and depression in his/her spouse. Support was found to suggest that marital problems brought on by alcohol use in men, but not alcohol use per se, was related to wives' level of depression. The relation between alcohol problems and partner depression highlights the need to consider treatment options for not only individuals who may be at risk for alcohol use disorders, but also spouses who could be at a higher risk for psychiatric distress. Future work will need to examine the asymmetrical patterns that were identified in this work to understand the mechanisms responsible for this finding. Additionally, there is a need to consider other specific subgroups of alcohol-related problems in one spouse and their relation to depression in his/her partner. Additionally, it will be important to determine if the associations identified here remain constant in the later years of marriage or if changes occur.

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References

Atkins DC. Using multilevel models to analyze couple and family treatment data: basic and advanced issues. J. Fam. Psychol 2005;19:98–110. [PubMed: 15796656]

Beach SR, Katz J, Kim S, Brody GH. Prospective effects of marital satisfaction on depressive symptoms in established marriages: a dyadic model. J. Soc. Person Relat 2003;20:355–371.

Beach SRH, Kim S, Cercone-Keeney J, Gupta M, Arias l. Brody GH, Hendrick S. Physical aggression and depressive symptoms: gender asymmetry in effects? J. Soc. Pers. Relationships 2004;21:341–360.

Brown, G.; Harris, T. Social Origins of Depression. Tavistock; London: 1978.

Cahalan, D.; Cisin, IH.; Crossley, HM. *American drinking practices; a national study of drinking behavior and attitudes*.. N. J. Publications Division Rutgers Center of Alcohol Studies distributed by College & University Press New Haven Conn; New Brunswick: 1969.

Cano A, O'Leary KD. Infidelity and separations precipitate major depressive episodes and symptoms of nonspecific depression and anxiety. J. Consult. Clin. Psychol 2000;68:774–781. [PubMed: 11068963]

Chadiha LA, Veroff J, Leber D. Newlywed's narrative themes: Meaning in the first year of marriages for African American and White couples. Journal of Comparative Family Studies 1998;29(1):115–130.

Clark, WB.; Hilton, ME. Alcohol in America: Drinking Practices and Problems. State University of New York Press; Albany: 1991.

Crohan SE, Veroff J. Dimensions of marital well-being among White and Black newlyweds. Journal of Marriage & the Family 1989;51(2):373–383.

Cronkite RC, Moos RH. The role of predisposing and moderating factors in the stress-illness relationship. J. Health Soc. Behav 1984;25:372–393. [PubMed: 6520359]

Crow JF, Felsenstein J. The effect of assortative mating on the genetic composition of a population. Eugen. Q 1968;15:85–97. [PubMed: 5702332]

Cyranowski JM, Frank E, Young E, Shear MK. Adolescent onset of the gender difference in lifetime rates of major depression: a theoretical model. Arch. Gen. Psychiatr 2000;57:21–27. [PubMed: 10632229]

Davila J, Hammen C, Burge D, Paley B, Daley SE. Poor interpersonal problem solving as a mechanism of stress generation in depression among adolescent women. J. Abnorm. Psychol 1995;104:592–600. [PubMed: 8530761]

Galbaud du Fort G, Bland RC, Newman SC, Boothroyd LJ. Spouse similarity for lifetime psychiatric history in the general population. Psychol. Med 1998;28:789–802. [PubMed: 9723136]

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Harris T. Depression in women and its sequelae. J. Psychosom. Res 2003;54:103–112. [PubMed: 12573731]

Hox, JJ. Multilevel Analysis: Techniques and Applications. Lawrence Erlbaum Associates; Mahwah, NJ: 2002.

Kessler RC, Crum RM, Warner LA, Nelson CB, Schulenberg J, Anthony JC. Lifetime co-occurrence of DSM-III-r alcohol abuse and dependence with other psychiatric disorders in the national comorbidity survey. Arch. Gen. Psychiatr 1997;54:313–321. [PubMed: 9107147]

Kokin, M.; Walker, I. Women Married to Alcoholics: Help and Hope for Nonalcoholic Partners. Morrow; New York: 1989.

Kreider, RM.; Fields, JM. Current Population Reports. US Census Bureau; Washington, DC: 2001. Number, timing, and duration of marriages and divorces: fall 1996; p. 70-80.

Leonard KE, Das Eiden R. Husband's and wife's drinking: unilateral or bilateral influences among newlyweds in a general population sample. J. Stud. Alcohol Suppl 1999;13:130–138. [PubMed: 10225497]

Leonard KE, Mudar P. Alcohol use in the year before marriage: alcohol expectancies and peer drinking as proximal influences on husband and wife alcohol involvement. Alcohol Clin. Exp. Res 2000;24:1666–1679. [PubMed: 11104114]

Leonard KE, Mudar P. Peer and partner drinking and the transition to marriage: a longitudinal examination of selection and influence processes. Psychol. Addict. Behav 2003;17:115–125. [PubMed: 12814275]

Maes HH, Neale MC, Kendler KS, Hewitt JK, Silberg JL, Foley DL, Meyer JM, Rutter M, Simonoff E, Pickles A, Eaves LJ. Assortative mating for major psychiatric diagnoses in two population-based samples. Psychol. Med 1998;28:1389–1401. [PubMed: 9854280]

McLeod JD. Spouse concordance for depressive disorders in a community sample. J. Affect. Disord 1993;27:43–52. [PubMed: 8432960]

Miller, WR.; Tonigan, JS. The Drinker Inventory of Consequences (Drinc) an Instrument for Assessing Adverse Consequences of Alcohol Abuse, Test Manual. NIAAA; Rockville, MD: 1995.

Moos, RH.; Finney, JW.; Cronkite, RC. Alcoholism Treatment: Context, Process, and Outcome. Oxford University Press; New York: 1990.

Muthen BO, Muthen LK. The development of heavy drinking and alcohol-related problems from ages 18 to 37 in a U.S. National sample. J. Stud. Alcohol 2000;61:290–300. [PubMed: 10757140]

Orford J. Alcohol and the family—an international review of the literature with implications for research and practice. Res. Adv. Alcohol Drug 1990;10:81–155.

Polich, JM.; Orvis, BR. Alcohol Problems: Patterns and Prevalence in the US Air Force. Rand; Santa Monica: 1979.

Quigley BM, Leonard KE. Alcohol and the continuation of early marital aggression. Alcohol Clin. Exp. Res 2000;24:1003–1010. [PubMed: 10924003]

Radloff LS. The CES-D scale: a self report depression scale for research in the general population. Appl. Psychol. Meas 1977;1:385–401.

Raudenbush SW, Brennan RT, Barnett RC. A multivariate hierarchical model for studying psychological change within married couples. J. Fam. Psychol 1995;9:161–174.

Raudenbush, SW.; Bryk, AS. Hierarchical Linear Models: Applications and Data Analysis Methods. Sage Publications; Thousand Oaks: 2002.

Raudenbush, SW.; Bryk, AS.; Cheong, YF.; Congdon, R. HLM 6. Scientific Software International Inc.; Lincolnwood: 2004.

Roberts LJ, Leonard KE. An empirical typology of drinking partnerships and their relationship to marital functioning and drinking consequences. J. Marriage Fam 1998;60:515–526.

Rudolph KD, Hammen C. Age and gender as determinants of stress exposure, generation, and reactions in youngsters: a transactional perspective. Child Dev 1999;70:660–677. [PubMed: 10368914]

Snijders TAB, Kenny DA. The social relations model for family data: a multilevel approach. Pers. Relationship 1999;6:471–486.

Windle M. A longitudinal study of stress buffering for adolescent problem behaviors. Dev. Psychol 1992;28:522–530.

Wiseman, JP. Aldine de Gruyter; New York: 1991. The Other Half: Wives of Alcoholics and their Social-Psychological Situation.

Zweben A. Problem drinking and marital adjustment. J. Stud. Alcohol 1986;47:167–172. [PubMed: 3713180]

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Table 1

Descriptive statistics

	Husband variables: mean (S.D.)			Wife variables: mean (S.D.)		
	Wave 1	**Wave 2**	**Wave 3**	**Wave 1**	**Wave 2**	**Wave 3**
Drinks per drinking day	3.69 (3.81)	3.61 (3.92)	3.38 (3.53)	2.35 (2.55)	2.37 (3.10)	2.15 (2.75)
Frequent heavy drinking	2.60 (1.74)	2.48 (1.71)	2.37 (1.60)	1.95 (1.20)	1.83 (1.23)	1.78 (1.47)
Marital alcohol problems	1.38 (3.44)	1.61 (4.03)	1.37 (3.48)	0.63 (2.12)	0.77 (2.76)	0.54 (1.94)
Other alcohol problems	2.61 (5.61)	2.55 (6.34)	2.04 (5.52)	1.06 (2.80)	1.14 (4.02)	0.84 (3.35)
Depression	9.90 (8.32)	9.91 (8.88)	9.84 (9.34)	12.38 (9.73)	11.91 (10.24)	11.66 (10.58)

Notes: Differences between husbands and wives are significant for each variable ($p < .001$). The variable frequent heavy drinking was the maximum of the frequency of intoxication in the past year and frequency of six or more drinks (range 0-9). The marital alcohol problem variables was the frequency of 7 alcohol-related problems occurring in the past year that related to the marriage (range 0-28) and the other problems was the frequency of 18 alcohol-related problems occurring in the past year that were not related to the marriage (range 0-72). Depression was assessed with CES-D (range 0-60). For all scales, higher scores indicate greater impairment.

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Table 2

Cross-sectional association between husband and wife alcohol variables and husband depression at each wave

	Husband depression		
	Wave 1	**Wave 2**	**Wave 3**
Husband, drinks per drinking day	.00	.03	-.02
Husband, frequent heavy drinking	.14**	.18**	.22**
Husband, marital problems	.19**	.23**	.25**
Husband, other problems	.16**	.18**	.25**
Wife, drinks per drinking day	.02	.01	.00
Wife, frequent heavy drinking	.02	.05	.05
Wife, marital problems	.05	.07	.16**
Wife, other problems	.04	.03	.08

** Correlation is significant at the 0.01 level two-tailed.

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Table 3

Multilevel model predicting husband depression

Predictor	Regression coefficient	Standard error
Husband's drinks per drinking day	- 0.21	0.32
Husband's heavy drinking	0.65**	0.20
Husband's marital alcohol problems	1.07*	0.46
Husband's other alcohol problems	0.42	0.39
Wife's drinks per drinking day	0.09	0.33
Wife's heavy drinking	-0.32	0.28
Wife's marital alcohol problems	0.76	0.55
Wife's other alcohol problems	-0.45	0.49

Note: The multilevel model incorporated both outcomes (i.e., husband's depression and wife's depression) within one model; however, for ease of presentation, the table is presented separately for wives and husbands.

* $p < .05$.

** $p < .01$.

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Table 4

Cross-sectional association between husband and wife alcohol variables and wife depression at each wave

	Wife depression		
	Wave 1	**Wave 2**	**Wave 3**
Wife, drinks per drinking day	-.03	-.03	-.02
Wife, frequent heavy drinking	.11**	.17**	.19**
Wife, marital problems	.15**	.24**	.18**
Wife, other problems	.10**	.20**	.13**
Husband, drinks per drinking day	-.02	.02	.08
Husband, frequent heavy drinking	.05	.10*	.14**
Husband, marital problems	.10**	.18**	.22**
Husband, other problems	.00	.08	.12*

* Correlation is significant at the 0.05 level two-tailed.

** Correlation is significant at the 0.01 level two-tailed.

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Table 5

Multilevel model predicting wife depression

Predictor	Regression coefficient	Standard error
Wife's drinks per drinking day	-0.61	0.41
Wife's heavy drinking	0.46	0.36
Wife's marital alcohol problems	1.51*	0.67
Wife's other alcohol problems	0.55	0.57
Husband's drinks per drinking day	-0.02	0.37
Husband's heavy drinking	0.20	0.22
Husband's marital alcohol problems	1.55**	0.49
Husband's other alcohol problems	-0.81	0.43

Note: The multilevel model incorporated both outcomes (i.e., husband's depression and wife's depression) within one model; however, for ease of presentation, the table is presented separately for wives and husbands.

* $p < .05$.

** $p < .01$.