Alcohol and Premarital Aggression among Newlywed Couples*

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ABSTRACT. The present study examined the relationship between husband and wife alcohol use and premarital aggression, and evaluated a social learning model of alcohol and aggression that posited a moderating role for alcohol beliefs and aggressive motivations. Couples (age 18 to 29) entering their first marriage were approached after they had applied for a marriage license and interviewed concerning demographic factors and premarital aggression. These couples were recruited for the longitudinal study and given questionnaires assessing hostility, marital dissatisfaction, alcohol use and alcohol beliefs. Overall, 76% of the couples who agreed to participate returned the questionnaires. Husbands (n = 607) were approximately 24 years old, and wives were 1 year younger. Reflecting the urban setting, 72% were white and 24% were black. The results indicated a significant relationship between husband heavy alcohol use and premarital aggression. In addition, there were significant interactions between husband heavy alcohol use and marital dissatisfaction, and between husband heavy alcohol use, husband hostility and husband belief in alcohol as an excuse for aggression. These results suggested that alcohol use and premarital aggression are associated even in the absence of alcohol beliefs, but that the presence of appropriate beliefs strengthens the association. (*J. Stud. Alcohol*, Supplement No. 11: 96-108, 1993)

SINCE the early 1970s, there has been a growing awareness that violence within the marriage, considered both in terms of lifetime and 1-year prevalence, is very widespread. For example, Straus et al. (1980) reported a 1-year prevalence of marital aggression of 15% in a nationally representative sample. Approximately 10 years later, the prevalence remained roughly comparable, with a yearly prevalence of approximately 16% for violence within the couple and 11% for husband-to-wife violence (Straus and Gelles, 1990). Prevalence rates among younger adults are two to three times greater than the rates observed in cross-sectional studies of married couples, a fact often obscured in general population surveys (Cazenave and Straus, 1990; McLaughlin et al., 1992; O'Leary et al., 1989). For example, the yearly prevalence rate of husband-to-wife violence reported by O'Leary et al. was 31% before marriage, 27% during the first 18 months of marriage and 25% between 18 and 30 months. Considering premarriage through 30 months, nearly 50% of the males reported aggression towards their spouse on at least one occasion. The findings of McLaughlin et al. (1992), with respect to the prevalence of premarital aggression among newlyweds, are generally congruent with these findings.

One of the most consistent, but relatively unexplored, findings in the marital violence literature has been that both excessive alcohol consumption and alcohol abuse are significant risk factors for marital aggression. Although much of the initial research demonstrating a link between the drinking pattern of the husband and marital violence was seriously flawed (see Leonard and Jacob, 1988), subsequent research addressing many of the conceptual and methodological problems has generally substantiated this relationship. For example, Coleman and Straus (1979) found considerably higher rates of marital violence among men reporting frequent drunkenness as opposed to those reporting rare or occasional drunkenness. Kaufman-Kantor and Straus (1990) examined the relationship between drinking patterns, occupational status and norms concerning aggression and marital violence. Their results suggested that binge and moderately heavy drinkers displayed more marital violence than did light drinkers. This relationship held, though it was weaker, even among those who were at a lower risk of material aggression, i.e., white-collar men who indicated a disapproval of aggression. Leonard et al. (1985) studied a sample of factory workers and reported that current alcohol abuse/dependence was related to the occurrence of physical conflict in the marriage. Further, the relationship was significant after controlling for sociodemographic factors, hostility and marital satisfaction. This finding was essentially replicated by Leonard and Blane (1992), who found that risky drinking was associated with marital aggression in a nationally representative sample of 22-year-old men after controlling for demographic factors, hostility, self-consciousness, negative affect and marital satisfaction. Reider et al. (1988) reported that among alcoholic husbands and their wives, the severity of alcohol-related

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problems on the part of the husband was significantly related to the husband's cumulative violence towards his wife after controlling for antisocial behavior, perception of family conflict and age.

In sum, although there have been a few studies that have failed to find a relationship between husband drinking patterns and marital violence (e.g., Gondolf and Foster, 1991), a substantial number of studies across both clinical and general population samples have reported a significant relationship, one that could not be shown to be a spurious effect of sociodemographic or personality factors. Although there are a number of gaps evident in the extant literature, three specific shortcomings are addressed in the present investigation: (1) the utilization of couples at different stages of family development; (2) the conceptual and methodologic focus on either the victim or the aggressor, but rarely on both; and (3) the descriptive, atheoretical perspective adopted by most of the studies.

Studies of marital aggression, with few exceptions (e.g., O'Leary et al., 1989), have targeted couples or families that were very heterogeneous with respect to their stage of family development. Thus, for example, studies of alcohol and marital aggression have included young married couples without children as well as older couples whose children have grown. While it could be that the variables that delineate family stages, such as length of marriage, presence of children, age of couple or age of children, could create a spurious relationship between heavy drinking and marital violence, this seems unlikely, because many studies have controlled for at least some of these variables in their analyses. More importantly, the failure to recognize the heterogeneous family situations neglects the possibility that alcohol may have varying effects; it may be an important factor in the aggression of families during certain stages of development, important in a different way at other stages, and irrelevant at still other stages.

One stage during which alcohol and marital aggression may be of considerable importance is in the early phases of family development, the premarital and early marital years. Both violence and heavy drinking are very prevalent among couples during this time. For example, as noted above, while the 1-year prevalence of husband-to-wife aggression is approximately 15% (Straus et al., 1980), the prevalence among engaged and newly married couples is between 30% and 40% (O'Leary et al., 1989; McLaughlin et al., 1992). This population is also at risk for higher levels of alcohol consumption. Alcohol consumption, and the attendant problems, peaks during the early 20s and declines thereafter (Blane, 1979; Clark and Midanik, 1982), both for men and for women. While there is evidence to suggest that drinking diminishes over the course of the marital transition (Miller-Tutzauer et al., 1991), it seems likely that, at least during the early years of marriage, the risk of alcohol-related problems remains elevated above that for the general population. Thus, the young newlywed population is at risk for heavy drinking, alcohol-related problems and marital aggression, and a detailed investigation of the association between alcohol use and aggression in this population is clearly warranted.

A second shortcoming in previous research is that rarely have studies been able to assess pertinent characteristics of both members of the couple. This is particularly important in the measurement of marital aggression because there is only modest agreement between husbands and wives on reports of aggression; and there is some evidence to suggest that husband reports of marital aggression are more influenced by social desirability than wife reports of victimization (Arias and Beach, 1987; Riggs et al., 1989). Broadening the focus from the "aggressor" or the "victim" to the *couple* is also of importance in the area of alcohol use. Recent research has provided evidence that the drinking patterns of women are related to experiencing marital violence (Miller et al., 1989, 1990), though it is unclear whether drinking contributes to victimization or vice versa. As research begins to develop process-oriented models of alcohol and aggression, assessments based on both the aggressor's and the victim's perspectives are of critical importance.

The final issue that has not often been addressed in studies of alcohol and marital aggression is the theoretical connections between heavy alcohol use and family violence. Although marital violence studies have often included measures of alcohol use or alcoholism, the instruments utilized have often been poor or inappropriate, and the alcohol assessment has usually been peripheral to the main thrust of the study. As a result, from theoretical rationale to measurement strategies to data analysis, alcohol use is not usually well integrated into the study. The extant literature, with the exception of a few theoretically guided studies (e.g., Kaufman-Kantor and Straus, 1990), does little more than establish that there is a relationship to explain; it provides only minimal insight as to the processes linking drinking patterns and marital violence.

One of the major theoretical approaches that has been advanced to account for the relationship between drinking patterns and marital aggression is a social learning model. This model emphasizes the "deviance disavowal" or "time out" aspects of drinking (McAndrew and Edgerton, 1969). According to this perspective, drinking and violence are linked primarily because the individual has learned that alcohol is a cause of violence and that he can avoid the responsibility for his actions by attributing his behavior to the alcohol. This model leads to the hypothesis that a pattern of heavy drinking should be more strongly related to marital violence among men who believe that alcohol facilitates aggression than among men who do not hold this belief.

Although research has examined the interrelationship of alcohol expectancies and other social and interpersonal behaviors, research specifically focused on the belief that alcohol fosters aggressive behavior is quite sparse. There is evidence to suggest that individuals do, in fact, believe that alcohol has an influence on aggressive behavior (Critchlow, 1983). However, the evidence suggesting that alcohol consumption can mitigate attributions of blame or responsibility in violent episodes is mixed. For example, Richardson and Campbell (1980) reported a nonsignificant increase in blame attributed to intoxicated wife abusers in contrast to sober abusers. Aramburu and Leigh's (1991) observers attributed more blame but less causality to intoxicated versus sober aggressors, a finding that was comparable for both male-to-male and male-to-female aggression. Thus, despite the broad cultural acceptance of alcohol as a cause of aggression, this view does not necessarily reflect an acceptance of alcohol as a mitigating circumstance in deviant behavior. From the perspective of testing a social learning view of alcohol and aggression, it could be of considerable importance to examine beliefs that alcohol *causes* aggression as well as beliefs that alcohol *excuses* aggression.

It should be recognized that while heavy drinking and alcohol expectancies might provide an excuse for marital aggression, it seems unlikely that these factors would provide a motivation to aggress. As a result, heavy drinking might be more strongly related to marital violence among individuals who believe that alcohol facilitates aggression and who also have relationship contexts or individual characteristics that reflect temporally stable instigations to aggress. That is, heavy drinking patterns would be related to higher levels of marital violence among those who have both a motive to aggress as well as beliefs that provide an excuse for aggression occurring while drinking. Although there are many potential aggressive instigations, two general sources are of particular relevance to marital violence, husband's marital dissatisfaction and dispositional hostility.

It is certainly the case that among general population samples, there are couples who acknowledge marital aggression and yet are relatively satisfied with their marriages (O'Leary et al., 1989). Clearly, marital dissatisfaction is not a necessary condition for marital violence. It is, nonetheless, strongly related to marital violence. Several cross-sectional studies have demonstrated that marital dissatisfaction, marital discord and verbal aggression within the marriage are related to marital violence (Brinkerhoff and Lupri, 1988; Leonard and Blane, 1992; Margolin et al., 1988; Rosenbaum and O'Leary, 1981). O'Leary (1988), for example, links marital aggression directly to episodes involving negative interchanges between the partners. Although such episodes can and do occur among maritally satisfied couples, the frequency of such episodes are considerably more common among dissatisfied couples. This relationship is of such strength that reports of these interchanges (arguments, conflicts, disagreements) are often a key element in the measurement of marital dissatisfaction. Thus, marital dissatisfaction may be viewed as providing a relatively stable relationship context that facilitates the occurrence of marital aggression.

High levels of anger or deficits in anger control have also been posited as a causal factor in marital violence. Maiuro et al. (1986) compared a clinical sample of violent men to a nonviolent comparison sample and found differences on six of the seven subscales of the Buss-Durkee Hostility Inventory. In a subsequent study, Maiuro et al. (1988) assessed domestically violent men, two samples of more generally violent men and a nonviolent control group. Across several measures of hostility, the sample of domestically violent men was more hostile than the nonviolent controls but was not different from the two samples of generally violent men. Other studies that have linked anger or hostility to marital aggression include Barnett et al. (1991), Hamberger and Hastings (1991), Kaufman-Kantor and Straus (1990), Leonard and Blane (1992), and Leonard et al. (1985).

The purpose of the present study is to examine a social learning model of the relation between excessive alcohol consumption and marital aggression within a marital development perspective. Four general issues will be examined. First, is there an association between excessive alcohol use and premarital aggression? Second, can the association be shown to be spurious when husband and wife background and personality characteristics that are linked to marital aggression are considered? Third, does the wife's drinking or the interaction of wife's and husband's drinking relate to premarital aggression? Fourth, does alcohol interact with hostility, marital dissatisfaction or the beliefs that alcohol causes or excuses aggression to predict premarital aggression?

Method

Subjects

Subjects in the present study were 607 couples participating in the first wave of a 3-year prospective study of newly married couples. In order to participate, the couples had to meet several criteria. Specifically, only couples who indicated that this was the first marriage for both husband and wife and that the husband was between the ages of 18 and 29, inclusive, were eligible to participate. The average age of the sample was approximately 1 year lower than the average age of couples at marriage nationally, primarily because first marriages involving men over 30 years of age were excluded. Husbands were approximately (mean ± SD) 24.1 ± 2.8 years old at the time they married, and wives were 23.2 ± 3.4 years old.

TABLE 1. Sample characteristics

	Husband	Wife
Age (mean ± SD)	24.1 ± 2.8	23.2 ± 3.4
Education (%)		
Some high school	11	10
High school graduate/GED	31	24
Some college/trade school	35	40
College graduate	15	17
Postgraduate	8	9
Race (%)		
White	72	74
Black	24	22
Hispanic	3	3
Other	1	1
Religion (%)		
Catholic	52	53
Protestant	15	15
Fundamentalist	22	24
No affiliation	9	6
Other	2	2
Employed (%)	80	57
Wife has any children (%)		32
Wife currently pregnant (%)		14

Reflecting the urban area in which the couples reside, 72% of the husbands and 74% of the wives were white. Approximately one quarter of the sample was black (24% of husbands and 22% of wives). Overall, as can be seen in Table 1, the sample is relatively diverse with respect to sociodemographic characteristics.

Procedures

Couples were approached at the city courthouse after they had applied for a marriage license and were asked to participate in an interview for which the couple would receive $5. Couples who initially refused to participate were asked whether they would complete both a brief interview collecting basic sociodemographic information and a supplemental questionnaire at home covering the remaining interview information. Over the course of the study, 1,415 eligible couples were approached, and 1,082 couples (76%) were successfully interviewed.

Couples who agreed to the interview were then recruited into the longitudinal study and were informed that each would receive $25 for participating. Approximately 10% refused to participate. Couples who agreed to participate were asked to provide their names and addresses and the names and addresses of two individuals who could be contacted by the project in order to reach the subjects. Couples were each given a consent form,[1] a questionnaire packet and a separate postage-paid envelope with which to return the questionnaire. The couples were instructed to complete the questionnaires in private within 2 weeks and not to discuss the contents until both members had completed and returned the questionnaires. Multiple contacts were made over the 3 months following the initial contact to encourage completion of the questionnaire.

Complete questionnaires were collected from both husband and wife in 76% of the couples who agreed to participate. In an additional 5% of the couples, we have responses from either husband or wife. Although a higher response rate could have been obtained by continued follow-up, couples followed up after 4 months would be well into their first year of marriage and the data would not be comparable to the data collected prior to and in the first couple of months of marriage. Approximately one-third of the couples responded prior to their marriage date, and an additional 42% responded during the first month of their marriage. For the present analysis, only couples who responded within 4 months of contact were included (607 of 632 complete couples).

Given that all of the couples who agreed to participate in the longitudinal study had completed the brief interview at the courthouse, there is a considerable amount of data available with which to compare complete and incomplete couples (no return or refused to participate). There were some differences between couples who completed the Time 1 questionnaires and those who did not. Black couples were less likely to complete the assessment than other racial/ethnic groups. Couples living together prior to marriage and couples in which the husband was unemployed were more likely to complete the assessment. Despite these significant findings, the impact of these biases is likely to be relatively small given that effect sizes as measured by Pearson r's were quite small (r = .07 to .11). Of importance, refusers and incomplete cases did not differ from complete cases with respect to premarital aggression or heavy drinking within the couple.[2]

As noted above, to ensure a high screening rate, couples who initially refused the screening interview were offered a brief screening interview and a supplemental questionnaire instead. This markedly increased the proportion of couples who agreed to be screened and, subsequently, to participate in the study. Comparisons between full-screen participants and brief-screen participants suggested that the brief-screen participants tended to have a higher education level, had a higher occupational level, were more likely to be employed and were older. The overall impact of these differences was quite minimal, with the significant correlations (r's) ranging from .06 to .11. In addition, couples who completed the full screen reported significantly less premarital aggression than couples who completed the brief screen and reported on premarital aggression with a supplemental questionnaire.[3] As a result, the method of collecting premarital aggression data was utilized as a covariate in the analyses.

Instruments

Sociodemographic and background variables. A variety of sociodemographic measures were assessed at the screening. Among the factors were age, education and oc-

cupation of both the husband and the wife. Other important factors assessed include race/ethnicity, religion, employment situation, whether the couple already had children or were expecting a child, and whether and for how long the couple had lived together prior to marriage.

Heavy alcohol consumption. The assessment of alcohol consumption focused on incidents of frequent excessive drinking rather than overall consumption, because several studies have suggested that the former is more relevant to the occurrence of aggression (Kaufman-Kantor and Straus, 1990; Leonard and Blane, 1992; Leonard et al., 1985). The primary measure was the Alcohol Dependency Scale (ADS) (Skinner and Allen, 1982). This is a 26-item scale that was derived through the use of factor analysis of the Alcohol Use Inventory (Wanberg et al., 1977). It includes items concerning the loss of behavioral control (such as blackouts and gulping drinks), obsessive-compulsive drinking style (such as sneaking drinks and always having a bottle handy), and psychoperceptual and psychophysical withdrawal (such as hangovers and hallucinations). The reliability and validity of this instrument have been described by Skinner and Allen (1982) (alphas in the present study were .80 for both husband and wife versions). Given the low mean score in the present nonclinical sample, higher scores are not necessarily indicative of alcoholism, but rather reflect a risky drinking style marked by occasional blackouts and passing out. Two additional questions assessing the frequency with which the subject had consumed six or more drinks at a single sitting and the frequency of getting drunk were asked of both husband and wife. The average intercorrelations among these three measures were .61 for husbands (ranging from .49 to .77) and .59 for wives (.54 to .68). The standardized values of the ADS, the frequency of heavy drinking and the frequency of getting drunk were averaged, yielding two scores, husband heavy drinking and wife heavy drinking.

Angry/aggressive disposition. Three scales were used to assess the angry/aggressive disposition that has been linked to aggressive behavior. The Spielberger Trait Anger Scale (STAS) (Spielberger et al., 1979) was used as a measure of hostile affect. This 10-item scale has extensive norms and excellent psychometric properties (alphas = .87 for husband and .88 for wife). The assault subscale of the Buss-Durkee Hostility Inventory (Buss and Durkee, 1957) was used to assess the individual's report of his behavioral tendencies with respect to actual physical aggression. This subscale manifests good levels of reliability and relates to aggressive behavior in the laboratory (Genthner and Taylor, 1973). The reliabilities in this sample were .81 for husbands and .78 for wives. The third scale was the Permissiveness in Respect to Aggression devised by Bruun (1959). This scale assesses the extent to which subjects endorse positive attitudes toward fighting and aggression. The reliability of this scale was .68 for husbands and .64 for wives. For husbands, the three hostility measures had an average intercorrelation of .47 (ranging from .35 to .55). Among wives, the average intercorrelation was .36 (ranging from .19 to .45). As with the alcohol measures, the hostility measures were standardized, and the mean standardized scores for husbands and for wives were utilized in the analyses.

Relationship dissatisfaction. Two scales were utilized to assess marital dissatisfaction. The Miller Social Intimacy Scale (MSIS) (Miller and Lefcourt, 1982) was used to assess positive feelings about the spouse. The MSIS contains 17 items addressing self-disclosure with one's partner and generally positive feelings about the relationship. The reliability of this measure was .89 for husbands and .85 for wives. The second measure was the Family Assessment Measure (FAM) (Skinner et al., 1984). This scale is a self-report instrument that explores marital/familial strengths and weaknesses in several areas: role performance, communication, affective involvement, values and norms, control and task accomplishment. The dyadic version was utilized to gauge subjects' overall satisfaction with their partner across these relationship domains. The instrument manifested a very high level of reliability (alphas were .93 for both husbands and wives). The two scales correlated .56 among husbands and .61 among wives. Again, these two scales were standardized, and the averages for husband and for wife were used in the analyses.

Alcohol beliefs. Two aspects of alcohol expectancies were of interest: the husband's belief concerning the effects of alcohol intoxication and his willingness to accept or excuse deviant behaviors performed by intoxicated persons. The power and aggression subscale of the Alcohol Effects Questionnaire (AEQ) developed by Rohsenow (1983) was used in the present study. Since expectancies appear to differ as a function of the dose being rated (Collins et al., 1990), subjects were asked their beliefs with respect to the effects of enough alcohol to become intoxicated on people in general. The reliability of the power and aggression subscale (AEQ-PA) was .72 for husbands in the present study.

Although the expectancy that alcohol causes aggression may be of importance, the social learning approach emphasizes that it is the belief that intoxicated behavior can be excused that is critical to whether an individual would be aggressive while drinking. This was assessed with the six-item Permissiveness in Respect to Aggression while Intoxicated Scale (PRAI) devised by Bruun (1959). This scale included items such as, "One should not do things when drunk that are unfitting when one is sober" and "A person who fights when he has been drinking cannot really be blamed for his behavior."[4] This scale manifested a reliability of .63 for husbands. The AEQ-PA and the PRAI scales were significantly correlated. However, the magnitude was low, $r = -.18$, and the scales were con-

TABLE 2. Bivariate correlations among predictor variables and premarital aggression

	1	2	3	4	5	6	7	8	9
Wife									
Hostility									
Marital dissatisfaction	.42†								
Heavy alcohol use	.19†	.17†							
Husband									
Hostility	.30†	.29†	.15†						
Marital dissatisfaction	.22†	.47†	.09‡	.38†					
Heavy alcohol use	.09‡	.20†	.43†	.35†	.25†				
AEQ-PA	.00	−.06	.02	.03	−.14†	−.02			
PRAI	.16†	.15†	.14†	.28†	.28†	.28†	−.18†		
Premarital aggression	.30†	.35†	.11‡	.29†	.30†	.24†	−.00	.10‡	

†$r \geq .14$, $p < .01$. ‡$r \geq .09$, $p < .05$.

sidered to be sufficiently distinct to warrant separate analyses.

Husband-to-wife premarital aggression. For this purpose, an abbreviated Conflict Tactics Scale (CTS) (Straus, 1979) was administered to both members of the couple during the initial screening. Given the context of this administration, a shortened version that asked only about husband's aggressive behavior and lower levels of aggression was used. Both husband and wife rated the number of times the husband had "pushed, grabbed, or shoved his wife" or had "slapped or hit his wife." The dependent measure was calculated as the average of husband and wife reports on these two items. The reliability of this four-item scale was .79. This score was then transformed with a lognormal transformation to improve its distribution qualities.

Results

Bivariate analyses

The bivariate and regression analyses involved eight substantive predictor variables, husband and wife hostility, marital dissatisfaction, and heavy drinking, and husband score on the AEQ-PA and the PRAI. The first set of analyses focused on the bivariate relationships among the predictor variables and between the predictor variables and the criterion variable. These correlations are presented in Table 2. There are several features of this table that are worth noting. First, there were moderate relationships among hostility, marital dissatisfaction and husband and wife heavy drinking, with these relationships present for both husbands and wives. Second, for each specific domain, husbands' and wives' scores were moderately correlated with each other. Third, the AEQ-PA was not significantly related to the other substantive variables, with the exception of a −.16 correlation with husband marital dissatisfaction. In contrast, the PRAI Scale was related to most of the substantive variables, though the correlations ranged from low for the correlations with wife variables to moderate for the correlations with husband variables. At the bivariate level, husband heavy alcohol use was associated with premarital aggression. The relationship between wife heavy alcohol use and premarital aggression was also significant.

Prediction of premarital aggression

To examine the various hypotheses concerning the predictors of premarital aggression, stepwise multiple regressions were conducted (see Table 3).[5] The first hypothesis to be examined was whether the observed relationship between husband heavy drinking and premarital violence could be attributed to husband and wife sociodemographic, personality and relationship factors. In the first step of this analysis, sociodemographic factors were included in the equation in a stepwise fashion until none of the remaining sociodemographic factors were related to premarital aggression at a $p < .10$ level. Sociodemographic factors were included in this manner because many of these variables were highly intercorrelated and we wanted to select only pertinent variables for inclusion.

TABLE 3. Summary of multiple regression analyses

	Premarital aggression		
	β	R^2	ΔR^2
Step 1		.12	.12*
Time living together	.20*		
Screen (full = 0, brief = 1)	.14*		
Husband age	−.10‡		
Wife race	.07§		
Husband education	−.09§		
Wife education	−.08§		
Step 2		.24	.12*
Husband marital dissatisfaction	.10‡		
Husband hostility	.12†		
Wife marital dissatisfaction	.17*		
Wife hostility	.12†		
Step 3		.26	.02†
Husband heavy drinking	.15*		
Wife heavy drinking	−.05		
Step 4		.26	.00
Husband × Wife heavy drinking	.01		

*$p < .001$. †$p < .01$. ‡$p < .05$. §$p < .10$.

TABLE 4. Multiple regression analyses of the social learning model

	Equation 1				Equation 2		
	β	R^2	ΔR^2		β	R^2	ΔR^2
Step 1		.12	.12			.12	.12
Step 2		.24	.12			.24	.12
Step 3		.26	.02			.26	.02
Step 4		.26	.00			.26	.00
PRAI	−.08			AEQ-PA	.03		
Step 5		.29	.03*			.29	.03*
Alc × PRAI	−.03			Alc × AEQ-PA	.10‡		
Alc × Host	.05			Alc × Host	.02		
Alc × Mar Dis	.08‡			Alc × Mar Dis	.08‡		
Mar Dis × PRAI	−.09‡			Mar Dis × AEQ-PA	−.01		
Mar Dis × Host	.13†			Mar Dis × Host	.09‡		
Host × PRAI	−.02			Host × AEQ-PA	−.01		
Step 6		.30	.01‡				
Alc × Host × PRAI	−.07‡						

*$p < .001$. †$p < .01$. ‡$p < .05$.

Note: AEQ-PA = Alcohol Effects Questionnaire–Power and Aggression Subscale; Alc = Husband Heavy Drinking; Host = Husband Hostility; Mar Dis = Husband Marital Dissatisfaction; PRAI = Permissiveness in Respect to Aggression while Intoxicated.

A number of sociodemographic factors were related to premarital aggression ($F = 13.25$, 6/600 df, $p < .001$). The strongest predictor was the length of time the couple had lived together ($\beta = .200$, $t = 4.85$, $p < .001$). Also, as noted above, the methodological differences in the context of data collection significantly predicted premarital aggression ($\beta = .144$, $t = 3.72$, $p < .001$). Husband's age was also a significant predictor ($\beta = -.100$, $t = -2.37$, $p < .05$). Aside from these highly significant factors, there were trends toward higher levels of premarital aggression among the less educated (β for husband's educational level = −.087, $p < .10$; β for wife's education = −.084, $p < .10$) and nonwhite couples (β for wife's race = .069, $p < .10$). Together, the sociodemographic and methodologic factors accounted for 11% of the variance.

In Step 2, the husband and wife scores on hostility and relationship dissatisfaction were entered. All four of these factors were significantly and uniquely associated with premarital aggression (husband hostility, $\beta = .122$, $t = 2.96$, $p < .01$; husband marital dissatisfaction, $\beta = .100$, $t = 2.35$, $p < .05$; wife hostility, $\beta = .117$, $t = 2.82$, $p < .01$; wife marital dissatisfaction, $\beta = .174$, $t = 3.96$, $p < .001$). These four variables accounted for an additional 12% of the variance.

After controlling for these sociodemographic, dispositional and relationship variables, the effects of husband and wife heavy drinking were examined. These two factors were entered as a block and accounted for 1.6% of the variance in premarital aggression. As with the bivariate analyses, husband heavy drinking was significantly associated with premarital aggression ($\beta = .150$, $t = 3.55$, $p < .001$); however, wife heavy drinking was not ($\beta = -.046$, $t = -1.14$, $p > .25$). The next step in the analyses was to include the interaction term for husband and wife heavy drinking. This term was not significant ($\beta = .008$, $t < 1$, $p > .50$) and was dropped from the equation.

Social learning model of alcohol and premarital aggression

In order to examine the hypothesis that the relationship between heavy alcohol use and premarital aggression would be stronger among those with both supportive beliefs and propensities to aggress, two regression analyses were conducted, one using the PRAI Scale as the beliefs variable and the other using the AEQ-PA scale. In each of these analyses, the sociodemographic factors and husband and wife hostility, marital dissatisfaction and heavy drinking were entered first, as described above. Also, the main effect of the specific belief variable of interest was entered. Then, the two- and three-way interactions pertinent to the model were added in turn. Although the four-way interaction was not specifically hypothesized, the significance of this interaction was then tested. The final model was then trimmed of nonsignificant interactions, with the exception that nonsignificant lower order interactions that were contained within significant higher order interactions were retained.

In the first equation, which used the PRAI Scale, the scale was significantly related to premarital aggression ($\beta = -.077$, $t = -1.98$, $p < .05$), suggesting higher levels of aggression among those who were less tolerant of intoxicated aggression. However, there were also several significant two-way interactions and a significant three-way interaction (Table 4). Specifically, the Marital Dissatisfaction × Husband Heavy Drinking ($\beta = .084$,

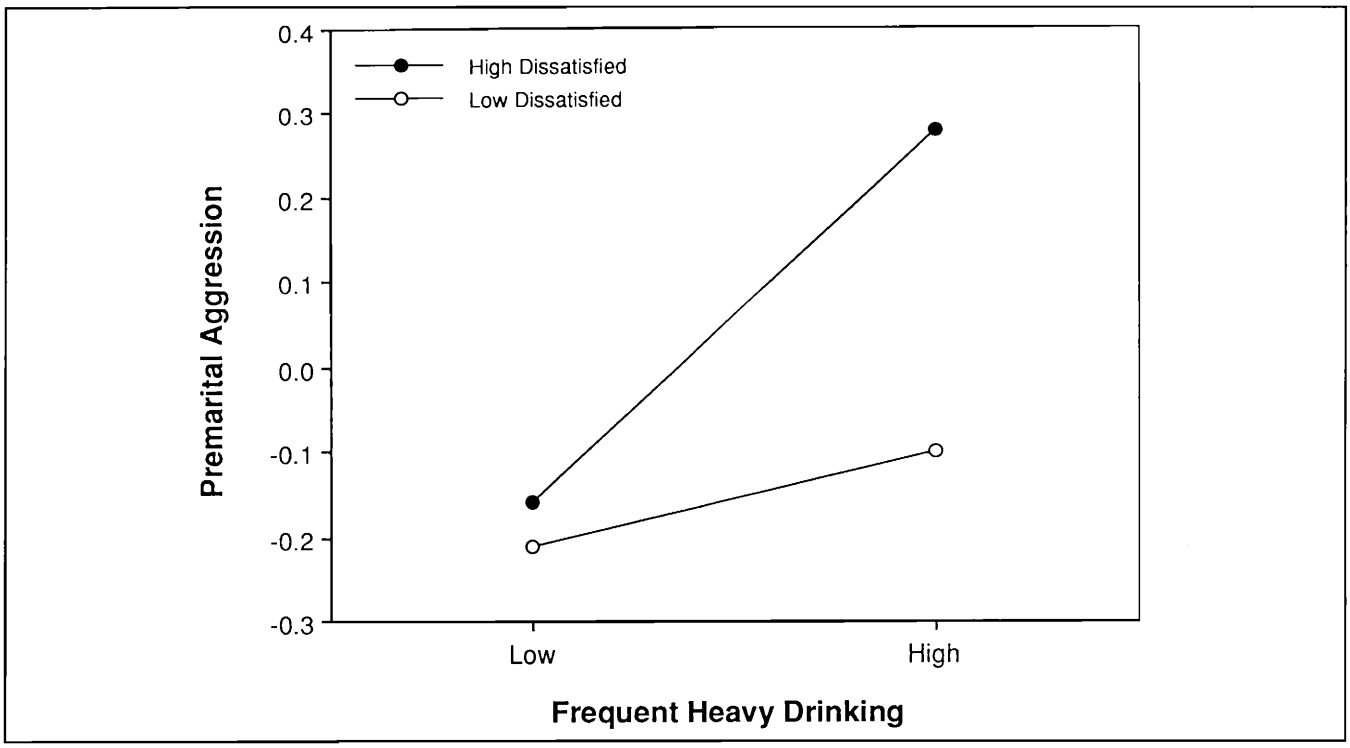

FIGURE 1. The effect of frequent heavy drinking and marital dissatisfaction on premarital aggression

$t = 1.99$, $p < .05$), Hostility × Marital Dissatisfaction ($\beta = .128$, $t = 2.89$, $p < .01$) and the Marital Dissatisfaction × PRAI ($\beta = -.086$, $t = -2.09$, $p < .05$) interactions were significant. To more fully describe these interactions, the values of the regression equation were plotted for low and high scores following the procedures outlined by Aiken and West (1991). The interaction of marital dissatisfaction and husband heavy drinking is displayed in Figure 1. As is evident in this figure, husband heavy drinking was not strongly related to premarital aggression for marital dissatisfaction scores at 1 standard deviation below the mean. In fact, the regression slope was not significant (slope = .05, $t = .86$). However, for high scores on marital dissatisfaction, husband heavy drinking was strongly and significantly related to premarital aggression (slope at high scores on marital dissatisfaction = .22, $t = 3.64$, $p < .001$). Similarly, the interaction of hostility and marital dissatisfaction indicated that hostility was unrelated to premarital aggression among those low in marital dissatisfaction (slope = $-.02$, $t = -.33$), but was significant among those at the high level (slope = .236, $t = 3.79$, $p < .001$) of marital dissatisfaction. The interaction of marital dissatisfaction and PRAI was essentially the same, with the PRAI Scale being related to premarital aggression only among those at higher levels of marital dissatisfaction.

There was also a significant three-way interaction involving hostility, permissiveness of intoxicated behavior and husband and wife heavy drinking ($\beta = -.073$, $t = -2.30$, $p < .05$). This interaction is depicted in Figure 2. Among men who scored high on hostility, heavy alcohol use was marginally related to premarital aggression (high hostile, high PRAI, slope = .12, $t = 1.88$, $p < .10$; high hostile, low PRAI, slope = .15, $p < .10$). However, among low hostile men who scored high on the PRAI, heavy alcohol use was strongly related to premarital aggression (slope = .29, $t = 3.60$, $p < .001$). The relationship between heavy drinking and premarital aggression was not significant among low hostile men who scored low on the PRAI (slope = .03, $t = .40$).

The regression analysis utilizing the power and aggression subscale of the AEQ provided results that were both comparable, and yet somewhat different. The main effect of the AEQ-PA scale was not significant ($\beta = .027$, $t < 1$, $p > .50$). Similar to the analyses of the PRAI, the interactions of Husband Heavy Drinking × Marital Dissatisfaction ($\beta = .086$, $t = 2.06$, $p < .05$) and Hostility × Marital Dissatisfaction ($\beta = .091$, $t = 2.17$, $p < .05$) were significant. However, there was also an interaction between the AEQ-PA and husband heavy drinking ($\beta = .098$, $t = 2.52$, $p < .05$). This interaction is depicted in Figure 3. As can be seen, frequent heavy drinking was not associated with premarital aggression among men who scored low on the AEQ-PA, that is, among men who did not believe that alcohol facilitated aggression (slope = .03, $t = .60$, $p > .25$). However, it

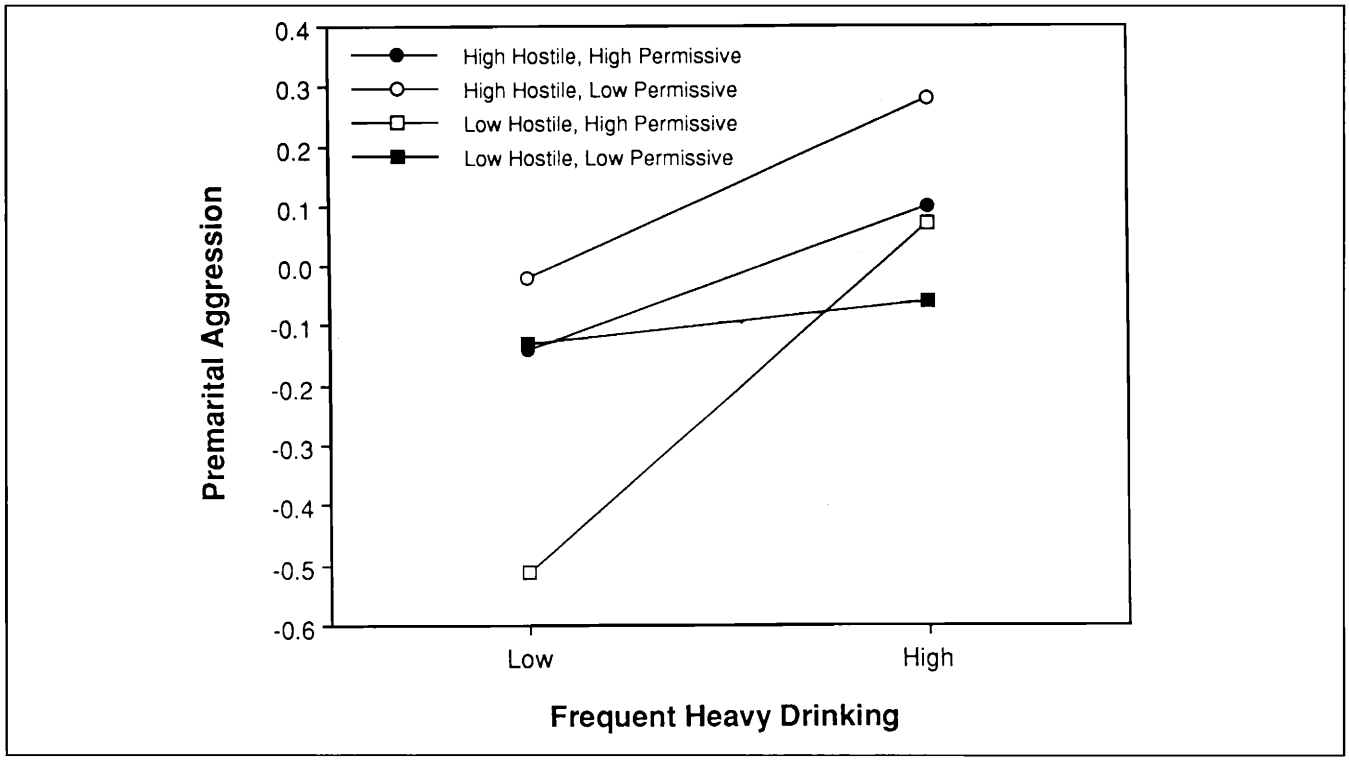

FIGURE 2. The effect of frequent heavy drinking, hostility and permissiveness of intoxicated aggression on premarital aggression

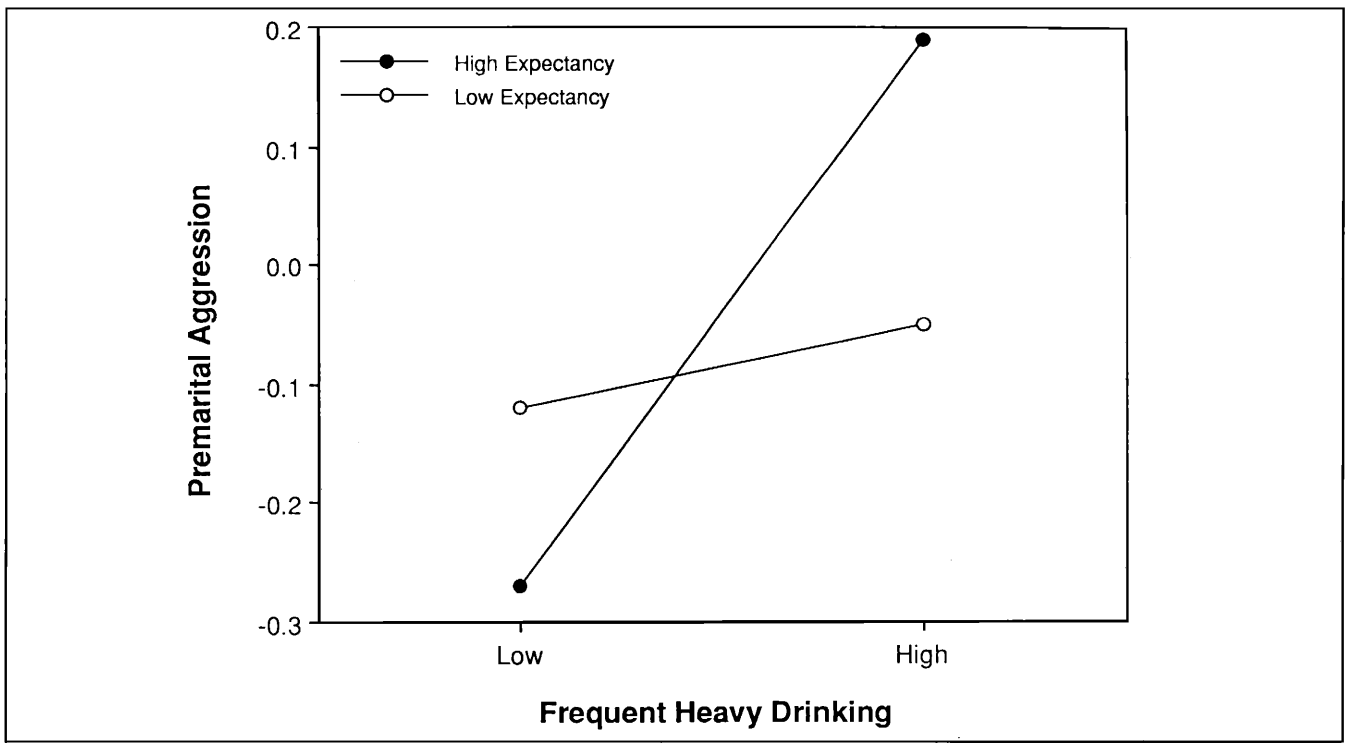

FIGURE 3. The effect of frequent heavy drinking and expectancy of power and aggression on premarital aggression

was significant among those scoring high on the AEQ-PA (slope = .23, $t = 3.74$, $p < .001$). There was no evidence for any three-way interactions in this analysis.

Discussion

The results of the present study substantiate previous research demonstrating a relationship between heavy drinking and violence among intimates and extend this literature to young newlywed couples describing their premarital experiences with aggression. Further replicating previous studies, the results also indicate that this relationship remains significant after controlling for sociodemographic factors and husband as well as wife characteristics that might create a spurious relationship between alcohol and aggression. These results also document that the alcohol/marital aggression relationship can be influenced by one's beliefs about alcohol. However, rather than simply supporting a social learning model in which only aggressively predisposed men with appropriate beliefs are influenced by heavy drinking, the results are supportive of a more complex and varied role for alcohol.

Beliefs about the effects of alcohol are often hypothesized to have an impact on behavior; however, research specifically focused on the influence of alcohol beliefs on aggressive behavior is lacking. Although several studies have examined the relationship between alcohol expectancies and behavior in laboratory settings (George et al., 1989; Rohsenow and Bachorowski, 1984), little is known concerning the relationship between alcohol expectancies and reports of actual behavior. Leigh (1990) has examined alcohol expectancies with respect to sexual behavior and reported that such expectancies interact with positive/negative views of sexuality to predict drinking in sexual situations. Dermen and George (1989) reported that in regression analyses controlling for age and hostility, drinking patterns and the expectancy that alcohol increases aggression interacted to predict the frequency of aggressive behavior.

The results of the present study provide further support for the potential significance of beliefs about alcohol as influences on behavior. However, the present study also suggests that the expected effects of alcohol may not be the appropriate alcohol belief construct under all circumstances. Instead, theoretically derived constructs that are specifically relevant to the behavior of interest should be of considerably more value. In the present study, the theoretical view that alcohol could serve as an excuse for aggression led to the inclusion of a scale assessing this specific construct. The analysis utilizing the belief that alcohol causes aggression suggested that heavy alcohol use interacted with this belief to predict aggression and that this relationship did not depend upon other predisposing factors. However, the analysis based on the measure of the belief that alcohol should mitigate blame for intoxicated behavior indicated that the alcohol-aggression relationship was strongest among low hostile men who believed that alcohol excused aggression. One implication of this finding is that in the presence of the belief that alcohol is an excuse for aggression, heavy drinking could facilitate marital aggression among men not otherwise predisposed to act aggressively. Of course, such an occurrence would be contingent on a proximal context that could elicit aggression, such as an argument or verbal insult.

Although the results do highlight the potential importance of beliefs concerning alcohol, other findings from the present study suggest that frequent heavy drinking is associated with premarital aggression independent of the influence of these alcohol beliefs. This was evident primarily in the observed interaction between alcohol consumption and marital dissatisfaction in the prediction of premarital aggression. The absence of a significant three-way interaction of alcohol consumption, marital dissatisfaction and either of the alcohol beliefs measures indicates that the interaction of alcohol consumption and marital dissatisfaction was not influenced by the relative strength of alcohol beliefs. Thus, even among husbands who score low on the alcohol beliefs measures, alcohol consumption was associated with premarital aggression if the husbands also indicated relatively higher levels of marital dissatisfaction. In short, alcohol beliefs enhance the predictive value of alcohol consumption, but these beliefs are not necessary for the relationship of alcohol consumption and premarital aggression to be observed.

Only two other studies have investigated the interaction of drinking behaviors with other factors to predict violence among intimates. In the first of these, Kaufman-Kantor and Straus (1990) examined the interaction among husband's drinking pattern, husband's approval of violence and socioeconomic status. These investigators hypothesized that the drinking patterns of husbands would be more strongly related to marital aggression among blue-collar men maintaining norms supportive of marital aggression. Overall, their findings indicated that heavier drinking patterns, particularly binge drinking, were associated with marital violence, even among white-collar men who disapproved of violence. However, the effect was very much stronger among blue-collar men and men supportive of violence. The second study to examine the interactions between drinking patterns and other distal factors in the prediction of marital aggression was Leonard and Blane (1992). The major finding was a significant interaction among heavy drinking, marital dissatisfaction and hostility. This interaction indicated that drinking patterns were strongly associated with marital aggression among the high hostile subjects, irrespective of marital dissatisfaction. However, among low hostile subjects, risky drinking was associated with marital aggression only among those high in marital dissatisfaction. These results are somewhat different than the results of the

present study, perhaps due to the use of different samples at different stages of marriage. However, the three studies together suggest the importance of hostility and marital dissatisfaction to the alcohol/marital aggression relationship. Further, it should be recognized that these three risk factors are interrelated. Analyses aimed at ascertaining the causal pathways among these three factors and marital aggression would be of considerable importance.

In contrast to the important role of husband heavy drinking in premarital aggression, wife heavy drinking was not associated with premarital aggression after controlling for husband drinking. There was no evidence that wife and husband heavy drinking interacted to predict premarital aggression. This finding conflicts with other studies of violent couples (Miller et al., 1989, 1990). There are several potential explanations of these conflicting results. Most importantly, the samples used by Miller and colleagues have tended to be older couples with longer relationships and have also included women with more serious alcohol-related problems, as well as other social problems. The general population nature of the present study resulted in relatively few women of comparable severity. Thus, it may be that alcoholism in women may facilitate victimization, but that heavy drinking short of severe alcohol-related problems may not. Alternatively, the association between women's drinking and victimization observed by Miller et al. may reflect a causal path from persistent victimization to heavy drinking. If so, it may be that such a process could not be observed in the present study, given the relatively early stage of the couple's relationship. Further evaluation of women's drinking and victimization, particularly within the context of a longitudinal design, is clearly warranted.

In addition to the findings specific to alcohol consumption, there were a number of significant associations that are pertinent to the more general predictors of premarital aggression. Of major importance is the pivotal role of husband marital dissatisfaction. Neither alcohol consumption nor hostility was related to premarital aggression among couples in which the husband professed a low level of marital dissatisfaction. However, these two factors were related to premarital aggression among the highly dissatisfied men, as well as among men at the mean on marital dissatisfaction. As was the case with alcohol consumption and alcohol beliefs, marital dissatisfaction does not appear to be either a necessary or sufficient condition for premarital aggression to occur. Thus, while previous studies have emphasized that many physically aggressive couples are not uniformly maritally dissatisfied, marital dissatisfaction, particularly in combination with another risk factor for aggression, is associated with premarital aggression.

There are a variety of aspects of the present study that strengthen confidence in the results. First, premarital aggression was defined on the basis of both husband and wife reports, which minimize reporting biases, such as social desirability. Second, the couples in the sample are approximately at the same stage of marital development and have not been winnowed by separation or divorce. Third, the sample is a general population sample rather than a clinical or volunteer sample, and the sample exhibits considerable heterogeneity with respect to sociodemographic factors. Despite these strengths, there are several limitations that should be noted. First, the premarital aggression assessment focused on less severe forms of aggression than are usually considered in the marital aggression literature. As a result, the relationship between alcohol use and very serious acts of violence or continued battering was not examined. Second, episode-specific information was not collected for incidents of premarital aggression, and thus it was not possible to determine whether any of the episodes were, in fact, accompanied by husband or wife alcohol use. Further, given the cross-sectional nature of the present analysis, factors that we have designated as statistical predictors of premarital aggression may actually be influenced by premarital aggression. For example, having engaged in premarital aggression while drinking might influence one's beliefs concerning the effects of alcohol or one's attitude toward intoxicated behavior. Given that these couples are currently being reassessed at their 1-year and 3-year anniversaries and that detailed, episodic-level data are being collected at these times, we will be able to examine these issues more closely in the near future.

Acknowledgments

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Notes

1. These research procedures were reviewed and approved by the Institutional Review Board of the Research Institute on Addictions.
2. Given the necessity of a relatively brief interview, not all of the subjects interviewed at the courthouse were asked all of these questions. For these questions, comparisons were made between complete and noncomplete cases who had agreed to a more extended version of the interview.
3. Our expectation was that we would collect more valid data in the in-person, full interview and that the inclusion of the brief interview was the best way of minimizing subject refusal. We also expected that among the brief-interview subjects, giving them the premarital aggression questions in the proper context but in a different format (questionnaire) was preferable to asking the aggression questions completely out of context. However, the differential rates of aggression between the brief and full screen suggest that the supplemental questionnaire may have provided more valid data than the individual, in-person interviews.
4. One item that asked explicitly whether violence towards a spouse was mitigated by intoxication was dropped from the scale to minimize the likelihood that scores on this scale would be influenced by premarital aggression.

5. The procedures for these analyses followed those recommended by Aiken and West (1991). Prior to the analyses, all variables were standardized. Interactions of interest were developed by multiplying the relevant standardized variables and entering these terms after the relevant main effects had been entered. In this approach, unstandardized regression coefficients are roughly interpretable as standardized regression coefficients (β's) and provide more accurate estimates for the interaction terms.

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