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Correlates of Intimate Partner Psychological Aggression Perpetration in a Clinical Sample of Alcoholic Men

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Abstract

This study longitudinally examined correlates of intimate partner psychological aggression in a sample of 178 men seeking treatment for alcoholism and their partners, building on a previous investigation examining correlates of intimate partner physical aggression (Taft et al., 2010). The men were largely Caucasian; average age was 41.0 years. Participants completed a battery of questionnaires that assessed distal and proximal predictors of psychological aggression perpetration. Distal factors, assessed at baseline, included initial alcohol problem severity, beliefs about alcohol, and antisocial personality characteristics. Proximal factors, assessed at baseline and at follow-ups 6 and 12 months later, included alcohol and drug use, relationship adjustment, and anger. Psychological aggression was assessed at all three time points. Findings showed that both groups of variables were associated with psychological aggression perpetration. Beliefs that drinking causes relationship problems and variables related to alcohol consumption exhibited the strongest associations with psychological aggression. The findings are consistent with theoretical models that emphasize both distal and proximal effects of drinking on intimate partner aggression. Implications for clinical interventions and directions for future research are discussed.

Keywords

Psychological Aggression Perpetration; Alcoholic Men

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Studies of men with alcohol use disorder (AUD) have consistently shown that heavy alcohol consumption is positively associated with the occurrence of physical aggression in marriage (Murphy & O'Farrell, 1994; O'Farrell & Murphy, 1995). Problematic alcohol use also has been linked to verbal and psychological aggression in men with AUD. For example, O'Farrell, Murphy, Neavins, and Van Hutton (2000) found that verbal aggression was five to seven times more prevalent for alcoholic husbands and their wives in contrast to a non-alcoholic comparison sample. Verbal aggression also was positively associated with frequency of drinking among alcoholics in this sample.

Theoretical models on alcohol and intimate partner aggression have discussed additional variables that may be associated with problematic alcohol consumption and may aid in the prediction of such aggression. For example, in his conceptual model on marital aggression Leonard (1993) discusses how alcohol contributes to the occurrence of intimate partner violence through its associations with, and its influence on both distal and proximal factors which set the stage for psychological and physical aggression to occur. As described by Leonard (1993), distal factors are relatively stable and include variables such as personality traits, gender roles, and norms, as well as more long standing drinking patterns. Proximal factors on the other hand are more transitory and include an individual's affective (e.g., irritability) or cognitive (e.g., inattentiveness) state, as well as acute intoxication. Both distal and proximal factors are believed to affect the context within which the negative interaction between husband and wife occurs. This model is consistent with other theoretical models which discuss how alcohol problems may indirectly lead to violence through their effects on different marital processes such as intimacy, conflict and overall relationship satisfaction (see Murphy & O'Farrell, 1996).

Research findings from studies on clinical samples of alcoholics provide support for these models. For example, Murphy and colleagues (e.g., Murphy et al., 2001; O'Farrell & Murphy, 1995) have found that variables such as antisocial personality characteristics (e.g., having a prior history of arrests), certain beliefs about alcohol (i.e., that alcohol causes marital difficulties and that marital difficulties cause drinking), and marital disharmony, in addition to binge drinking, earlier onset of problem drinking, and family history of alcohol problems, are all associated with intimate partner physical aggression perpetration.

Recently, Taft et al. (2010) examined a comprehensive set of fixed marker and variable risk factors associated with intimate partner physical aggression longitudinally among men seeking treatment for AUD. Similar to Leonard's (1993) proximal factors, variable risk factors are factors which can change within a person, either spontaneously or through some sort of manipulation or intervention. Similar to distal factors, fixed markers are variables that are not able to be changed, for example one's race or gender (Kraemer et al., 1997). Taft et al. (2010) examined these variables among alcoholic men who reported intimate partner physical aggression at baseline (i.e., in the 6 months prior to starting treatment) and among alcoholic men with no reported aggression at baseline. Findings showed that across both groups, alcohol problem severity variables (e.g., having a family history of alcohol problems, more alcohol dependence symptoms), baseline beliefs related to alcohol use (e.g., that relationship problems cause drinking, that drinking causes relationship problems), and antisocial personality characteristics were the fixed markers at baseline which predicted aggression at the 6- and 12-month follow up assessments. In terms of variable risk factors, across both groups, alcohol use variables (e.g., number of days of heavy alcohol use), relationship adjustment factors, and anger were found to be associated with aggression at the 6- and 12-month follow-up assessments.

Although research has documented a link between heavy alcohol consumption and verbal aggression among individuals with alcohol problems (O'Farrell et al., 2000), few if any

studies have comprehensively examined correlates of verbal and psychological aggression perpetration in this population. Other research using community samples has found variables such as trait anger, poor relationship adjustment, and parental aggression to be positively associated with psychological aggression perpetration (e.g., O'Leary, Malone, & Tyree, 1994; Taft et al., 2006).

The current study attempted to build on prior research by examining correlates of psychological aggression perpetration longitudinally in a sample of men with serious alcohol problems. We define psychological aggression as "coercive or aversive acts intended to produce emotional harm or threat of harm. In contrast to physical abuse, these coercive behaviors are not directed toward the target's bodily integrity, but are instead directed at the recipient's sense of self" (Murphy & Cascardi, 1999, p. 202). Using the same sample as Taft et al. (2010), we examined psychological aggression perpetration as the outcome of interest. Psychological aggression is an important focus for research because it is more pervasive and frequent than physical aggression and is considered by the majority of domestic violence survivors to have more damaging effects (Murphy & Cascardi, 1999). Consistent with Leonard's (1993) model we identified both distal and proximal factors. Distal factors included initial alcohol problem severity, baseline beliefs about alcohol, and antisocial personality characteristics. Proximal factors included alcohol and drug use, relationship adjustment, and anger. It was expected that all of the correlates examined would be associated with the occurrence of psychological aggression.

Method

Participants

Participants were 178 men who had recently begun an alcoholism treatment program and their female partners. These individuals were recruited from four substance abuse treatment programs in Massachusetts; these included inpatient or residential treatment ($n = 102$, 57.3%), intensive outpatient or day treatment ($n = 34$, 19.1%), and outpatient counseling ($n = 42$, 23.6%). None of the programs offered specific treatment for intimate partner aggression. Participants generally did not differ on study variables across the different treatment sites. However, inpatients reported a younger age of alcohol problem onset compared to intensive and general outpatients, $F(2, 175) = 4.15$, $p < .05$, and inpatients evidenced greater antisocial personality disorder symptoms compared to intensive and general outpatients, $F(2, 175) = 4.48$, $p < .05$. Male participants attended an average of 9.5 ($SD = 11.3$) days of inpatient, residential, or intensive outpatient substance use treatment and 2.1 days ($SD = 3.3$) of outpatient counseling for substance use in the 30 days prior to the baseline assessment. Couples met the following eligibility criteria: (a) currently married/cohabitating; (b) living together for at least the last 12 months; (c) living together at the time of the baseline assessment; and (d) not separated or planning a divorce. Furthermore, the male partner met criteria for current alcohol abuse or dependence according to the Structured Clinical Interview for the DSM-IV (SCID; First, Spitzer, Gibbon, & Williams, 1996), neither partner met criteria for a psychotic disorder on the SCID psychoticism screen, and the male partner consumed alcohol in the 30 days prior to his beginning treatment. The majority of male participants met criteria for alcohol dependence ($n = 174$; 98%) and four (2%) met criteria for alcohol abuse according to the SCID. In addition, 37% and 43% of the sample met diagnostic criteria for drug dependence and abuse, respectively. Couples reported having lived together for an average of 10.7 years ($SD = 9.1$). Most of the couples were married ($n = 116$; 65%); sixty-two couples (35%) were cohabitating. Participants completed a baseline assessment and two follow-up assessments 6 and 12 months later. Of the 178 couples, three did not complete the 6-month follow-up assessment, and an additional four couples did not complete the 12-month follow-up assessment. Each partner was interviewed separately.

The majority of the male participants were Caucasian (85%). Additional racial and ethnic identifications included African American (8%), American Indian or Alaskan Native (5%), Hispanic (4%), and Native Hawaiian or Pacific Islander (1%). Additionally, 3% indicated that their race or ethnicity fit none of the above categories. On average, men were 41.0 years old ($SD = 8.5$ years) and had 12.6 years of formal education ($SD = 2.4$ years). Approximately half (51%) of the men were employed full-time, 10% of the men were employed part-time, and 35% men were not employed.

Measures

Distal Factors—Male participants completed the following measures during the baseline assessment only.

Alcohol Problem Severity—The Alcohol Dependence Scale (ADS; Skinner & Allen, 1982) is a 34-item questionnaire designed to assess problematic alcohol use and symptoms of alcohol dependence. Higher scores indicate more problematic alcohol use and alcohol dependence symptoms. Cronbach's alpha for the ADS was .89. The Short Inventory of Problems-lifetime scale (SIP; Miller et al., 1994) is a 15-item measure designed to assess negative consequences associated with alcohol use that have occurred over one's lifetime. Higher scores indicate more alcohol-related negative consequences that have occurred over one's lifetime. Cronbach's alpha for the SIP was .87. The Family Tree Questionnaire (FTQ; Mann, Sobell, Sobell, & Pavan, 1985) assesses alcohol problems among biological relatives, with higher scores indicating more problems. Age of drinking problem onset was assessed by taking the average of the age at which participants first began to experience problems related to drinking, the age at which they began to get drunk regularly, and the age at which they realized that alcohol gave them relief from problems.

Alcohol Related Beliefs—Two subscales of the Alcohol Use Inventory (AUI; Wanberg, Horn, & Foster, 1977) were used in the current study. The first subscale consists of 8 items and assesses the extent to which an individual believes that relationship problems cause drinking (AUI Subscale 1). The second subscale also consists of 8 items and assesses the extent to which individuals believe that alcohol causes relationship problems (AUI Subscale 2). One of the items from AUI Subscale 2 was removed due to its focus on partner aggression. Higher scores on these two subscales indicate a stronger belief that relationship problems cause drinking and that drinking causes relationship problems. Cronbach's alpha for AUI Subscales 1 and 2 were .71 and .76, respectively. The Situational Confidence Questionnaire (SCQ; Annis, 1984) is a 20-item measure designed to assess an individuals' perceived ability to resist the urge to drink in various high-risk situations. Higher scores indicate an increased belief in one's ability to resist the urge to drink in high-risk situations. Cronbach's alpha for the SCQ was .99. The Inventory of Drinking Situations (IDS; Annis, 1982) is a 20-item measure designed to assess the extent to which individuals drank excessively during the high-risk situations listed in the SCQ, within the past 6 months, with higher scores indicating more excessive drinking during high-risk situations. Cronbach's alpha for the IDS was .97.

Antisocial Personality Characteristics—The California Psychological Inventory, Socialization Scale (CPI-So; Gough, 1994) is a 46-item questionnaire designed to assess antisocial traits and behaviors. Higher scores reflect greater socialization—that is, lower levels of antisocial traits. Cronbach's alpha for the CPI-So was .67. The SCID Antisocial Personality Disorder (APD) module (First et al., 1996) is an interview assessment of the DSM-IV criteria for APD. The total number of positively endorsed adulthood APD criteria was analyzed as a continuous measure of antisocial personality characteristics.

Proximal Factors—Male participants completed the following measures at all three assessment points. For the alcohol and drug use variables, if the male participant's self-report score was unavailable, the female partner's collateral report was used¹.

Alcohol and Drug Use—The Time Line Follow-Back interview (TLFB; Sobell & Sobell, 1996) was used to measure the number of days that the male participant used alcohol in the six months prior to each assessment. Separate scores indicate the number of days that participants engaged in any alcohol use and heavy alcohol use. The Quantity-Frequency Index (QF; Cahalan, Cisin, & Crossley, 1969) also was used to assess participants' alcohol use in the six months prior to each assessment. Frequency of alcohol use was based on the number of days an individual consumed alcohol in the six month time period. Quantity of alcohol use was based on the typical number of standard drinks (e.g., one 12-ounce beer) consumed on an average day. Male participant drug use was measured with the Drug Use Frequency scale (DUF; O'Farrell, Fals-Stewart, & Murphy, 2003). Scores were computed for the frequency of (1) all drug use, (2) stimulant drug use, and (3) non-stimulant drug use.

Relationship Adjustment—The Dyadic Adjustment Scale (DAS; Spanier, 1976) is a 32-item scale assessing the individual's overall satisfaction with the relationship and positive relationship adjustment. Both partners completed the DAS. Scores from each partner were averaged to obtain an overall satisfaction score. Higher scores indicate greater relationship satisfaction. Cronbach's alpha for the DAS ranged from .94 to .99 for both husbands and wives over the three assessments. The Positive Feelings Questionnaire (PFQ; O'Leary, Fincham, & Turkewitz, 1983) is a 17-item measure designed to assess one's positive affect towards their partner. Higher scores indicate greater positive feelings towards one's partner. Cronbach's alpha for the PFQ ranged from .95 to .97 for husbands over the three assessments.

Anger—Male participant's anger was assessed using the 10-item trait anger subscale of the State-Trait Anger Inventory (STAXI; Spielberger, 1988). The STAXI trait anger subscale measures how frequently, in general, one experiences anger-related thoughts and emotions. Higher scores indicate greater trait anger. Cronbach's alpha for the STAXI for husbands ranged from .89 to .99 over the three assessments.

Outcome Variable

Psychological Aggression—Male psychological aggression perpetration was measured at all three time points using the 8-item Psychological Aggression subscale of the Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Both partners completed the CTS2 and indicated how often each aggressive behavior (e.g., "Threatened to hit or throw something at my partner", "Insulted or swore at my partner") occurred during the six months prior to each assessment using a scale ranging from 0 (never) to 6 (more than 20 times). Items were recoded to indicate the estimated frequency of the behavior (e.g., "3 to 5 times" was coded as 4, and "11 to 20 times" was coded as 15), as recommended by Straus (1990). For each couple, the higher of the two frequency scores for each of the items was taken, and then totaled to produce an overall psychological aggression score. This method of computing aggression scores reduces the likelihood of underreporting and is consistent with prior work in this area of research (e.g., Mattson et al., 2011). Cronbach's alpha for the CTS2 ranged from .70 to .84 for both husbands and wives over the three assessments.

¹At baseline, all male participants completed the alcohol and drug use assessments. At the 6 month follow-up, alcohol and drug use data was not available for 4% ($n = 7$) of the sample. At the 12 month follow-up, alcohol and drug use data was not available for 3% ($n = 5$) of the sample. In such instances, the wives' collateral report was used.

Analyses

Since the observed scores on the outcome measure were count-derived frequencies of aggressive acts in specific time periods, Poisson regression models were fitted using the SAS GENMOD procedure (SAS Institute, 2004) to predict the natural logarithm of rates of intimate partner psychological aggression perpetration. SAS GENMOD is an advanced generalized linear modeling procedure that accommodates outcome variables lacking a normal distribution, including counts and frequencies or percentages derived from counts. To account for the correlated observations over time, we used a within-subjects repeated measures design and modeled the correlation as an autoregressive type I [AR(1)] process. Since the level of partner aggression reported at baseline represents frequency of aggressive acts committed during the 6-month interval prior to assessment, using time interval as a predictor variable, the baseline interval was specified as a reference interval in estimating the rates of aggression for each of the two subsequent 6-month intervals (i.e., the second interval representing the 6-month follow-up assessment, and the third interval representing the 12-month follow-up assessment), making each subject act as his own control. As shown in Equation 1, Poisson regression expresses the natural logarithm of the rate of the person-time outcome variable, y/N , as a linear function of the predictors, x_1 and x_2 . Therefore, the β_1 and β_2 coefficients represent the change in the log of the rate of the outcome variable per unit change in the predictor variables, x_1 and x_2 , respectively.

$$\log\left(\frac{y}{N}\right) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \varepsilon$$

For instance, in the present study, the β_1 coefficient represents the expected difference in the log of aggression rate per unit change in the predictor x_1 . The resulting beta coefficients are usually exponentiated, and the result is reported as an incidence density ratio or, more commonly, as a rate ratio that is typically interpreted as the increased or decreased event rate conditional upon change in the predictors.

We modeled the rate of the outcome using two groups of variables, distal and proximal factors. Distal factors, assessed only at baseline, and proximal factors, assessed at each of the three occasions, were examined as predictors of rates of aggression frequency at each time interval. Percentage reduction or increase in the rate of aggression was estimated based on a unit of one standard deviation for each of the predictors since single units of the predictors were small and not inherently meaningful. Additionally, we examined whether the influence of factors upon rate of partner aggression perpetration changed across the three time intervals by conducting interactions with time period and testing for significant differences using SAS GENMOD Type 3 analyses (SAS Institute Inc., 2004).

Results

Descriptive statistics for all study variables are presented in Tables 1 and 2.

Prevalence of Intimate Partner Psychological Aggression Perpetration over Time

According to male and female partner reconciled reports, nearly all men engaged in psychological aggression, with prevalence rates of 99%, 97%, and 88% at the baseline, 6-month, and 12-month assessments, respectively. Prevalence rates for psychological aggression based on male partner reports only were 95%, 90%, and 78% at baseline, 6-month, and 12-month follow-up, respectively. Prevalence rates based on female partner reports only were 97%, 90%, and 76% at baseline, 6-month, and 12-month follow-up, respectively.

Rates of Intimate Partner Psychological Aggression Perpetration Over Time

Results of Poisson regression models demonstrated that the overall rates of psychological aggression perpetration significantly decreased over time. Compared with the six months prior to treatment, the rate of psychological aggression was 1.53 times lower during the 6-month follow-up interval ($IDR = 0.66$, 95%; $CI = 0.58 - 0.75$, $p < .001$) and 1.75 times lower during the 12-month follow-up interval ($IDR = 0.57$, 95%; $CI = 0.49 - 0.66$, $p < .001$). Presented in Table 2 are the mean event frequencies for psychological aggression. The decreases in the three assessments are consistent with the significant observed decreases in aggression rates.

Distal Factors

Presented in Table 3 are results of Poisson regression models specifying rates of aggression over each of the three time intervals as predicted by baseline levels of the distal variables. For each time interval, we reported incidence density ratios using a 95% confidence interval, followed by the corresponding percentage increase or decrease in rate of aggression per standard deviation unit of the predictor. The distal variables were not repeatedly assessed; we estimated the influence of baseline levels of the distal variables upon rates of aggression perpetration at each interval. We also tested whether the associations between the distal variables at baseline and rates of aggression perpetration differed significantly across the three intervals.

Alcohol Problem Severity—As presented in Table 3, all four alcohol problem severity variables significantly predicted psychological aggression perpetration over the 6 months before baseline. For example, those with more alcohol dependence symptoms (i.e., higher ADS scores) and those with a younger age of alcohol problem onset had higher rates of psychological aggression perpetration over the 6 months prior to baseline. Alcohol dependence symptoms, negative consequences of drinking (i.e., SIP scores), and age of alcohol problem onset continued to predict psychological aggression perpetration at the 6 month follow-up, while the latter two variables predicted psychological aggression at the 12 month follow-up. The relationship between ADS scores, SIP scores, family history of alcohol problems, and psychological aggression became more attenuated over time, while the relationship between age of onset of alcohol problems and psychological aggression became stronger over time. These changes represented significant differences.

Beliefs Related to Alcohol Use—Participants' baseline beliefs that relationship problems cause drinking (i.e., AUI Subscale 1 scores), and that drinking causes relationship problems (i.e., AUI Subscale 2 scores), as well as the extent to which participants endorse drinking excessively in high-risk situations (i.e., IDS scores), significantly predicted psychological aggression perpetration over the 6 months prior to baseline. For example, believing that relationship problems cause drinking and that drinking causes relationship problems predicted higher rates of psychological aggression during the 6 months prior to baseline. Furthermore, although the effects of baseline levels of the AUI Subscale 1 and Subscale 2 scores were attenuated over time, these variables still significantly predicted psychological aggression at the 6 and 12 month assessments. Belief in one's ability to abstain from alcohol use during interpersonal conflict and negative emotional states (i.e., SCQ scores) was not related to psychological aggression perpetration during the 6-months prior to baseline. However, this variable significantly predicted lower rates of psychological aggression perpetration during the 6- and 12-month assessment intervals. Chi-square tests indicated the lower rates observed at the 6- and 12-month follow-ups represented significant differences over time.

Antisocial Personality Characteristics—Baseline levels of two indicators of antisocial characteristics (i.e., CPI-So and SCID APD scores) were associated with rates of aggression at each of the time intervals as presented in Table 3. Better socialization capacity as assessed by the CPI, was associated with lower rates of psychological aggression at baseline, as well as at the 6- and 12-month follow-up assessments. Patients with higher baseline levels of antisocial personality disorder characteristics had higher rates of psychological aggression during the 6 months prior to treatment and at the 6-month follow-up. Chi-square analyses indicated that the observed changes across intervals for both antisociality indicators represented significant differences.

Proximal Factors

Presented in Table 4 are results of Poisson regression models examining proximal variables of rates of psychological aggression. Concurrent assessments of the predictors and outcomes were modeled at each time interval and incidence density ratios and percentage increase or decrease in rates of aggression per SD unit of change in predictor variables are reported. We tested whether the observed aggression rates were significantly different over time and these results are presented in the final column of Table 4.

Alcohol Use—As presented in Table 4, all four alcohol use variables significantly predicted higher rates of psychological aggression at all three time intervals. The association between alcohol use and rate of psychological aggression was attenuated over time, but occurred more gradually and remained significant.

Drug Use—At the baseline assessment, all three indicators of drug use significantly predicted higher rates of partner psychological aggression. Interactions with time period indicated that the influence of drug use frequency (with the exception of stimulant use frequency) significantly decreased at the follow-up assessments for psychological aggression perpetration.

Relationship Adjustment—Both indicators (i.e., DAS scores and PFQ scores) predicted lower rates of psychological aggression perpetration at all three assessments. Effects of the relationship adjustment variables became more protective during the 6 months of treatment and remained protective at the 12-month assessment. Interactions with time period indicated the increased effects represented significant differences over time.

Anger—Higher scores on the STAXI were associated with a higher rate of psychological aggression during the 6-months prior to baseline. Furthermore, anger significantly predicted higher rates of psychological aggression at each of the follow-up assessments. Further tests indicated the influence of anger on rates of aggression significantly differed across time intervals.

Discussion

The current study sought to examine whether certain distal and proximal factors longitudinally predicted psychological aggression perpetration among men seeking treatment for alcohol use problems. Overall, most of the variables from both groups were found to be associated with the occurrence of intimate partner psychological aggression. For the distal factors, except for participants' beliefs related to refraining from drinking alcohol in high-risk situations, all were found to be associated with psychological aggression in the expected direction at baseline, with beliefs that relationship problems cause drinking and that drinking causes relationship problems representing the strongest predictors. These beliefs continued to predict rates of psychological aggression perpetration at the 6- and 12-

month follow-up. Other distal factors, including problematic alcohol use, negative consequences of alcohol use experienced throughout one's life, age of alcohol problem onset, and antisocial personality characteristics also continued to predict rates of psychological aggression perpetration at the 6- and 12-month follow-up. Regarding the proximal factors, all were found to be associated with psychological aggression in the expected direction at baseline, with the alcohol use variables and relationship adjustment demonstrating the strongest associations. These variables continued to predict psychological aggression at both the 6- and 12-month follow-up. Moreover, aside from the drug use variables, all of the other proximal variables predicted the occurrence of psychological aggression at both the 6- and 12-month follow-up.

The findings from the current study are similar to those obtained by Taft et al. (2010) in their examination of correlates of physical aggression perpetration. For example, in that study the belief that drinking causes relationship problems and variables related to alcohol consumption most strongly predicted the rate of physical aggression at baseline. These variables were also the strongest predictors of psychological aggression in the current study. Researchers have discussed how psychological aggression is a correlate of, and predicts first incidents of, physical aggression (Murphy & O'Leary, 1989; O'Leary & Curley, 1986; Schumacher & Leonard, 2005). Furthermore, both types of aggression may share functional similarities—for example, control of the partner's behavior through intimidation and coercion—and research has shown that both have common etiological factors (see Saudino & Hines, 2007). Given this, it is not surprising that similar variables were found to predict physical and psychological aggression across studies.

The findings from the current study are also consistent with theoretical models which focus on alcohol and intimate partner violence (e.g., Leonard, 1993; Murphy & O'Farrell, 1996). For example, in his model, Leonard (1993) describes how both distal factors (e.g., personality traits, gender roles, norms) and proximal factors (e.g., affective and cognitive states) play a role in the occurrence of intimate partner violence. That the identified distal and proximal variables examined in the current study were found to be associated with psychological aggression is consistent with these predictions.

Results also showed that the relationship between some of the predictors and psychological aggression became stronger over time, while others became weaker over time, or remained relatively the same. These findings are similar with what was obtained in Taft et al. (2010) for physical aggression. The reason for these patterns of findings is unclear. One possibility, particularly for findings indicating that the relationships between the drug and alcohol variables and psychological aggression weakened over time, could be because participants were receiving treatment for substance abuse. However, given that there was no control group implemented in this study, it is difficult to draw more definitive conclusions as to what could account for the observed changes.

Psychological aggression can have a strong negative impact on its victims (e.g., Arias & Pape, 1999; Lawrence, Yoon, Langer, & Ro, 2009; Sackett & Saunders, 1999) and research has shown that psychological aggression can be just as, if not more harmful than physical aggression (e.g., Follingstad, Rutledge, Berg, Hause, & Polek, 1990). Given the high prevalence of verbal aggression in alcoholic samples (O'Farrell, Murphy, Neavins, & Van Hutton, 2000), identifying the factors that are associated with increases and decreases in psychological aggression are important and may help delineate which groups to focus on for prevention/intervention efforts and determine how such programs could be structured and what content should be included. Thus, those seeking treatment for alcohol use who hold certain alcohol-related beliefs (i.e., that relationship problems cause drinking and that drinking causes relationship problems), and who are characterized by a more problematic

alcohol use profile (e.g., having more alcohol dependence symptoms, a younger age of alcohol problem onset, and experiencing more negative consequences related to drinking) and greater antisocial personality disorder characteristics, should be targeted for relationship abuse prevention and intervention efforts. Furthermore, by knowing that alcohol and drug use, poorer relationship adjustment, and anger are also important for psychological aggression, prevention and intervention efforts could incorporate material into their programs designed to address these issues specifically (e.g., anger management skills, relationship enhancement techniques). Indeed, research has shown that couples-based interventions for alcoholics, which include some of these components, have been shown to be effective in decreasing not only alcohol consumption, but marital aggression as well (e.g., O'Farrell & Murphy, 1995; O'Farrell et al., 2004). Whether these specific components in and of themselves would be effective in decreasing not only IPV but also problematic drinking would be an important area for future research.

Although the current study provides important information regarding those factors which play a role in the perpetration of psychological aggression among those seeking treatment for alcohol problems, it is not without its limitations. Firstly, other variables not examined in the present study may also predict the occurrence of psychological aggression by alcoholic men, such as an individual's level of self-esteem, gender role expectations, and norms concerning aggression (Leonard, 1993). Secondly, this research focused on men seeking individual treatment for their alcohol problems. As such, the current findings can only be generalized to this population; specifically men and their partners who were willing to participate in a clinical treatment study. It is also important to note that we did not collect information on the number of men who were excluded because they refused to participate, because their female partners refused to participate, or because their partners could not be reached. As such, additional caution should be made in generalizing the current findings, as the current sample may not represent typical AUD treatment-seeking men who meet the study inclusion criteria. Although a strength of this study is that it involved both a 6- and 12-month follow-up period, additional work should examine the predictive utility of these variables over longer follow-up periods. Future research might also examine the extent to which certain proximal factors mediate the effects that distal factors have on psychological aggression perpetration, consistent with the notion that distal factors likely contribute to partner aggression by virtue of their influence on proximal factors (Leonard, 1993). In a related vein, it would be useful to examine psychological and physical aggression together, along with their correlates, and the extent to which psychological aggression acts as the mechanism through which both distal and proximal factors lead to physical aggression.

These limitations notwithstanding, the current study provides new information on those factors that predict the occurrence of intimate partner psychological aggression in clinical samples of alcoholics. This is important given the negative impact that psychological aggression can have on its victims and the scarcity of research on this type of abuse. The current study also highlights similarities between factors that predict both psychological and physical aggression among those with alcohol use problems, and in so doing provides us with an increased understanding of the context in which psychological and physical aggression would be most likely to occur among this population. By identifying such factors we are in a better position to identify individuals who are most at risk of perpetrating aggression towards their partners and tailoring interventions to prevent partner aggression.

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Table 1

Descriptive Statistics for Distal Factors

Baseline Variable	M	SD	Range
Alcohol Problem Severity			
Alcohol Dependence Scale	24.44	10.36	5 – 50
Short Inventory of Problems	12.66	3.14	2 – 15
Family Tree Questionnaire	5.56	2.78	0 – 10
Age of Alcohol Problem Onset	22.27	7.21	8 – 49
Beliefs Related to Alcohol Use			
AUI – Relationship Problems Cause Drinking	0.28	0.21	0 – 1
AUI – Drinking Causes Relationship Problems	0.57	0.21	0 – 1
Situational Confidence Questionnaire	75.99	27.00	0 – 100
Inventory of Drinking Situations	41.33	26.53	0 – 100
Antisocial Personality Characteristics			
CPI Socialization Scale	21.17	6.50	7 – 38
SCID APD Module	10.37	4.33	0 – 40

Note. AUI = Alcohol Use Inventory; CPI = California Psychological Inventory; SCID APD = Structured Clinical Interview for DSM Antisocial Personality Disorder.

Table 2
Descriptive Statistics for Proximal Factors and Intimate Partner Psychological Aggression Perpetration

Variable	Baseline			6-month Follow-up			12-month Follow-up		
	M	SD	Range	M	SD	Range	M	SD	Range
Alcohol Use									
Percent Days of Any Alcohol Use	55.32	29.24	0 – 96	20.11	28.43	0 – 100	22.18	30.06	0 – 100
Percent Days of Heavy Alcohol Use	34.79	31.08	0 – 96	10.53	20.14	0 – 86	11.98	25.36	0 – 100
Days of Alcohol Use	119.78	66.91	3 – 180	39.51	60.96	0 – 180	43.59	63.90	0 – 180
Typical Drinks Per Day	16.88	11.43	2 – 64	11.13	9.95	1 – 64	11.24	9.85	1 – 64
Drug Use									
Frequency of All Drug Use	90.46	140.30	0 – 918	35.93	80.55	0 – 453	31.21	89.88	0 – 792
Frequency of Stimulant Drug Use	18.25	44.92	0 – 264	5.38	23.31	0 – 198	5.37	30.69	0 – 360
Frequency of Non-stimulant Drug Use	72.20	119.20	0 – 720	30.55	74.82	0 – 447	25.84	73.69	0 – 432
Relationship Adjustment									
Dyadic Adjustment Scale	97.19	19.54	28 – 145	100.33	21.49	31 – 182	101.59	26.04	39 – 266
Positive Feelings Questionnaire	96.58	18.01	17 – 119	96.95	16.93	19 – 119	95.89	19.38	18 – 137
Anger									
State Trait Anger Expression Inventory	22.63	6.67	10 – 40	19.90	5.68	10 – 37	19.12	5.97	10 – 40
Partner Aggression Perpetration									
Psychological Aggression Perpetration	47.47	35.09	0 – 177	31.12	29.51	0 – 129	26.95	29.62	0 – 124

Table 3

Distal Factors and Psychological Aggression Perpetration

Predictor Variables	Scale Units per SD	Baseline		6-month Follow-up		12-month Follow-up		χ^2 Test of Significant Difference Over Time
		IDR (95% CI) ^a	% Rate	IDR (95% CI) ^a	% Rate	IDR (95% CI) ^a	% Rate	
Alcohol Problem Severity								
Alcohol Dependence Scale	10.36	1.33 (1.21, 1.46)	33% ***	1.15 (1.04, 1.28)	15% **	1.10 (0.98, 1.23)	10%	p<.001
Short Inventory of Problems	3.14	1.29 (1.17, 1.42)	29% ***	1.17 (1.05, 1.30)	17% **	1.14 (1.02, 1.27)	14% *	p<.001
Family Tree Questionnaire	2.78	1.11 (1.00, 1.23)	11% *	0.94 (0.84, 1.06)	-6%	0.90 (0.79, 1.02)	-10%	p<.001
Age of Alcohol Problem Onset	7.21	0.82 (0.74, 0.91)	-18% ***	0.72 (0.64, 0.81)	-28% ***	0.68 (0.61, 0.77)	-32% ***	p<.001
Beliefs Related to Alcohol Use								
AUI – Relationship Problems Cause Drinking	0.21	1.44 (1.32, 1.58)	44% ***	1.24 (1.11, 1.39)	24% ***	1.15 (1.02, 1.30)	15% *	p<.001
AUI – Drinking Causes Relationship Problems	0.21	1.44 (1.31, 1.60)	44% ***	1.27 (1.13, 1.42)	27% ***	1.22 (1.08, 1.37)	22% **	p<.001
Situational Confidence Quest.	27.00	0.98 (0.89, 1.08)	-2%	0.85 (0.77, 0.94)	-15% **	0.80 (0.73, 0.89)	-20% ***	p<.001
Inventory of Drinking Situations	26.53	1.28 (1.16, 1.41)	28% ***	1.05 (0.93, 1.19)	5%	0.96 (0.85, 1.09)	-4%	p<.001
Antisocial Personality Characteristics								
CPI Socialization Scale	6.50	0.85 (0.77, 0.94)	-15% **	0.76 (0.68, 0.85)	-24% ***	0.72 (0.65, 0.80)	-28% ***	p<.001
SCID-IV APD Module	4.33	1.14 (1.10, 1.18)	14% ***	1.07 (1.02, 1.12)	7% **	1.02 (0.97, 1.08)	2%	p<.001

Note. IDR = incidence density ratio; CI = confidence interval; AUI = Alcohol Use Inventory; CPI = California Psychological Inventory; SCID APD = Structured Clinical Interview for DSM Antisocial Personality Disorder module.

* p < .05,

** p < .01,

*** p < .001.

^aFor example, IDR = 1.40 indicates 40% increase in rate of partner aggression perpetration per SD unit change in predictor variable; IDR = .60 indicates 40% decrease in rate of partner aggression perpetration per SD unit change in predictor variable.

Table 4

Proximal Factors and Psychological Aggression Perpetration

Predictor Variables	Scale Units per SD	Baseline		6-month Follow-up		12-month Follow-up		χ^2 Test of Significant Difference Over Time
		IDR (95% CI) ^a	% Rate	IDR (95% CI) ^a	% Rate	IDR (95% CI) ^a	% Rate	
Alcohol Use								
% Days of Any Use	29.24	1.31 (1.24, 1.39)	31% ***	1.26 (1.15, 1.37)	26% ***	1.15 (1.08, 1.24)	15% ***	p<.001
% Days of Heavy Use	25.53	1.21 (1.13, 1.28)	21% ***	1.16 (1.06, 1.26)	16% **	1.12 (1.03, 1.21)	12% **	p<.001
Number of Days Alcohol Consumed	63.92	1.29 (1.22, 1.37)	29% ***	1.24 (1.14, 1.36)	24% ***	1.17 (1.07, 1.27)	17% ***	p<.001
Typical Drinks Per Day	10.99	1.22 (1.15, 1.30)	22% ***	1.14 (1.05, 1.23)	14% **	1.12 (1.00, 1.26)	12% *	p<.001
Drug Use Frequency								
All Drug Use	103.58	1.16 (1.11, 1.20)	16% ***	1.04 (0.94, 1.14)	4%	1.08 (0.97, 1.19)	8%	p<.01
Stimulant Drug Use	32.97	1.16 (1.10, 1.21)	16% ***	1.09 (0.96, 1.24)	9%	1.08 (1.05, 1.10)	8% ***	p<.05
Non-Stimulant Use	89.24	1.13 (1.08, 1.20)	13% ***	1.01 (0.92, 1.10)	1%	1.05 (0.91, 1.21)	5%	p<.01
Relationship Adjustment								
DAS	22.36	0.74 (0.67, 0.83)	-26% ***	0.68 (0.61, 0.76)	-32% ***	0.65 (0.59, 0.73)	-35% ***	p<.001
PFQ	17.46	0.92 (0.85, 0.99)	-8% *	0.85 (0.79, 0.92)	-15% ***	0.83 (0.76, 0.89)	-17% ***	p<.001
Anger								
STAXI	6.11	1.24 (1.16, 1.34)	24% ***	1.15 (1.05, 1.26)	15% **	1.12 (1.03, 1.22)	12% **	p<.001

Note. IDR = incidence density ratio; CI = confidence interval; DAS= Dyadic Adjustment Scale; PFQ=Positive Feelings Questionnaire, male participant score; STAXI = State Trait Anger Expression Inventory.

* p < .05,

** p < .01,

*** p < .001.

^a For example, IDR = 1.40 indicates 40% increase in rate of partner aggression perpetration per SD unit change in predictor variable; IDR = .60 indicates 40% decrease in rate of partner aggression perpetration per SD unit change in predictor variable.