The Role of Coping and Problem Drinking in Men’s Abuse of Female Partners: Test of a Path Model

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This article examines the relationship of coping and problem drinking to men’s abusive behavior towards female partners. While previous research has demonstrated a consistent association between problem drinking and male abuse of intimate partners, virtually no studies have assessed the role of coping in relation to men’s violence. Furthermore, multivariate studies have not examined how these factors operate together to increase risk for abusive behavior. An ethnically diverse sample of 147 men in a court-mandated program for domestic violence offenders completed questionnaires at the first session. Path modeling was conducted to test the extent to which coping and problem drinking predicted both physical and psychological abuse. In addition, the relationships of problem drinking and physical abuse to injury of the men’s female partners were examined. Results indicated that both the use of avoidance and problem-solving coping to deal with relationship problems were related indirectly to abusive behavior through problem drinking. Greater use of avoidance coping strategies was more likely among problem drinkers. By contrast, men who used higher levels of problem-solving coping were less likely to be problem drinkers. Avoidance, but not problem-solving coping also was directly and positively related to physical and psychological abuse. Men identified as problem drinkers were more likely to use both physical and psychological abuse. Finally, greater use of physical violence was strongly related to higher levels of injury among female partners, and served to mediate the relationship between problem drinking and injury. Results are discussed in terms of their contribution to the identification of risk and protective factors for men’s violent behavior toward intimate female partners and implications for developing intervention strategies.

Keywords: coping; problem drinking; men’s abuse; injury

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Interventions for men who abuse their female partners have emerged over the past two decades, and program approaches and strategies are continually being developed and refined (Gondolf, 1999). While extant research suggests that participation in such programs may reduce to some degree the rates of men's rearrest or reassault (Babcock & Steiner, 1999; Gondolf, 1997), there still is no decisive evidence supporting one particular program model over others (Gondolf, 2000; Violence Against Women & Family Violence Publications, 2002). In fact, in a recent meta-analysis of 22 studies examining the treatment efficacy of programs for domestically violent men (Babcock, Green, & Robie, 2004), interventions in general were found to have small effects on reducing recidivism and no differences emerged in the effectiveness of the different program models compared. We propose that one way to improve intervention programs for abusive men is to address specific risk and protective factors that may be important predictors of physical and psychological abuse, such as avoidance and problem-solving coping, or problem drinking (Gleason, 1997; Okun, 1986; Russell, 1988). Moreover, further research that employs multivariate designs that allow for the simultaneous examination of the interrelationships among these variables and abuse is particularly needed (Holtzworth-Munroe, Bates, Smutzler, & Sandin, 1997). Use of such designs provides a basis for determining the relative contribution of multiple variables to the occurrence of a given behavior or other type of outcome (Tabachnick & Fidell, 2001), in this case, men's abusive behavior.

The present study uses path modeling to examine the role of coping strategies and problem drinking in men's abusive behavior towards female partners. In addition, the relationships of men's physical abuse and problem drinking to injury of their female partners are assessed. While numerous studies have found high rates of alcohol use among men who are abusive, no attention has been given to examining the relationship between men's coping strategies and their commission of abusive behavior. Yet coping has been linked to a number of other behaviors and symptoms that are known to correlate with abuse, including alcohol use (e.g., Cooper, Russell, Skinner, Frone, & Mudar, 1992). It also is important to determine whether there are different pathways between coping and abuse, that is, whether different types of coping are directly related to either physical or psychological abuse and/or indirectly related through their relationship to problem drinking. Again, this knowledge helps us to better understand how various risk and protective processes operate and, in turn, informs the development of effective intervention strategies.

This study addresses these gaps in the literature and also assesses the contribution of coping and problem drinking in relation to both men's physical and psychological abuse. Psychological abuse has received relatively little attention in studies of domestic violence (O'Leary, 1999), even though it typically occurs more frequently than physical abuse (Murphy & Hoover, 1999). In addition, several studies indicate that psychological abuse, in many cases, can have a more devastating emotional and psychological impact than physical abuse (Arias & Pape, 1999; Folingstad, Rutledge, Berg, Hauge, & Polek, 1990), and that psychological abuse frequently precedes physical abuse and, thus, makes it an important focus of prevention and treatment interventions (O'Leary). Therefore, studies of the predictors and correlates of men's abusive behavior should examine both forms of abuse. The next sections provide a brief overview of the literature on the relationship between coping strategies, problem drinking, and men's use of physical and psychological abuse, as well as the association of physical abuse and problem drinking to injury of one's female partner.
COPING

While a range of coping strategies in response to stressful conditions is possible, coping frequently is described along either active or avoidance dimensions. Active coping, such as problem-solving and support-seeking coping, involves cognitive and behavioral efforts to constructively address aspects of a stressful event. Use of these types of strategies is expected to reduce the likelihood of symptom formation or problem behavior. On the other hand, avoidance coping involves efforts to avoid the stressful situation or thinking about the stressful event, thereby reducing the likelihood of bringing about change in the problem situation and related stress reactions (Lazarus, 1991; Tobin, Holroyd, Reynolds, & Wigal, 1989). For the most part, research indicates that employing active coping strategies leads to more adaptive outcomes, while use of avoidance coping tends to lead to more negative outcomes such as greater alcohol abuse and psychological symptoms (Koeske, Kirk, & Koeske, 1993; Snow, Swan, Raghavan, Connell, & Klein, 2003; Sullivan, Meese, Swan, Mazure, & Snow, 2005).

To date, the role of coping in relation to men's abusive behavior toward their female partners has received very little attention, with no reported empirical studies that we were able to find. Theoretically, one would expect that greater use of avoidance coping strategies (such as denial or minimization of the problem, wishful thinking, or social withdrawal) by men to address relationship stressors would predict higher levels of physical and psychological abuse, since the stressors would continue to exist and increase the likelihood of arguments and abusive behavior. By contrast, employing active coping (such as problem solving or support seeking) would be expected to reduce the likelihood of committing violent behavior by attempts to solve the problem and to promote more positive relationship patterns. Indirect support for the link between coping and abusive behavior is suggested in a study involving physically abusive mothers (Cantos, Neale, O'Leary, & Gaines, 1997). Compared to nonabusive mothers, physically abusive mothers reported using greater levels of avoidance coping, less problem-focused coping, and more ineffective coping. Whether these findings hold for men who are violent with their intimate female partners is addressed in the present study.

It is also possible that coping has an indirect relationship to men's abuse behavior. If coping is related to problem drinking, and alcohol abuse in turn predicts men's violence, this would support an explanation positing indirect or mediating effects. Numerous studies have reported that greater use of avoidance coping strategies is related to increased alcohol consumption and problem drinking (Brennan & Moos, 1990; Cooper et al., 1992; Grunberg, Moore, & Greenberg, 1998; Johnsen, Laberg, & Eid, 1998), while greater reliance on active as opposed to avoidance coping has emerged as predictive of better drinking outcomes (Grunberg et al., 1998; McKay, Maisto, & O'Farrell, 1996).

PROBLEM DRINKING

Numerous studies have found greater alcohol abuse and problem drinking patterns among domestically violent men as compared to other groups of men, as well as higher alcohol consumption as a risk factor for partner violence among alcoholic men (Dinwiddie, 1992; Fagan, Barnett, & Patton, 1988; Fals-Stewart, 2003; Julian & McKenry, 1993; Leonard & Blane, 1992; Leonard, Brotem, Parkinson, Day, & Ryan, 1985; Leonard & Quigley, 1999; McKenry, Julian, & Gavazzi, 1995; Murphy, Winters, O'Farrell, Fals-Stewart, & Murphy, 2005; Neff, Holaman, & Schluter, 1995; O'Farrell, Fals-Stewart, Murphy, & Murphy, 2000).
In an early prevalence study (Kantor & Strauss, 1987), physical partner assault in a United States population survey was observed to be approximately three times higher for men who frequently engaged in binge drinking compared with alcohol-abstinent men. Among a sample of almost 12,000 male military personnel, Pan, Neidig, and O’Leary (1994) found that the odds that men with alcohol problems would use physical aggression against partners was 1.28 times greater than those for men without alcohol problems. Comparing two samples, men entering a domestic violence treatment program and domestically violent men entering an alcohol treatment program, Fals-Stewart (2003) found the odds of male-to-female physical aggression to be 8 and 11 times higher, respectively, on days when men drank than on days involving no alcohol consumption. Finally, in a longitudinal study of newlywed couples (Heyman, O’Leary, & Jouriles, 1995), the amount of alcohol consumption was found to predict male violence 18 months postmarriage.

Straus and Sweetow (1992) examined the relationship between drunkenness and psychological abuse in a large, nationally representative sample and found that the more times respondents were drunk the previous year, the greater the probability they had used psychological abuse against their partners. And in a study examining both physical and psychological abuse (Leonard & Quigley, 1999), even though husband drinking was more likely in episodes of physical versus verbal aggression, significant relationships between husband drinking and both verbal and physical aggression were observed.

The explanatory model for this consistent set of findings is that men who show patterns of problem drinking are more often in a state of intoxication, and alcohol intoxication facilitates violence in intimate partner relationships (Fals-Stewart, 2003; Steele & Josephs, 1990). On a theoretical basis, it has been advanced that the relationship between problem drinking and violence may be mediated by negative effects on cognitive functioning, particularly adverse influences on executive functioning (Chermack & Taylor, 1995), and/or the expectancy or excuse functions of intoxication (Critchlow, 1983). Both processes would result in an increased tendency toward violence under conditions of excessive drinking.

**PHYSICAL ABUSE, PROBLEM DRINKING, AND INJURY**

Men’s physical aggression toward women in intimate partner relationships has been reported as the leading cause of injury to women (Stark & Flitcraft, 1988). More recently, in a study of women with partners in batterer intervention programs (Cohen, Forjuoh, & Gondolf, 1999), three-quarters of the women reported a history of prior injury as a result of abuse, and nearly 40% of those injured indicated seeking medical care for injuries caused by their intimate partner. A relationship between alcohol abuse and injury also has been demonstrated, presumably due to the increased likelihood that men will perpetrate physical abuse that is potentially injurious to their partners when problem drinking has occurred. Brecklin (2002) found that male perpetrators’ alcohol use was associated with increased likelihood of physical injury to the female partner. In related investigations, male batterers who were also alcohol abusers were more likely to inflict injury on the female victim than batterers with no alcohol use (Elberle, 1982). Furthermore, the odds of injury to the female victim were 1.49 times greater in an intimate partner assault when the male perpetrator was drinking than when he was not (Martin & Bachman, 1997). And, in a community sample, 26% of women who were victims of domestic violence were injured when the male perpetrator was drinking compared to 13% when the perpetrator was sober (Permanen, 2003; O’Farrell & Murphy, 1995; Perilla, Bakeman, & Norris, 1994; Rosenbaum & O’Leary, 1981; Stith & Farley, 1993; Van Hasselt, Morrison, & Bellack, 1985).
A Path Model of Men's Abuse

1991). Finally, Kyariacou and colleagues (1999) determined, after adjusting for other discriminating variables, that the relative risk of having an alcohol-abusing relationship was 3.5 times greater for women seeking emergency room care for partner violence injuries than for those seeking care for non-partner-related injuries.

Existing empirical evidence clearly suggests a complex set of relationships among problem drinking, physical abuse, and injury. In studies of married men entering treatment for alcoholism (O'Farrell et al., 2003; O'Farrell & Murphy, 1995), the annual prevalence of partner violence is 50%–70% and, more specifically, the prevalence of severe and potentially more injurious violence is 20%–30%. These rates are four to eight times higher than those for demographically similar nonalcoholic men. The primary pathways that seem most logical to explain these relationships are that problem drinking among men is related to higher rates of physical aggression and, in turn, these greater levels of physical aggression result in increased risk of injury to female partners. While alcohol has been shown to have a relationship to injury, this relationship is likely mediated by physical abuse.

This study investigates a model that examines the extent to which coping and problem drinking are related to men's physical and psychological abuse in intimate partner relationships, and whether physical abuse and problem drinking are associated with increased injury to the partner. The proposed model is shown in Figure 1. The model illustrates that the coping strategies men use to deal with relationship stress (i.e., avoidance, problem solving, and support seeking) will have a positive or negative impact on their problem drinking depending on the nature of the coping strategy employed, and also may contribute directly to the occurrence of abusive behavior. Problem drinking, in turn, will be related to an increased likelihood that men will commit physical and psychological abuse. Finally, physical abuse will be associated with injury to the female partner, and will mediate the relationship between problem drinking and injury.

Specific hypotheses:

1. Avoidance coping will be positively related, and problem-solving and support-seeking coping will be negatively related to problem drinking.
2. Problem drinking will be related to increased levels of both men's physical and psychological abuse.
3. Men's physical abuse will have a direct positive relationship to the extent of injury to the female partner, and will mediate the relationship between problem drinking and injury.

Given that no studies have examined, to our knowledge, the relationship between coping and men's abusive behavior, no hypotheses are made concerning a direct relationship between coping and physical or psychological abuse; these paths will be tested on an exploratory basis. The questions to be explored are whether avoidance coping is associated with increased levels, and problem-solving and support-seeking coping to decreased levels of men's physical and psychological abuse.

METHOD

Participants

Two hundred men from a court-mandated program for domestic violence offenders in a small New England city completed the survey. Because the focus of this study is on men...
who were abusive towards female partners, 13 men who reported that their partners were male were removed from the sample. Also, 18 men who left the psychological and physical abuse measure blank, and 22 men with other missing data were removed, leaving a final sample of 147.

Participants ranged in age from 16 to 69 years ($M = 32.1$, $SD = 11.2$) and were diverse with respect to ethnicity: 41% were African American, 37% White, 16% Latino/Hispanic, 2% Asian/Pacific Islander, and 3% Other. Twelve percent of the sample had not completed high school, 44% had completed high school, 12% had graduated from a vocational school, 18% had attended some college, and 14% had earned a college or graduate degree. The annual family income reported by the men was fairly equally distributed across three categories, with 28% earning less than $20,000, 38% earning between $20,000 and $39,999, and 34% earning $40,000 or more. Seventy-nine percent of participants had at least one child ($M = 1.7$, $SD = 1.5$), although only 53% of the sample reported that their children lived with them. Approximately half of the participants reported that they were currently either married or unmarried but living with a partner (52%), and 50% of the participants stated that they were still together with the person whom their charges involved. Few participants reported involvement with mental health services; 7% of participants reported that they were currently seeing a counselor or therapist, and 6% reported receiving drug or alcohol treatment. Additionally, 7% of participants reported that they were attending some type of
self-help group (e.g., Alcoholics Anonymous) when they entered the program, and 5% re-
ported that they had ever been hospitalized for an emotional problem.

Procedures

All study participants attended a 10-week psycho-educational program for first-time of-
fendes. On the first day of class, all participants were administered a questionnaire prior
to the beginning of the session. During this time, facilitators left the room while a trained
research assistant explained that the purpose of the survey was to understand more about
people entering the program. Research assistants were not involved with the domestic
violence program in any way. They assured participants that the survey was anonymous,
confidential, would not be shared with the class facilitators, and would not affect partici-
pants’ involvement in the program. Consent for use of the survey for research purposes
was obtained. Following brief instructions, the questionnaires were self-administered by
the participants in a group format and took an average of 30 minutes to complete. Particip-
ants were not remunerated for their time.

Measures

Physical abuse was measured using six items derived from the Conflict Tactics Scale-2
(CTS-2) (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). These consisted of the
following items: “I pushed, grabbed, or shoved my partner”; “I slapped my partner”; “I
punched or hit my partner”; “I kicked my partner”; “I beat up my partner”; “I used a knife
or gun on my partner.” The final item involving use of a weapon was dropped from the
scale since the base rate of occurrence was extremely low, and its inclusion resulted in a
lower reliability coefficient. Psychological abuse was measured using two items from the
Psychological Maltreatment of Women Inventory (PMWI) (Tolman, 1989); “I monitored
my partner’s time and made her tell me where she had been” and “I acted jealous of my
partner’s friends”; as well as two items from the CTS-2: “I shouted or yelled at my partner”
and “I insulted or swore at my partner.” Injury was assessed using two items from the
injury subscale of the CTS-2: “My partner had injuries, like cuts or bruises, because of a
fight with me” and “My partner needed to go to a doctor because of a fight with me, but
didn’t.” Because of time considerations, it was not feasible to administer the CTS-2 and
PMWI scales in their entirety. Items from each scale were selected to represent a diverse
range of abusive behaviors with varying levels of severity. As a second criterion, items
from the CTS-2 needed to have an acceptable item-to-total scale correlation as reported
by Straus and colleagues (1996) (the range for the eight items was .51 to .70) or, for the
two items from the PMWI, they needed to have a factor loading exceeding .50 (these were
.62 and .55, respectively) (Tolman).

Participants were asked if they had committed each of the behaviors in the last 6 months.
The response scale ranged from never, once, twice, 3–5 times, 6–10 times, and more than
10 times in the past 6 months. Individual items were recoded so that the midpoint of the
frequency range was the variable’s value (i.e., never = 0, once = 1, twice = 2, 3–5
times = 4, 6–10 times = 8, and more than 10 times = 11 [conservatively coded]). For
each scale, these values were summed to create a total score. Following each item assessing
their own behavior, participants were then asked if their partners had ever used the same
behavior toward them, using the same response scale. The reported abuse committed by
partners is not examined in this study.
The Conflict Tactics Scale is the primary measure of family violence used in the field. It has been used in hundreds of studies since 1972 with over 70,000 participants of diverse cultural and ethnic backgrounds around the world (Straus et al., 1996). The CTS-2 has been shown to have good internal consistency and validity (Straus et al.). The PMWI (Tolman, 1989) also has been shown to have good reliability with a sample of 76% White and 15% African American men (Tolman, 1989). In the present study, Cronbach’s alpha reliabilities for the physical and psychological abuse subscales were $\alpha = .81$ and $\alpha = .77$, respectively. The reliability for the two-item injury variable was $\alpha = .30$. Given this low reliability, a single-item injury variable using the question with the higher base rate (i.e., “My partner had injuries, like cuts or bruises, because of a fight with me”) was tested as an alternative model to the one presented in the paper. Using the single item resulted in poorer model fit and a substantial decrease in the amount of variance explained in the injury variable from .32 to .17. Therefore, even though the reliability was low, the two-item variable was retained in the analysis.

*Problem drinking* was assessed utilizing the 10-item Alcohol Use Disorders Identification Test (AUDIT) (Babor & Grant, 1989), a commonly used screening measure for problem drinking. The measure has been used with thousands of individuals around the world and has high and well-established sensitivity and specificity (Allen, Litten, Fertig, & Babor, 1997). Indices of internal consistency for the measure are generally in the .80s (Allen et al., 1997). In the present study, internal consistency was $\alpha = .84$. Twenty percent of the sample equaled or exceeded the cutoff score of 8 on the AUDIT, indicating a positive screen for problem drinking. The cutoff score was used to create a dichotomous variable, with less than 8 = 0 and greater than or equal to 8 = 1.

*Coping* was measured using 15 items from the Coping Strategy Indicator (CSI) (Amirkhan, 1990). A series of factor analyses conducted by Amirkhan (1990) revealed three factors: avoidance, problem solving, and support-seeking coping. Participants were asked to rate each item in relation to a self-identified relationship problem (e.g., “my partner cheated on me,” “an argument about money matters,” and “a break up with my girl”) on a scale from 1 (not at all) to 3 (a lot). The measure has good reliability and validity (Amirkhan, 1990, 1994). Again, because of time constraints for administration of measures, five items with high factor loadings were selected from each of the original subscales to represent the three coping strategies assessed by the CSI: avoidance coping (i.e., “daydreamed about better times,” “watched television more than usual,” “avoided being with people,” “identified with characters in novels or movies,” and “wished that people would just leave you alone”); problem solving (i.e., “brainstormed all possible solutions before deciding,” “set goals for yourself,” “tried different ways to solve the problem,” “tried to solve the problem,” “tried to carefully plan a course of action”); and support seeking (i.e., “talked to people about the situation,” “confided your fears and worries to a friend or relative,” “went to a friend for advice,” “accepted sympathy and understanding from friends,” and “sought reassurance from those who know you best”). Participants’ responses to each of the five items were summed to create a subscale score. The internal consistency for the 15-item measure was $\alpha = .75$; for the separate subscales, $\alpha = .67$ for avoidance; $\alpha = .73$ for problem solving; and $\alpha = .82$ for support seeking.

To focus the measure on relationship stress in particular, the measure began with these instructions:

The following questions are about how you cope with problems and troubles in your relationship ... try to think of one problem or conflict you have encountered in the last
six months in your relationship. Please describe this problem in a few words. . . with this problem in mind, indicate how you coped by checking the appropriate box for each coping behavior listed below.

Social desirability was assessed using a 10-item measure based on analyses conducted by Greenwald and Satow (1970) aimed to develop a briefer version of the widely administered Marlowe-Crowne scale. They determined that using a measure with as few as 10 items with the highest item-total correlations (half positively keyed and half negatively keyed) resulted in a relationship with the original Marlowe-Crowne scale that demonstrates statistical singularity. The 10-item scale contained items such as “No matter who I’m talking to, I’m always a good listener” and “There have been occasions when I took advantage of someone.” The response scale ranged from 1 (strongly disagree) to 5 (strongly agree). The reliability of the measure in the present study was $\alpha = .74$. This measure was included because social desirability may be a useful way to account for underreporting of abusive behavior.

Data Analyses

Study variables first were assessed for assumptions of normality. Two variables, men’s physical abuse and injury to the female partner, showed an unacceptable degree of skew. Tabachnick and Fidell (2001) describe techniques for dealing with skewed variables and recommend transformations to normalize distributions. A square root transformation was performed that produced a normal distribution for both variables. Because psychological abuse was assessed in part with items from the same measure as physical abuse and injury (i.e., the CTS-2), psychological abuse also was transformed by square root to keep it on the same metric. Problem drinking also was skewed and so was coded as a dichotomous variable. All other study variables were normally distributed.

The AMOS 4.0 statistical program (Arbuckle & Wothke, 1999) was employed to analyze the path models, obtain maximum-likelihood estimates of model parameters, and provide goodness-of-fit indices. A two-tailed test was employed to determine the significance of each path coefficient. Standardized scores are depicted in the final path model and reported in the results section. A model that provides a good fit to the data is generally considered one that has a nonsignificant $p$ value of greater than .05; a root mean square error of approximation (RMSEA) value of less than .05, with a $p$ test for closeness of fit for RMSEA of .05 or greater; and a model relative chi-square of less than 3 (Byrne, 2001). Path coefficients, which can be interpreted similarly to regression coefficients, are considered significant at $p < .05$.

RESULTS

Descriptive Statistics and Correlations

Means, standard deviations, and correlations of the study variables are presented in Table 1. Participants reported the use of a wide range of coping strategies in response to relationship problems or conflict. Twenty percent of the sample was classified as problem drinkers. In terms of participants’ self-reported use of violence, they indicated substantially higher rates of psychological as compared to physical abuse, and a relatively low rate of
<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
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<td>1. Avoidance coping</td>
<td>8.70</td>
<td>2.34</td>
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<td>2. Problem-solving coping</td>
<td>11.76</td>
<td>2.43</td>
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<td>3. Support-seeking coping</td>
<td>9.75</td>
<td>2.78</td>
<td>.25**</td>
<td>.35**</td>
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<td>4. Problem drinking</td>
<td>0.20</td>
<td>0.40</td>
<td>-.28**</td>
<td>-.16</td>
<td>.06</td>
<td></td>
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<tr>
<td>5. Psychological abuse</td>
<td>8.33</td>
<td>5.20</td>
<td>.34**</td>
<td>-.14</td>
<td>.11</td>
<td>.31**</td>
<td></td>
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<tr>
<td>6. Physical abuse</td>
<td>2.20</td>
<td>2.98</td>
<td>.27**</td>
<td>-.15</td>
<td>.08</td>
<td>.24**</td>
<td>.38**</td>
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<tr>
<td>7. Injury</td>
<td>0.29</td>
<td>0.69</td>
<td>.16</td>
<td>-.13</td>
<td>.07</td>
<td>.21**</td>
<td>.24**</td>
<td>.56**</td>
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<tr>
<td>8. Social desirability</td>
<td>22.70</td>
<td>4.04</td>
<td>-.35**</td>
<td>.33**</td>
<td>-.01</td>
<td>-.10</td>
<td>-.31**</td>
<td>-.20**</td>
<td>-.16</td>
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Note. Means and standard deviations are based on untransformed scores. Correlations are based on transformed scores.

* $p < .05$. ** $p < .01$. 
injury to their female partners. For the variables included in the path model, the strongest correlations were observed between men’s physical abuse and injury to their female partner ($r = .56$, $p < .01$), physical and psychological abuse ($r = .38$, $p < .01$), and avoidance coping and psychological abuse ($r = .34$, $p < .01$). Avoidance coping also was related to problem drinking ($r = .28$, $p < .01$) and physical abuse ($r = .27$, $p < .01$). Finally, problem drinking, in addition to its relationship to avoidance coping, was significantly correlated with psychological abuse ($r = .31$, $p < .01$), physical abuse ($r = .24$, $p < .01$), and injury to female partner ($r = .21$, $p < .01$).

**Path Models**

Path analyses were conducted to examine the relationships among study variables. In a test of the proposed path model (see Figure 1), support-seeking coping had no relationship to any of the other study variables and was dropped from subsequent analyses. The paths from problem-solving coping to both physical and psychological abuse were nonsignificant and also were removed from the model. Therefore, neither problem-solving nor support-seeking coping was related directly to either measure of abuse.

The final model tested, along with standardized parameter estimates for each path, is shown in Figure 2. This model provided an excellent fit to the data, with a nonsignificant chi-square, $\chi^2 (6, 147) = 4.27$, $p = .64$, with $\chi^2/df = .71$, Goodness of Fit Index (GFI) = .99, Adjusted Goodness of Fit Index (AGFI) = .97, RMSEA = .00, and $p$ for test of closeness of fit = .80.

The first hypothesis is that avoidance coping will be positively related and problem-solving and support-seeking coping negatively related to problem drinking. This hypothesis was largely supported, with the exception of support-seeking coping. Greater use of avoidance coping was positively related ($\beta = .28$, $p < .001$) to problem drinking, while problem-solving coping was negatively related ($\beta = -.15$, $p = .05$).

The model also examined the direct relationship between coping and men’s abusive behavior. The analysis revealed that avoidance coping, in addition to being indirectly related to abuse through problem drinking, was also directly and positively related to both men’s physical ($\beta = .22$, $p < .01$) and psychological ($\beta = .26$, $p = .001$) abuse of their partners.

The second hypothesis was that problem drinking would be positively related to men’s use of violence. Consistent support was found for this prediction. Problem drinking was associated with higher levels of both physical ($\beta = .17$, $p < .05$) and psychological ($\beta = .23$, $p < .01$) abuse.

The final hypothesis, that physical abuse will be positively related to injury and will mediate the relationship between problem drinking and injury, was supported. Higher levels of men’s physical abuse were strongly and positively related to increased levels of injury to the female partner ($\beta = .54$, $p < .001$). In addition, men’s use of physical abuse was found to mediate the relationship between problem drinking and injury to the female partner.

Baron and Kenny (1986) provide a framework for testing mediating effects. They outline three conditions that need to be met for a variable to function as a mediator. First, the relationship between the independent variable (i.e., problem drinking) and the presumed mediator (i.e., men’s physical abuse) must be significant. In the present study, this condition was clearly met in that problem drinking and men’s physical abuse were significantly related ($r = .24$, $p < .01$). The second condition is that the mediator must be significantly
related to the dependent variable (i.e., injury). This condition also was met given that men’s physical abuse was highly correlated with injury to the female partner ($r = .56, p < .01$). The third condition is that a previously significant relationship between the independent and dependent variables is no longer significant when the paths between the independent and mediator variables and the mediator and dependent variables are introduced into the model.

We first tested a direct-effects model for problem drinking in relation to injury to the female partner. The path coefficient between problem drinking and injury was significant ($\beta = .21, p < .01$). When the mediating role of men’s use of physical abuse was tested following the procedures outlined above, the direct relationship between problem drinking and injury became nonsignificant ($\beta = .09, p > .22$), demonstrating that men’s use of physical abuse did fully mediate the effects of problem drinking on injury to the female partner.

**Social Desirability**

The relationship between social desirability and the other study variables was examined to determine the extent to which participants tended to portray themselves in a more favorable or socially desirable manner. Scores on the social desirability measure were not correlated with problem drinking or injury to the female partner. However, social desirability was significantly correlated with avoidance coping ($r = -.35, p < .01$), problem-solving coping ($r = .33, p < .01$), psychological abuse ($r = -.31, p < .01$), and physical abuse ($r = -.20, p < .05$). To test the influence of social desirability on the interrelationships among study variables, partial correlation analyses were performed, controlling for social desirability. The partial correlations were very similar to the zero-order
correlations portrayed in Table this study were negligible.

DISCUSSION

This study tested a multivariate model predicting physical and psychological abuse based on participants' self-reports of coping and problem drinking, and examined the relationships of men's problem drinking and physical abuse to injury to the female partner. As predicted, men who used more avoidance coping strategies to deal with relationship problems were more likely to be problem drinkers, and by contrast, men who used more problem-solving coping were less likely to be problem drinkers. Support-seeking coping showed no relationship to problem drinking or any of the other study variables.

It also was of interest to explore whether the coping variables had a direct relationship to men's physical and psychological abuse, since this is an area in the domestic violence literature that has received little attention. The important finding that emerged was that men who made greater use of avoidance coping to deal with relationship problems were more likely to commit physical and psychological abuse. In addition, avoidance coping showed an indirect relationship to these variables through problem drinking. That is, men who used more avoidance coping strategies were also more likely to engage in problem drinking. Problem drinking, in turn, was associated with a higher frequency of abusive behavior. Therefore, avoidance coping was observed to have a significant role in relation to men's abusive behavior, and this association occurred through multiple pathways. There were no direct relationships between problem-solving coping and either type of abuse, so that the role of this type of active coping strategy operated as a protective factor only indirectly through problem drinking.

While coping strategies have received little attention in the research on men's violence toward women, they emerged as significant components in the model of abusive behavior tested in this study. Importantly, the role of coping in relation to both physical and psychological abuse was found to operate both indirectly through problem drinking as well as directly in the case of avoidance coping. Other studies have demonstrated that individuals who tend to utilize avoidance coping and make little use of problem solving or other active coping strategies are more likely to score higher on indices of aggression or related negative affect. For example, escape-avoidance coping has been linked to higher levels of aggression and hostility in a sample of treatment-seeking substance abusers (McCormick & Smith, 1995). These findings are suggestive of the important role that avoidance coping may play in the occurrence of intimate partner violence. Further research is needed to determine if the findings of the present study regarding avoidance coping can be replicated among other samples of men who act aggressively toward their female partners. Seeking social support as a coping strategy had no relation to problem drinking or violence. Perhaps this finding is related to gender; men may be less likely to activate social support to address their problems. There is some evidence from studies of coping that women are more likely to seek and feel comfortable with social support than men (Endler & Parker, 1990; Hobfoll & Vaux, 1993).

Studies of assertiveness in domestically violent men also provide some indirect support for the notion that abusive men may have deficits in effective coping skills that contribute to their behavior. Evidence indicates that abusive men may show deficits in assertiveness with their partners, as compared to nonviolent men (Holtzworth-Munroe et al., 1997). For
example, Dutton and Strachan (1987) found that violent husbands were less assertive in expressing their needs to their partners than maritally distressed but nonviolent men, and men who were satisfied with their marriages. Another study found that male batterers were equivalent to nonviolent men on refusal assertiveness, but they were less assertive in initiating requests (Maiuro, Cahn, Vitaliano, Wagner, & Zegre, 1988). The investigators concluded that these abusive men were able to defend their rights, but had difficulty expressing their needs and desires in a socially appropriate manner. To the extent that assertiveness is related to the use of more active problem-solving coping strategies, these studies suggest that abusive men may be less likely to engage in these types of strategies with respect to stressors in their relationships. Moreover, in our own observations of the men who participate in our domestic violence program, many report engaging in avoidance coping in response to conflict with their partners, and have little idea how to respond assertively, that is, without using aggression.

These findings have implications for batterers' intervention practice. Substance use is recognized as an important factor in batterer intervention programs (Collins, Krouitl, Rodland, & Moore-Garrara, 1997; Donnelly, Mederos, Nyquist, Williams, & Wilson, 2002), and programs that combine both substance abuse and relationship violence interventions appear promising (Easton, Swan, & Sinha, 2000; Goldkamp, Weiland, Collins, & White, 1996). The evidence found in the current study suggests that coping interventions also may be helpful in reducing men's abusive behavior. Our own program experience suggests that many abusive men eschew dealing with relationship problems. Some research suggests that more explicit attention to helping men address avoidance coping could prove fruitful. Among a sample of alcoholics in treatment, changes in coping (increases in approach coping and decreases in avoidance coping) were associated with fewer psychological, interpersonal, and alcohol-related problems (Chung, Langenbuccher, Labouv, Pandina, & Moos, 2001). Results of the present study suggest that these types of changes in coping strategies could potentially lead to decreases in both alcohol abuse and violent behavior.

Consistent with previous research, men who were problem drinkers were significantly more likely to commit both physical and psychological abuse than those classified as non-problem drinkers. And men's physical abuse had a strong, positive relationship to the extent of injury to the female partner. A number of studies have examined the interrelationships of alcohol abuse, physical abuse, and injury (e.g., Brecklin, 2002; Elberle, 1982; Kyariacou et al., 1999; Martin & Bachman, 1997), and have shown the greater likelihood of injury to women when men have abused alcohol as compared to incidents in which they had not been drinking. The present study also found that men's physical abuse mediates the relationship between problem drinking and injury. Clearly, drinking alone cannot directly result in injury.

The mechanisms by which problem drinking increases the likelihood of men committing abusive acts toward women are not completely clear, but a number of explanations have been advanced. For example, increased alcohol consumption, and certainly intoxication, has a disinhibiting effect that appears to facilitate violence (Fals-Stewart, 2003; Leonard & Quigley, 1999). Two theories have been articulated to explain this facilitative effect, both involving processes that potentially mediate problem drinking and men's abusive behavior. The first is that mediation occurs through the psychopharmacologic effects of alcohol on cognitive processing (Chermack & Taylor, 1995), limiting an individual's ability to exercise control over his behavior, thereby increasing the likelihood of behaving more aggressively. A related example is that drinking may impair a man's ability to read his partner's behavioral and verbal cues, causing him to perceive innocuous statements as
slights or insults and to react violently (Collins et al., 1997). The second theory is that mediation may occur through changes in expectancy or excuse functions of intoxication (Critchlow, 1983). For some men, expectancies about their behavior may be altered due to alcohol abuse, or intoxication provides an perceived excuse to explain their violence. It is also possible that drinking is a source of relationship conflict and stress, leading couples to argue about the man’s drinking, which then increases the possibility of abusive behavior. For men with alcohol problems, conflict events often involve arguments about men’s alcohol (and drug) abuse and can escalate to violence (Murphy et al., 2005). The relationship between problem drinking and men’s physical and psychological abuse is likely multidetermined, and further research is needed to better identify the central explanatory mechanisms.

This study has certain limitations. First, since the data are cross-sectional, it is not possible to determine the direction of causality. Thus, the patterns of association described in this paper warrant further study using a longitudinal or prospective design. Thus far, the field has paid limited attention to conducting longitudinal studies of this nature (Holtzworth-Munroe, et al., 1997). Second, these data were based on self-reports from individuals in a court-mandated program. In spite of assurances that data were collected anonymously and would only be used in an aggregate fashion, respondents may have been inclined to minimize or misrepresent their alcohol consumption and abusive behavior. While we attempted to offset this problem by (1) not including data from men who reported no physical or psychological abuse, and (2) including a measure of social desirability, future work can further improve the validity of findings by collecting data from multiple reporters (e.g., intimate partners). In addition, since the participants were in a court-mandated program, replicating the model tested in this paper with other samples of the larger population of men will be necessary to determine the generalizability of the study findings. Third, even though the reliabilities of the physical and psychological abuse subscales were good, it is important to note that the original scales were not administered in their entirety. Fourth, the measure of injury was based on only two items and had low reliability. However, unlike most other investigations of injury that simply measure whether or not injury has occurred using a single item and then employ logistic regression analyses, the two items utilized in this study assessed frequency of occurrence. Clearly, more sophisticated and reliable measures of injury (type, frequency, severity, etc.) need to be developed. Finally, this model requires further exploration and could be broadened to include other important constructs, such as depression, trauma history, shame, attachment security, and personality disorder characteristics (Dutton, 2000; Dutton & Starzomski, 1993; McBurnett et al., 2000).

Despite these limitations, this study represents one of the first efforts to explore the role of coping strategies in relation to men’s physical and psychological violence and to use a modeling design to assess the extent to which variables such as coping and problem drinking differentially predict abusive behavior as related but separate phenomena. The analysis also helps to clarify the relationships among problem drinking, physical abuse, and injury to the female partner. Moreover, this study poses a broader conceptual framework for men’s use of violence in intimate relationships. Men’s violence against women must be considered in a holistic manner that incorporates not only dynamics of power and control, but also a number of other important intrapersonal factors including coping skills and substance abuse. While these factors do not excuse violent behavior, it would be shortsighted not to include them among variables that may contribute both to the understanding of violent behavior and to the ongoing development of intervention efforts geared toward cessation of intimate partner violence.
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