Predicting Preferences for Dating Partners From Past Experiences of Psychological Abuse: Identifying the Psychological Ingredients of Situations

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Are women who have been the victim of psychological abuse in the past more likely to prefer an abusive dating partner in the future? Are men who have been the perpetrator of abuse more likely to prefer a dating partner with high attachment anxiety, a characteristic associated with victims of abuse? The present research used a highly repeated, within-subject, multilevel approach to identify the characteristics of potential dating partners that constitute salient psychological ingredients of situations influencing partner preference. Study 1 found that college-age women who reported more instances of receiving psychological abuse, compared to women who did not, showed a stronger preference for male dating partners who possessed characteristics associated with an abusive personality (e.g., possessiveness). Study 2 found that college-age men who reported more instances of inflicting psychological abuse, compared to men who did not, showed a stronger preference for female dating partners characterized by high attachment anxiety.

Keywords: *psychological abuse; abusive relationships; partner preference; human mate selection; romantic relationship; adult attachment*

> If you've frequently become involved with abusive men, it's either because you tend to find them in more or less the same places, something about them attracts you, or something about you attracts them.
>
> —NiCarthy (1986), founder and director of the Abused Women's Network in Seattle (p. 223)

The belief that some people recreate past negative relationship dynamics through the choices they make in dating partners is widespread in today's popular culture as well as among professionals and academics (Kirkwood, 1993). Many professionals in the field of domestic violence explicitly advise women who have been the victims of abuse to "break the cycle" of abuse by changing their preferences in dating partners.

What empirical evidence is there to support this belief? Surprisingly, very little. Moreover, little or no research has focused on the partner preferences of men who are abusive in intimate relationships. The lack of empirical research on these issues may be due to the ethical and practical limitations of assessing partner preference.

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Perhaps an even greater obstacle is, ironically, the concern of implicitly and inadvertently "blaming the victim" (Kirkwood, 1993) or "exonerating the perpetrator" (Dutton, 1994).

Despite the relative lack of empirical research, some existing evidence does suggest an association between past abuse and preferences for subsequent dating partners. First, experiencing or observing abuse in past relationships, including high school dating relationships (O'Keefe & Treister, 1998), is associated with a greater likelihood of being the victim or perpetrator of abuse in future relationships (e.g., Centers for Disease Control and Prevention, 2000). Second, Jacobson and Gottman (1998) noted that battered women in their studies showed a preference for romantic relationships described as "on the edge," unpredictable, and potentially dangerous, also suggesting a link between partner preference and victimization.

Research and theory from social and personality psychology also points to the possibility that individuals seek relationship partners who will confirm their views and expectations of relationships, even if those views are negative. For example, in their sample of heterosexual dating dyads, Kirkpatrick and Davis (1994) found a greater proportion (than expected by chance) of couples in which one member was anxiously attached and the other member was avoidantly attached. They argued that these findings are consistent with the idea that one person's expectation about her partner is likely to be reinforced by the behaviors of the partner. An anxiously attached person, for example, may expect her partner to avoid intimacy, and this expectation is likely to be confirmed by the behaviors that typically characterize an avoidantly attached partner. Although Kirkpatrick and Davis's study did not specifically examine the role of partner selection in nonrandom pairings, other research (e.g., Collins & Read, 1990; Pietromonaco & Carnelley, 1994) is consistent with this possibility.

OVERVIEW OF PRESENT STUDIES

Even though research has extensively examined the factors related to assortative mating and partner preference, the extent to which past experiences of psychological abuse relate to partner preferences still remains unexamined. Thus, the goal of the present research was to investigate the relation between women's experiences of psychological victimization and women's preference for different types of dating partners (Study 1) and the relation between men's experiences of engaging in psychologically abusive behaviors and men's preference for different types of female dating partners (Study 2). To this end, the present research employed a highly repeated, multilevel approach (Shoda, 2003) in which a person's preference was assessed across numerous potential dating partners rather than only one or a handful of partners. Specifically, participants read 16 personal ads, each describing a potential dating partner who varied systematically on key personal characteristics or "psychological ingredients" (Zayas, Shoda, & Ayduk, 2002). These characteristics were identified a priori using existing theory and research on the characteristics associated with victimized women and abusive men. We then used multilevel modeling to predict the effects of psychological ingredients on partner preference from participants' past experience of psychological abuse.

The focus on analyzing the psychological ingredients of situations is rooted in current social-cognitive conceptualizations of psychological functioning and individual differences. According to the Cognitive Affective Processing System (CAPS; Mischel & Shoda, 1995) model, how a person responds—cognitively, affectively, and behaviorally—to situations depends on the psychological ingredients present in the situation (Shoda, Mischel, & Wright, 1994). Most important, the effects of psychological ingredients are expected to vary from person to person, such that some people may be highly sensitive to certain features of the situations, whereas others are sensitive to different features. Thus, if NiCarthy and others' assumption is correct, then women and men who have experienced abuse are likely to differ from those who have not in how they respond to the psychological ingredients of situations. For example, possessiveness and aggressive behaviors in male potential partners may be psychological ingredients that attract some women and repel others. In contrast, vulnerability and insecurity in potential female dating partners may be the psychological ingredients that are relevant to men's preferences in dating partners.

In the present research, we chose to focus on psychologically abusive behaviors, which include denigrating and damaging partner's self-image or esteem, withholding emotional support and nurturance in a passive-aggressive manner, engaging in threatening behavior, restricting partner's personal territory and freedom, and extreme jealousy (Kasian & Painter, 1992; Maiuro, 2001). The focus on psychological abuse was motivated by two reasons. First, psychological abuse occurs in the early, dating, getting-to-know phase of the relationship and typically precedes the first act of physical violence, which is more likely to emerge when individuals become more committed (O'Leary & Slep, 2003). Second, with the exception of extreme levels of physical abuse, psychological abuse may sometimes be more detrimental to recipient's mental health and well-being than the negative effects of physical abuse (O'Leary, 2001; Walker, 1979). Moreover, even in the absence of physical

violence, psychological abuse predicts depression, anxiety, and somatization among women (McKibbin, 1998) and it has been shown to have unique effects on outcomes that are normally thought of as consequences of physical abuse, such as negative health perceptions, cognitive impairment, and physical and role limitations (Straight, Harper, & Arias, 2003).

Abusive dynamics may come in many forms, for example, men and women may be perpetrators, victims, or both, and abuse may occur within opposite-sex as well as same-sex couples. Nonetheless, male-to-female psychological abuse has been identified as the most common abusive dynamic (Weihe, 1998), with women having a greater likelihood than their male counterparts to be physically injured and to suffer emotionally (O'Keefe & Treister, 1998). Thus, the present studies focused primarily on heterosexual abusive relationship dynamics in which women are the victims and men are the perpetrators. In addition, participants of this study were college-age men and women, for whom the process of partner preference is expected to be particularly salient. Young adults are the fastest growing population at risk for dating violence. In a study by Neufeld, McNamara, and Ertle (1999), approximately 77% of college-age women reported experiencing at least one instance of psychological abuse within the past 6 months and 55% of women reported multiple occurrences within this same time period.

STUDY 1

Study 1 examined whether women's experiences of receiving psychological abuse in their most recent romantic relationship predict their preferences for potentially abusive dating partners.[1] Female college-age students completed the Internet Dating Service (IDS) procedure in which they read descriptions of 16 potential dating partners and indicated their preference for each partner. The ads used as stimuli were written by actual male college students in a separate study and differed systematically in the degree to which they had been judged by a separate group of female raters as describing a man who may be psychologically abusive. The description of the 16 dating partners also varied in the degree to which they had been judged as desirable dating partners. By including the desirability dimension, it was possible to examine women's preferences for potentially abusive dating partners independent of (i.e., statistically controlling for) the dating partner's general desirability.

Study 1 also examined the relation between women's adult romantic attachment and their preference for potentially abusive male dating partners. This analysis was motivated by past research showing that women characterized by high attachment anxiety (i.e., overly concerned about abandonment and separation) report experiencing more emotional (O'Hearn & Davis, 1997) as well as physical abuse (Henderson, Bartholomew, & Dutton, 1997). To date, however, no study has examined whether attachment anxiety predicts women's preference for potentially abusive dating partners.

Last, the present study examined the relation between women's global self-esteem and their partner preference. Research has found links between low self-esteem and higher frequencies of self-reported psychological abuse among physically victimized women as well as psychologically victimized women (Katz, Arias, & Beach, 2000). However, the extent to which women's self-esteem predicts preference for potentially abusive dating partners has yet to be examined.

Method

Participants

To recruit female participants for the present study, a prescreening questionnaire was administered to University of Washington students enrolled in an introduction to psychology class. One hundred and five women who indicated interest in participating in a future study and completed all the prescreening questionnaires (described in the Procedures and Measures section below) were invited to take part in the experimental session. Of these, 65 women completed all the procedures administered in the experimental session (3-6 weeks after the prescreening session). The median age of the sample was 19 years old (range = 18-22). At the time of the experimental session, 16 women were involved in a romantic relationship. Because the findings did not depend on the current relationship status (i.e., no significant interactions involving relationship status), the results for the combined sample are reported in the text and tables.

Procedures and Measures

Identifying psychological ingredients of potential male dating partners: Development and validation of personal ads. In a separate study, 112 male college students wrote short descriptions of themselves in the form of personal ads.[2] Next, three female coders who were blind to the experimental hypotheses provided initial evaluations of the 112 personal ads with regard to the degree to which the men described in the ads would be perceived by women, on average, as being (a) potentially abusive and (b) desirable as a dating partner. The aim of the initial evaluation was to select ads that represented all four possible combinations of high versus low abusiveness and desirability. Coders' evaluations, however, indicated that no ads were perceived as both potentially abusive and highly desirable. Although it

would have been possible to create ads that described male dating partners who were both abusive and desirable, doing so would have resulted in descriptions of some dating partners written by actual students and descriptions of other dating partners artificially created. To avoid such a confound, all the stimuli were selected from those ads written by actual college students, representing the following three types of dating partners: (a) four ads that described potential dating partners that were rated high on abusiveness and low on desirability (abusive), (b) eight ads that described potential dating partners that were rated low on abusiveness and low on desirability (undesirable), and (c) four ads that described potential dating partners that were rated low on abusiveness and high on desirability (desirable). Ads classified as abusive included statements reflecting a predisposition toward anger (e.g., "Warning ahead, I do have a very bad temper") and jealousy (e.g., "Though I do admit I will get jealous if you are always going over to one of your guy friend's house . . . "), as well as themes regarding trust and emotional control (e.g., "I will treat you like you are God until you break my trust and then you are just another person").

Next, a separate sample of female college students ($N = 24$) rated the extent to which they perceived the man described in each of these 16 personal ads to be potentially abusive, psychologically and physically, with a romantic partner. A different sample of female college students ($N = 22$) rated the extent to which the man described in each ad was a desirable dating partner and someone they would be interested in dating. In addition, both samples of female raters indicated the extent to which each male dating partner possessed personality characteristics that past research has linked to an abusive personality in men, such as jealousy, impulsivity, dependence, and violence (e.g., Dutton & Browning, 1988; Dutton, Starzomski, & Ryan, 1996; Murphy, Meyer, & O'Leary, 1994; Walker, 1979). Each of the ratings were then averaged across raters to create continuous indices that characterized each of the 16 male dating partners in terms of the psychological ingredients (e.g., potential for abusiveness, desirability, impulsivity, possessiveness). (To index the desirability associated with each male dating partner, ratings reflecting the extent to which the man described in the ad was a desirable dating partner and someone they would be interested in dating were further averaged.)

The average interrater correlation (agreement) for the ratings of the potential abusiveness portrayed in each of the 16 ads was .39. Based on this, Cronbach's alpha estimate (α) of the reliability of the index of potential abusiveness was .93. For the desirability ratings, the average interrater correlation was .30 and Cronbach's alpha was .89. Finally, Cronbach's alpha estimate of the reliability of the ratings for the specific personality characteristics (e.g., jealousy, impulsivity) associated with each ad ranged from .72 to .87.

As a first step in the construct validation of the 16 personal ads, we examined the female raters' general impressions of the dating partners. The abusive dating partners were rated as significantly more likely to inflict psychological as well as physical abuse than the undesirable and desirable dating partners (Table 1, rows 1-4). The desirable and undesirable dating partners, however, did not differ significantly from one another in their rated likelihood of engaging in psychological or physical abuse. The desirable dating partners were rated as significantly more desirable and more preferred than the undesirable and abusive men, whereas the latter two were rated as approximately equally undesirable.

As a second step in the construct validation, we examined whether abusive dating partners were rated high on characteristics associated with an abusive personality. Adding further validity to the ads used as stimuli, abusive dating partners were rated as more impulsive, jealous, possessive, dependent, clingy, aggressive, hostile, violent, and angry than the undesirable and desirable dating partners (Table 1, rows 5-13). Undesirable and desirable ads did not differ from each other on any of these characteristics.

Finally, as an additional step in the construct validation of the 16 personal ads, we examined the relation between female raters' judgments of the ads and the male ad writers' own self-reported characteristics. Specifically, in a second session conducted after the initial ads were written, ad writers completed self-report measures to assess characteristics that have been associated with an abusive personality in the literature, such as impulsivity, jealousy, and hostility. Three of the 16 ad writers whose descriptions were eventually selected as stimuli for Study 1 (1 classified as undesirable and 2 classified as potentially abusive) did not return for the second session. Thus, self-report data are available for 13 of the 16 ads. The small sample size makes it difficult to draw firm conclusions about the relation between men's self-reported characteristics and judgments of men's characteristics as perceived by the independent sample of female raters. Nonetheless, and rather remarkably, correlations between men's self-reports and the female raters' judgments of the ads showed moderate to high convergence. Specifically, women's ratings of each ad writer's potential for psychological abuse were correlated in the expected direction with the ad writer's self-reported hostility ($r = .63$, $p < .05$), impulsivity ($r = .47$, *ns*), jealousy ($r = .34$, *ns*), attachment anxiety ($r = .42$, *ns*), and self-esteem ($r = -.38$, *ns*).

Internet Dating Service procedure. To assess partner preference with as much experimental control as possible,

TABLE 1: Mean (*SD*) Ratings of Potential for Abusiveness and Desirability and Personality Characteristics for the 16 Dating Partners Described in the Personal Ads Used as Stimuli (Study 1)

	Type of Dating Partner		
	Abusive	*Undesirable*	*Desirable*
General impressions			
Potential for inflicting psychological abuse	3.33_a (.57)	2.28_b (.58)	1.93_b (.57)
Potential for inflicting physical abuse	2.75_a (.45)	1.83_b (.57)	1.65_b (.58)
Desirability as a dating partner	2.51_a (.85)	2.66_a (.47)	3.46_b (.49)
Would you date this person?	2.15_a (.82)	2.34_a (.42)	3.21_b (.53)
Personality characteristics			
Impulsive	4.37_a (1.03)	3.84_b (.98)	3.89_b (1.18)
Jealous	4.67_a (.96)	2.90_b (.99)	2.56_b (1.11)
Possessive	4.82_a (.94)	2.96_b (.96)	2.46_b (1.05)
Dependent	4.10_a (.98)	3.62_b (1.17)	3.42_b (1.32)
Clingy	3.91_a (1.22)	3.25_b (.86)	2.92_b (1.17)
Aggressive	4.47_a (.98)	2.92_b (1.00)	2.61_b (1.09)
Hostile	3.71_a (1.09)	2.08_b (.82)	1.81_b (.78)
Violent	3.33_a (1.02)	1.79_b (.68)	1.51_b (.68)
Angry	3.43_a (1.03)	2.00_b (.72)	1.68_b (.72)

NOTE: The independent sample of female judges rated the extent to which each descriptor (listed in the left column above) was characteristic of each of the 16 ads using a scale of 1 (*not at all characteristic*) to 7 (*extremely characteristic*). All pairwise comparisons (among the three types of male dating partners: abusive, undesirable, and desirable) were performed using Tukey's honestly significant difference (HSD) test with Greenhouse-Geisser's corrected MSWI and MSRES as the error term. Tukey's HSD kept the overall alpha level at .05. Within a row, means not sharing a common subscript are significantly different from one another according to Tukey's HSD test at $p < .05$. $N = 22$ (abusiveness ratings), $N = 24$ (desirability ratings), $N = 46$ (personality ratings).

we developed the IDS paradigm by drawing from existing methodologies (e.g., Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996; Frazier, Byer, Fischer, Wright, & DeBord, 1996). At the start of the IDS procedure, participants were simply instructed to surf the Web pages of a dating service, read the 16 personal ads posted on the site, and select the person they were most interested in getting to know better. The specific aims of the study were not revealed to participants.

The main page of the site consisted of a list of 16 names, which were randomly ordered for each participant. Each name was hyperlinked to a Web page containing the corresponding personal ad, and participants were able to access and read the description of each male dating partner by clicking on the person's name. Participants were not allowed to go onto the selection phase of the IDS procedure until they had read all 16 personal ads. Once in the selection process, they could reaccess and reread any of the personal ads. Participants indicated their preferences for potential dating partners through a four-round, forced-choice selection process in which they selected the dating partners they were interested in getting to know. Forced-choice procedures have been used successfully in past research to assess partner preference (Fletcher, Tither, O'Loughlin, Friesen, & Overall, 2004). In each selection round, participants selected half (and thus eliminated the other half) of the dating partners from the ads selected in the previous round. For example, in round 1, participants selected eight dating partners (of the 16) they were most interested in getting to know, and in round 2, participants selected four dating partners (from the eight they had selected in the previous round). This type of selection process continued through rounds 3 and 4 and ended when participants had selected the dating partner they preferred most. Preference for each dating partner was represented by the number of rounds in which the ad was selected and ranged from 0, if the ad was not selected at all, to 4, if the ad was selected all four rounds (i.e., most preferred dating partner).

Self-report measures. All self-report measures were administered at the experimental session (after completing the IDS) or at the prescreening session approximately 3 to 6 weeks earlier. Participants were run in groups of 15 to 25 in a computer lab that allowed each person to complete the procedures on an IBM compatible computer.

The Psychological Maltreatment Inventory (PMI; Kasian & Painter, 1992), a commonly used self-report measure of receipt and infliction of psychologically abusive behaviors within dating and premarital dyads, was used to assess the extent to which each female participant had been the recipient of psychologically abusive behaviors. Participants completed the PMI with respect to experiences within their current or most recent romantic relationship because recent relationship experiences are assumed to affect subsequent views of relationships

as well as one's subsequent search for future dating partners (Brehm, Miller, Perlman, & Campbell, 2002). The PMI consists of five negative behavior scales: isolation and emotional control (e.g., "My partner tried to keep me from seeing or talking to my family"), undermining self-esteem (e.g., "My partner treated me like I was stupid"), jealousy (e.g., "My partner was jealous of my friends"), verbal abuse (e.g., "My partner swore at me"), and emotional withdrawal (e.g., "My partner sulked and refused to talk about a problem"). Participants indicated how frequently each of the behaviors had occurred during a 12-month period using a 5-point scale (never, 1-2 times, 3-5 times, 6-10 times, or 10 or more times). Participants completed a short version (20-item) of the PMI (consisting of the four items with the highest factor loadings for each scale) at the prescreening session and the full version (60-item) at the experimental session. For both the short and full versions, the mean of the five scales was computed. The correlation between the mean score for the short and full versions of the PMI was strong, $r(65) = .84$, $p < .001$, and there was also no significant difference between the variances of the two versions, $t(63) = .24$, *ns*. Because the full version consisted of more items than the short version, weighted averages for each scale (based on the number of items in each scale) were computed. The overall score, referred to as the PMI index, was computed by taking the mean of the five weighted scales ($\alpha = .85$). In addition, participants responded twice (at both the prescreening and experimental session) to an item from the Conflict Tactics Scale (Straus, 1979), designed to assess the possibility or threats of physical abuse (i.e., "My partner threw or smashed or hit or kicked something"). Participants' average response to this item (CTS-TPA) obtained at the prescreening and experimental session was computed to index threat of physical abuse.

Participants completed the Experiences in Close Relationships (ECR) questionnaire (Brennan, Clark, & Shaver, 1998) based on how well each statement characterized their feelings and thoughts across all of their past romantic relationships. The ECR consists of an 18-item avoidance scale that assesses discomfort with intimacy and dependency (e.g., "I prefer not to show a partner how I feel deep down"; $\alpha = .93$) and an 18-item anxiety scale that corresponds to vigilance concerning rejection and abandonment (e.g., "I worry a lot about my relationships"; $\alpha = .92$). To assess global self-esteem (GSE), Rosenberg's (1965) 10-item self-report measure was administered ($\alpha = .81$). Finally, participants completed a measure of social desirability responding (SDR) (Paulhus, 1991), which consists of a 20-item scale designed to assess self-deception (i.e., the tendency to give favorably biased but honestly held self-descriptions) and another 20-item scale designed to assess impression management (i.e., the tendency to give favorable self-descriptions to others). The mean of the two scales was computed to index participants' SDR.

At the end of the experimental procedures, participants were asked to guess the purpose of the experiment. No participant accurately guessed the purpose of the study.

Multilevel Modeling of the Effects of Psychological Ingredients on Partner Preference

The data from the present study are multilevel in that the 16 different male dating partners, the level-1 units, were all shown to each female participant, the level-2 units. Hierarchical linear models (HLM; HLMwin v 5.04; Raudenbush, Bryk, & Congdon, 2001) were used to simultaneously estimate the relations among constructs at level-1 and level-2.

In the present study, the level-1 model of the HLM analysis is a within-subjects analysis. As shown below, the level-1 model predicted, for each female participant j (j = 1-65), preference for dating partner i (i = 1-16) as a function of the abusiveness and desirability of partner i:

$$\begin{aligned} &\text{Level-1 model} \\ &[\text{Preference for partner } i]_j \\ &\quad = b_{\text{abusivenessj}}\,[\text{partner } i\text{'s abusiveness}] \\ &\quad + b_{\text{desirabilityj}}\,[\text{partner } i\text{'s desirability}] + r_{ij} \end{aligned} \tag{1.0}$$

The outcome variable (i.e., preference for each partner) and level-1 predictors (i.e., partner i's abusiveness and partner i's desirability) were grand-mean centered. r_{ij} is the residual error term, $b_{\text{abusivenessj}}$ and $b_{\text{desirabilityj}}$ are the regression coefficients (slopes) in the linear regression predicting each woman's preference for the 16 dating partners from the abusiveness and desirability indices that characterized each dating partner, respectively.[3] By including the desirability index as a level-1 predictor, the HLM analyses statistically controlled for the effect of the dating partner's desirability. Thus, $b_{\text{abusivenessj}}$ represents the extent to which each woman preferred potentially abusive dating partners relative to nonabusive dating partners, after controlling for the effect of dating partner's desirability. Similarly, $b_{\text{desirabilityj}}$ represents the extent to which each woman preferred desirable dating partners relative to undesirable dating partners, after controlling for the effect of dating partner's abusiveness. For brevity and ease of description, level-1 coefficients (e.g., $b_{\text{abusivenessj}}$ and $b_{\text{desirabilityj}}$) are hereafter interpreted simply as "preference for X dating partners," where X is the feature that characterizes the dating partner. For example, $b_{\text{abusivenessj}}$ will be referred to as participant's preference for potentially abusive dating partners.

TABLE 2: Correlations Among Self-Report Measures of Women's Personal Characteristics Used as Level-2 Predictor Variables (Study 1)

	1	*2*	*3*	*4*	*5*	*6*
1. Psychological Maltreatment Inventory (PMI) Index	—	.71***	.31*	–.08	–.11	–.15
2. Potential for Physical Violence (CTS-TPA)		—	.04	–.13	–.07	–.10
3. Attachment Anxiety (ECR-ANX)			—	–.11	–.52***	–.47***
4. Attachment Avoidance (ECR-AVO)				—	–.07	-.23†
5. Global Self-Esteem (GSE)					—	.48***
6. Social Desirability Responding (SDR)						—

NOTE: CTS = Conflict Tactics Scale, ECR = Experiences in Close Relationships. $N = 65$.
†$p < .10$. *$p < .05$. ***$p < .001$.

The level-2 model of the HLM analysis is a between-subjects analysis. As shown in equation 1.1, the level-2 model predicted female participant *j*'s preference for potentially abusive dating partners, $b_{\text{abusivenessj}}$, from female participant *j*'s characteristics (e.g., PMI). Similarly, equation 1.2 predicted female participant *j*'s preference for desirable dating partners, $b_{\text{desirabilityj}}$, from female participant *j*'s characteristics.

Level-2 model

$$b_{\text{abusivenessj}} = \gamma_{\text{abusiveness0}} + \gamma_{\text{abusiveness1}}\,[\text{participant } j\text{'s characteristic}] + \mu_{\text{abusivenessj}} \quad (1.1)$$

$$b_{\text{desirabilityj}} = \gamma_{\text{desirabiliy0}} + \gamma_{\text{desirability1}}\,[\text{participant } j\text{'s characteristic}] + \mu_{\text{desirabilityj}} \quad (1.2)$$

where $b_{\text{abusivenessj}}$ is female participant *j*'s slope in the level-1 model representing the relation between dating partners' abusiveness and woman *j*'s preference for dating partners, $\gamma_{\text{abusiveness0}}$ is the level-2 intercept, which represents the average main effect of the abusiveness dimension, and $\gamma_{\text{abusiveness1}}$ is the coefficient in the linear regression predicting $b_{\text{abusivenessj}}$ from women's characteristics (e.g., PMI). The level-2 equation predicting $b_{\text{desirabilityj}}$ (Equation 1.2) is analogous to $b_{\text{abusivenessj}}$ (Equation 1.1) except that here the equation predicts preferences for desirable dating partners. All of the level-2 predictor variables were grand-mean centered. The HLM analysis described above was performed separately for each of the level-2 predictor variables.

Results

Before examining the central question of whether women's experiences of receiving psychological abuse predict their preference for potentially abusive dating partners, we examined the typical responses in the entire sample of participants. For example, we asked, do women, on average, prefer desirable partners to undesirable partners? These analyses provided further tests of the construct validity of the personal ads and IDS procedure used to assess partner preference. Specifically, we focused on the level-2 intercepts, $\gamma_{\text{desirability0}}$ and $\gamma_{\text{abusiveness0}}$, that are the expected average effect of partners' desirability and potential for abusiveness, respectively, on partner preference from a subject who was average on the level-2 predictor (because all level-2 variables were centered, level-2 intercepts predict the level-1 coefficients for subjects at the mean of the distribution). As such, the intercepts can be interpreted as the average effect among women in the sample of partners' desirability and potential for abusiveness, respectively, on partner preference.

Not surprisingly, women, on average, preferred desirable dating partners. When partner desirability was entered as the only level-1 variable, the level-2 intercept was statistically significant ($\gamma_{\text{desirability0}} = .71$, $p < .001$).[4] For every 1.0 increase in the desirability of the dating partner ($SD = .54$), there was an average increase of .71 in women's preference for the dating partner ($SD = 1.24$). The results remained unchanged even when partner's abusiveness was statistically controlled by entering both partner desirability and abusiveness simultaneously as level-1 predictors ($\gamma_{\text{desirability0}} = .80$, $p < .001$). When partner abusiveness was entered as the only level-1 variable, it was negatively associated with preference for dating partners ($\gamma_{\text{abusiveness0}} = -.34$, $p < .001$). However, when the desirableness of the partner was statistically controlled (by entering desirability as a level-1 predictor also), women, on average, did not show a clear preference for or against abusive dating partners ($\gamma_{\text{abusiveness0}} = .12$, *ns*).

Predicting the Effects of Psychological Ingredients on Partner Preference

The level-2 coefficients, $\gamma_{\text{abusiveness1}}$ and $\gamma_{\text{desirability1}}$, represent the degree to which women's personal characteristics (e.g., PMI) predicted each woman's preference for potentially abusive and desirable dating partners, respectively. Correlations among the level-2 variables are reported in Table 2.

Receipt of psychological abuse. PMI was positively related to preferences for potentially abusive dating partners ($\gamma_{\text{abusiveness1}} = .26$, $p < .05$, Table 3). For every

TABLE 3: Level-2 Coefficient Estimates and Descriptive Statistics (Study 1)

	Feature of Dating Partner			
	Abusiveness		*Desirability*	
*Women's Characteristics (*M, SD, *Skewness)*	$\gamma_{abusiveness1}$	SE	$\gamma_{desirability1}$	SE
Psychological Maltreatment Inventory (PMI) Index (.52, .51, 1.78)	.26*	.11	.06	.13
Threat of Physical Abuse (CTS-TPA, .31, .66, 2.48)	.24*	.10	.12†	.07
Adult Romantic Attachment (ECR)[a]				
Attachment Anxiety (ECR-ANX, 3.65, 1.12, .26)	–.06	.07	–.03	.08
Attachment Avoidance (ECR-AVO, 3.02, 1.09, .38)	–.07	.07	–.10†	.08
Global Self-Esteem (GSE; 5.67, .90, –.70)	.13	.10	.17*	.09
Social Desirability Responding (SDR; 5.71, 2.54, .52)	.01	.03	.05†	.03

NOTE: The entries are level-2 coefficients that represent the degree to which women's characteristics (in left column) predict the relationship (level-1 slopes) between ad features (i.e., abusiveness and desirability) and women's preference for ads. The level-2 coefficients, $\gamma_{abusiveness1}$ and $\gamma_{desirability1}$, indicating the predicted increase (or decrease) in the level-1 coefficient, $b_{abusivenessj}$ and $b_{desirabilityj}$, respectively, for one raw unit increase in the level-2 variable. Separate hierarchical linear modeling (HLM) analyses were performed for each level-2 variable. The level-2 intercepts, $\gamma_{abusiveness0}$ and $\gamma_{desirability0}$, which represent the average effect of abusiveness and desirability, respectively, on preference for potential dating partners were the same in all analyses ($\gamma_{abusiveness0} = .12$, *ns*, and $\gamma_{desirability0} = .80$, $p < .001$). All variables were grand-mean centered. CTS = Conflict Tactics Scale, ECR = Experiences in Close Relationships. $df = 63$.

a. Because the avoidance and anxiety scales of the ECR were entered in simultaneously, the *df* for analyses involving attachment are 62.

†$p < .10$. *$p < .05$.

1.0 increase in PMI (*SD* = .51), women's preference for potentially abusive dating partners showed an average increase of .26. (This corresponds to an average increase of .13 in women's preference for potentially abusive dating partners for every 1 *SD* increase in PMI.) Thus, even when statistically controlling for the effect of desirability, the effect of dating partner's abusiveness on preferences interacted with women's past experiences of receiving abuse. When partner abusiveness was entered as the only level-1 predictor, PMI continued to predict preferences for potentially abusive dating partners ($\gamma_{abusiveness1} = .22$), $t(63) = 2.49$, $p < .05$. Most important, the PMI index was not related to preference for desirable dating partners. This was the case even when partner's desirability was entered as the only predictor in the level-1 analyses ($\gamma_{desirability1} = -.13$), $t(63) = 1.27$, *ns*. These findings indicate that women who reported more instances of experiencing psychological abuse showed a stronger preference for potentially abusive dating partners, but not necessarily undesirable partners more generally.

The next analyses focused specifically on women's preference in the last, fourth round. This analysis addressed the question: Who, of the 16 potential male dating partners, did women choose as the one they were *most* interested in getting to know better? This analysis also ensured that the HLM analysis adequately represented the data. A chi-square test was used to examine the relation between PMI and the type of dating partner that women most preferred. Because normative scores for identifying women who have been psychologically abused have not been determined (O'Leary & Maiuro, 2001), the sample was divided into high and low PMI using a median split. In addition, dating partners were classified into one of three, distinct categories: abusive, undesirable, and desirable (see Study 1 Method section).

Women who scored above the median on the PMI index were 3 times more likely (12 vs. 4) than women who scored below the median on the PMI index to select an abusive dating partner (see Table 4). Consistent with the HLM analyses, the chi-square was statistically significant, $\chi^2(2, N = 65) = 6.30$, $p < .05$ (Cramer's V, a measure of effect size, was .31), indicating that preference for different types of dating partners interacted with women's self-reports of receiving psychological abuse.

The final analyses examined whether women's experiences of receiving psychological abuse were related to preferences for dating partners with personality characteristics associated with an abusive personality (e.g., impulsive, jealous). These analyses provide a more detailed examination of the specific characteristics that some women may find attractive in dating partners. For these analyses, the HLM models were specified exactly as those described in equations 1.0, 1.1 and 1.2, except that the abusiveness index was replaced by each personality index (see Table 1, rows 5-13), one at a time, as the level-1 predictor.

The results of the HLM analyses showed that PMI predicted preferences for dating partners judged as impulsive ($\gamma_{impulsive1} = .21$), $t(63) = 2.51$, $p < .01$, jealous ($\gamma_{jealous1} = .11$), $t(63) = 2.05$, $p < .05$, possessive ($\gamma_{possessive1} = .14$), $t(63) = 2.48$, $p < .01$, aggressive ($\gamma_{aggressive1} = .28$), $t(63) = 3.35$, $p < .001$, hostile ($\gamma_{hostile1} = .17$), $t(63) = 2.36$, $p < .05$, and violent ($\gamma_{violent1} = .13$), $t(63) = 2.05$, $p < .05$. There were also two marginally significant trends: PMI was positively related to preference for dating partners characterized as angry ($\gamma_{angry1} = .12$), $t(63) = 1.75$, $p < .10$, and potentially capable of being physically abusive

TABLE 4: Type of Dating Partner Most Preferred as a Function of Women's Self-Reports of Receiving Psychological Abuse: Study 1

	Male Dating Partner Most Preferred		
	Abusive	*Undesirable*	*Desirable*
Receipt of Psychological Abuse (PMI)			
Above the median ($n = 32$)	12 (37.5%)	7 (21.9%)	13 (40.6%)
Below the median ($n = 33$)	4 (12.1%)	7 (21.2%)	22 (66.7%)
Total ($N = 65$)	16 (24.6%)	14 (21.5%)	35 (53.8%)

NOTE: Cells show the number of women who preferred each type of dating partner. PMI = Psychological Maltreatment Inventory. Percentage within each level of receipt of psychological abuse is reported in parentheses. Percentages within each row total 100%. The continuous (undichotomized) measure of PMI was not significantly correlated with selection of a desirable partner in the final round (coded as 1 if the desirable dating partner was selected as most preferred and 0 if it was not; $r = -.11$, *ns*) or with mean preference for the four desirable ads (i.e., the degree to which the desirable ads were selected across the four rounds of selection; $r = -.01$, *ns*).

($\gamma_{physicallyabusive1} = .23$), $t(63) = 1.81$, $p < .10$. PMI was not related to preference for dating partners characterized as dependent ($\gamma_{dependent1} = .18$), $t(63) = 1.38$, *ns*, or clingy ($\gamma_{clingy1} = .04$), $t(63) = .47$, *ns*.

Social desirability processes. The next set of analyses examined the extent to which the relation between PMI and preference for abusive dating partners could be explained by a more general tendency to provide socially desirable responses. SDR was not related to preference for abusive dating partners. However, of interest, it was positively related (although not statistically significant at $p < .05$) to preferences for desirable dating partners ($\gamma_{desirability1} = .05$), $t(63) = 1.69$, $p < .10$. In addition, when SDR was statistically controlled by entering SDR and PMI simultaneously as level-2 predictors in the HLM analyses, PMI continued to predict the effect of dating partner's abusiveness on women's preference ($\gamma_{abusiveness1} = .27$), $t(62) = 2.40$, $p < .05$.

Adult romantic attachment. Replicating previous research (O'Hearn & Davis, 1997), women characterized by high attachment anxiety as assessed by ECR reported more instances of receiving psychological abuse ($r = .31$, $p < .05$). Moreover, the relation between attachment anxiety and PMI remained relatively unchanged when SDR was statistically controlled by computing a partial correlation (partial $r = .27$, $p < .05$).

A central question of the present study is whether women's attachment anxiety is related to their preference for potentially abusive dating partners. To address this question, the anxiety and avoidance scales were simultaneously entered as the level-2 predictors in the level-2 model (equations 1.1 and 1.2). Neither the anxiety nor avoidance scale was significantly related to preference for potentially abusive dating partners (see Table 3).

Global self-esteem. GSE did not predict preference for abusive dating partners ($\gamma_{abusiveness1} = .13$), $t(63) = 1.33$, *ns*, and it was not correlated with PMI ($r = -.11$, *ns*). Instead, GSE significantly predicted preferences for desirable dating partners ($\gamma_{desirability1} = .17$), $t(63) = 2.01$, $p < .05$, and was strongly correlated with SDR ($r = .48$, $p < .001$). When SDR was statistically controlled by entering SDR and GSE simultaneously as level-2 predictors in the HLM analyses, GSE was no longer significantly related to preferences for desirable dating partners ($\gamma_{desirability1} = .14$), $t(62) = 1.64$, *ns*.

Discussion

Study 1 found that self-reports of psychological victimization within college-age women's most recent romantic relationship were positively related to women's preference for descriptions of dating partners that were judged (by a separate sample of women) to be potentially abusive. For example, women who reported the highest frequencies of receiving psychological abuse were 3 times more likely to choose a potentially abusive dating partner than were women who reported the fewest instances of receiving psychological abuse. In addition, women who reported more psychological victimization in their most recent romantic relationship showed a stronger preference for dating partners who had been judged to be impulsive, jealous, possessive, aggressive, hostile, and violent. All of these characteristics have been linked to personality characteristics of abusive men (e.g., Dutton et al., 1996). Thus, as will be discussed in the General Discussion section, these characteristics are the features of situations or psychological ingredients that differentially affected women's partner preferences.

Could the relation between self-reports of past victimization and preference for potentially abusive dating partners be due to a general tendency to endorse socially undesirable responses? The results from the HLM analyses suggest that this possibility is unlikely. First, the PMI index was not associated with preference for desirable dating partners; women who endorsed negative statements on PMI did not also prefer undesirable dating partners who were not abusive. Second, SDR, a measure of women's tendency to endorse socially desirable responses, was not related to preference for abusive dating partners, although it was positively related, as one might expect, to preferences for desirable dating partners. Finally, even when the HLM analyses statistically controlled the effect of social desirability responding, PMI continued to predict women's preference for potentially abusive dating partners. Thus, general social desirability

responding processes do not appear to account for the relation between past experiences of receiving psychological abuse and preferences for potentially abusive dating partners.

It is worth noting that low self-esteem was not related to preference for potentially abusive dating partners. The present findings are consistent with the argument that low self-esteem does not place women at risk for becoming involved in abusive relationships (Cahn & Meier, 1995). Rather, women may experience a decrease in self-esteem as a result of being psychologically abused (e.g., degraded, humiliated).

The present study also examined the role of women's adult romantic attachment on partner preferences. Replicating prior research (Henderson et al., 1997), women characterized by high attachment anxiety reported more instances of psychological victimization within their past romantic relationship. Attachment anxiety, however, was not related to preferences for potentially abusive dating partners. What process, then, might account for the finding that anxiously attached women report higher instances of psychological abuse in their romantic relationships? One possibility, as noted by NiCarthy (1986), is that men with abusive tendencies prefer women with particular characteristics, for example, women high in attachment anxiety. This possibility is examined in Study 2.

STUDY 2

Do men who have behaved in a psychologically abusive manner in their most recent romantic relationship show a stronger preference for female dating partners who are high in attachment anxiety? To examine this question, male college students completed the IDS procedure. The ads used as stimuli were written by actual female college students in a separate study but were edited so that they differed systematically in the woman's adult attachment style. Specifically, the degree to which the woman described in the ad differed in attachment anxiety and attachment avoidance. As in Study 1, the present study also examined the degree to which participants' own adult romantic attachment, global self-esteem, and social desirability responding tendencies were related to their preference for female dating partners.

Method

Participants

Participants for Study 2 were recruited using procedures similar to those described in the Method section of Study 1. Ninety-three college-age, heterosexual men who indicated interest in participating in the experimental session and completed all the prescreening questionnaires (described in the Procedures and Measures section below) were invited to take part in the study. The mean age was 19 years old (SD = 1.33 years, range = 17-27 years). Fifty-three participants were not involved in a romantic relationship at the time of the experimental session. Analyses showed that the pattern of results did not depend on current relationship status. Thus, the results for the combined sample are reported in the text and tables.

Procedures and Measures

Identifying psychological ingredients of potential female dating partners: Development of personal ads and IDS. The personal ads used as stimuli in Study 2 were developed so that they described female dating partners who differed systematically in their adult attachment style, a characteristic assumed to be a psychological ingredient influencing men's partner preference. The development process consisted of the following three steps: (a) In a separate study, 149 female college students wrote short descriptions of themselves in the form of personal ads; (b) 16 personal ads were selected as ad templates; and (c) finally, following Baldwin and colleagues' (1996) procedures, the adult attachment style of the potential female dating partner described in each ad was manipulated by inserting (verbatim or paraphrased) statements from a measure of adult attachment (Brennan et al., 1998) reflecting attachment anxiety or interpersonal avoidance. Anxiety and avoidance statements were paired so that all four possible combinations produced by the two dimensions (low anxiety/low avoidance, high anxiety/high avoidance, low anxiety/high avoidance, high anxiety/low avoidance) were represented, which also have been shown to correspond with the four adult attachment styles (i.e., secure, fearful, dismissing, preoccupied, respectively; Bartholomew & Horowitz, 1991). Because 16 unique anxiety and avoidance statements were paired together and inserted into 1 of the 16 ad templates, the same statements never appeared in more than one personal ad for a given participant. To control for the effect of ad template, participants were randomly assigned to one of four experimental conditions across which the attachment statements and the ad templates were counterbalanced. The IDS procedure (see Study 1 Method section) was used to assess partner preference.

Self-report measures. At the end of the experimental session, participants completed the ECR (Brennan et al., 1998; anxiety α = .90; avoidance α = .92), GSE (Rosenberg, 1965; α = .81), and SDR (Paulhus, 1991; see Study 1 Method section). Participants also completed, at the prescreening session and again at the experimental

session, questionnaires that assessed the frequency in which they had inflicted psychological abuse in their most recent romantic relationship. Infliction of Psychological Abuse (IPA) consisted of items from the PMI that were reworded so that they assessed frequency of inflicting, rather than receiving, psychological abuse within men's most recent romantic relationship (e.g., "You put down your partner's appearance"). Participants completed a short version (20 items) and a full version (60 items) of the IPA at the prescreening and experimental session, respectively. In the short version, Cronbach's reliability alpha was unacceptably low for the isolation and emotional control ($\alpha = .01$) and undermining self-esteem ($\alpha = .32$) scales. Furthermore, the correlation between the average score for the short and full versions was .53 ($p < .001$). Because of the low alpha reliabilities of the short version and the relatively low correlation between the short and full measures, only the data from the full version are reported here.[5] An IPA index was computed by taking the mean of the five IPA scales that were assessed by the full version ($\alpha = .82$). In addition, the item from the Conflict Tactics Scale (Straus, 1979) was reworded to assess the extent to which participants had engaged in behaviors suggesting the possibility or threat of physical abuse. Participants responded to the CTS-TPA at the prescreening and experimental session and the average response was computed to index threat of physical abuse.

Because some participants may have found it unusual that all the personal ads contained descriptions about the dating partner's feelings and thoughts within romantic relationships, participants were told (before they read the personal ads) that all the women described in the ads had been instructed to write about how they typically feel and think within romantic relationships. This additional information was designed to minimize suspicions about the validity of the personal ads. At the end of the experimental session, none of the participants correctly identified the purpose of the study.

Multilevel Modeling of the Effects of Psychological Ingredients on Partner Preference

HLM was used to analyze the data obtained in the present study. Descriptions of the potential female dating partners were the level-1 units and the male participants were the level-2 units. The level-1 HLM analysis estimated, separately for each male participant, a regression slope predicting preference for female dating partners as a function of the dating partner's adult attachment style. A set of three orthogonal contrast codes (Cohen & Cohen, 1983), representing anxiety, avoidance, and their interaction, was used to represent the female dating partner's adult attachment style. (Interaction terms that are represented by orthogonal contrast codes may be entered simultaneously with the main effects to produce the meaningful coding-invariant coefficients; Cohen & Cohen, 1983.) In the following level-1 model, each potential female dating partner is represented by the subscript i (i = 1-16) and each individual man is represented by the subscript j (j = 1-93):

Level-1 model

$$\begin{aligned}[\text{Preference for partner } i]_j = {} & b_{\text{anxietyj}}\,[\text{partner } i\text{'s anxiety}] \\ & + b_{\text{avoidancej}}\,[\text{partner } i\text{'s avoidance}] \\ & + b_{\text{Anxiety} \times \text{Avoidancej}}\,[\text{partner } i\text{'s Anxiety} \times \text{Avoidance}] \\ & + r_{ij}\end{aligned} \tag{2.0}$$

The value of the outcome variable is preference for each female dating partner and was grand-mean centered (contrast codes also had a mean of 0). b_{anxietyj}, $b_{\text{avoidancej}}$, and $b_{\text{Anxiety} \times \text{Avoidancej}}$ are the regression coefficients (slopes) in a linear regression predicting preference for each dating partner i as a function of the adult attachment style of the female dating partner i represented by the three contrast codes that examined the effect of anxiety, avoidance, and Anxiety × Avoidance, respectively. r_{ij} is the usual residual error term. Thus, b_{anxietyj} represents the extent to which each man preferred dating partners high in attachment anxiety (relative to low anxiety), after controlling for the main effect of avoidance and the Anxiety × Avoidance interaction. Similarly, $b_{\text{avoidancej}}$ represents the extent to which each man preferred dating partners high in avoidance (relative to low avoidance), after controlling for the main effect of anxiety and the Anxiety × Avoidance interaction. Hereafter, level-1 coefficients (e.g., b_{anxietyj} and $b_{\text{avoidancej}}$) are referred to simply as "preference for X dating partners," where X is the feature that characterizes the dating partner. For example, b_{anxietyj} will be referred to as participant's "preference for dating partners high in attachment anxiety."

The level-2 model, a between-subjects analysis, predicted the level-1 slopes (b_{anxietyj}, $b_{\text{avoidancej}}$, $b_{\text{Anxiety} \times \text{Avoidancej}}$) corresponding to each male participant's regression line. As shown below, the level-2 model examined the extent to which men's characteristics (e.g., IPA) predicted the relation between preference for dating partner $\underline{i}$ and dating partner i's anxiety (Equation 2.1), avoidance (Equation 2.2), and Anxiety × Avoidance interaction (Equation 2.3):

Level-2 model

$$\begin{aligned}b_{\text{anxietyj}} = {} & \gamma_{\text{anxiety0}} \\ & + \gamma_{\text{anxiety1}}\,[\text{participant } j\text{'s characteristic}] \\ & + \mu_{\text{anxietyj}}\end{aligned} \tag{2.1}$$

$$\begin{aligned}b_{\text{avoidancej}} = {} & \gamma_{\text{avoidance0}} \\ & + \gamma_{\text{avoidance1}}\,[\text{participant } j\text{'s characteristic}] \\ & + \mu_{\text{avoidancej}}\end{aligned} \tag{2.2}$$

$$\begin{aligned}b_{\text{Anxiety} \times \text{Avoidancej}} = {} & \gamma_{\text{Anxiety} \times \text{Avoidance0}} \\ & + \gamma_{\text{Anxiety} \times \text{Avoidance1}}\,[\text{participant } j\text{'s characteristic}] \\ & + \mu_{\text{Anxiety} \times \text{Avoidancej}}\end{aligned} \tag{2.3}$$

TABLE 5: Correlations Among Self-Report Measures of Men's Personal Characteristics Used as Level-2 Predictor Variables (Study 2)

	1	*2*	*3*	*4*	*5*	*6*
1. Infliction of Psychological Abuse (IPA) Index		.37***	.20†	–.02	–.20†	–.44***
2. Threat of Physical Abuse (CTS-TPA)		—	–.02	–.03	–.05	–.12
3. Attachment Anxiety (ECR-ANX)			—	–.10	–.41***	–.17
4. Attachment Avoidance (ECR-AVO)				—	–.31**	–.12
5. Global Self-Esteem (GSE)					—	.31**
6. Social Desirability Responding (SDR)						—

NOTE: ECR = Experiences in Close Relationships. $N = 93$.
†$p < .10$. **$p < .01$. ***$p < .001$.

where b_{anxietyj} is male participant *j*'s slope in the level-1 model representing the relation between the level of attachment anxiety characterizing dating partner *i* and preference for dating partner *i*, γ_{anxiety0} is the intercept, and γ_{anxiety1} is the slope in a linear regression predicting b_{anxietyj} from individual differences in men's characteristics (e.g., IPA). The level-2 equations predicting $b_{\text{avoidancej}}$ (Equation 2.2) and $b_{\text{Anxiety} \times \text{Avoidancej}}$ (Equation 2.3) are analogous to Equation 2.1 predicting b_{anxietyj} except that they represent the effect of avoidance and Anxiety × Avoidance interaction, respectively. The HLM analyses described above were performed separately for each of the level-2 predictor variables, all of which were grand-mean centered.

Results

Before examining the central question—of whether men's experiences of inflicting psychological abuse relate to their preference for female dating partners—the effect of the female potential dating partner's attachment characteristics on men's preferences was examined. These analyses provided a test of the construct validity of the experimental procedures and stimuli. Based on past research (e.g., Baldwin et al., 1996; Frazier et al., 1996; Kirkpatrick & Davis, 1994), male participants, on average, were expected to prefer dating partners that were both low in anxiety and low in avoidance (i.e., secure) and expected to show the weakest preference for partners high in avoidance (i.e., dismissing or fearful).

For these analyses, we focused on the level-2 intercepts that reflect the average effect (in the sample) of attachment style on men's preferences (see Study 1 results). As expected, the regression coefficients representing the Anxiety × Avoidance interaction and the main effects of avoidance and anxiety were statistically significant ($\gamma_{\text{Anxiety} \times \text{Avoidance0}} = .16$), $t(92) = 2.82$, $p < .005$ ($\gamma_{\text{avoidance0}} = -.29$), $t(92) = 4.17$, $p < .001$ ($\gamma_{\text{anxiety0}} = -.14$), $t(92) = 1.93$, $p = .05$, respectively. A closer inspection of the means showed that, on average, male participants preferred dating partners who were low in anxiety and low in avoidance (uncentered $M = 1.23$), followed next by dating partners who were low in avoidance and high in anxiety ($M = .94$), and followed last (i.e., preferred least) by dating partners who were high in avoidance (i.e., fearful or dismissing; $M = .80$ and $M = .78$, respectively). Overall, these results add further confidence for the construct validity of the measure of partner preference used in the present study.

Predicting the Effects of Psychological Ingredients on Partner Preference

In the level-2 analyses, γ_{anxiety1} represents the degree to which men's personal characteristics (e.g., IPA) predicted each man's preference for dating partners high in attachment anxiety. Correlations among the level-2 variables are reported in Table 5.

Infliction of psychological abuse. IPA was positively ($\gamma_{\text{anxiety1}} = .58$, $p < .001$) related to preferences for dating partners high in anxiety (see Table 6). For every 1.0 increase in IPA (*SD* = .38), the effect of the anxiety dimension produced an average increase of .58 on men's preference. (This corresponds to an average increase of .22 in men's preference for anxiously attached dating partners with every 1 *SD* increase in IPA.) The IPA index was not related to preference for dating partners with other attachment characteristics. These results indicate that men who reported more instances of behaving in a psychologically abusive manner in their most recent relationship showed a stronger preference for female dating partners that were characterized by high attachment anxiety.

Of the 16 potential female dating partners, who did men choose as the one they were most interested in getting to know better? Men who scored above the median on the IPA index were 1.5 times more likely to select a woman high (vs. low) in attachment anxiety (28 vs. 18; see Table 7). In contrast, men who scored below the median on the IPA index were more than twice as likely to select a woman low (vs. high) in attachment anxiety (34 vs. 13). Consistent with the HLM analyses, the chi-square was statistically significant, $\chi^2(1, N = 93) = 10.40$, $p < .001$, Cramer's V = .33, indicating that men's preference for female dating partners characterized by high anxiety depended on (i.e., interacted with) men's self-reports of inflicting psychological abuse.

TABLE 6: Level-2 Coefficient Estimates and Descriptive Statistics (Study 2)

	Attachment of Potential Female Dating Partner					
	Anxiety		*Avoidance*		*Anxiety × Avoidance*	
*Men's Personal Characteristics (*M, SD, *Skewness)*	$\gamma_{anxiety1}$	SE	$\gamma_{avoidance1}$	SE	$\gamma_{Anxiety \times Avoidance1}$	SE
Infliction of Psychological Abuse (IPA) Index (.54, .38, .99)	.58***	.18	.02	.18	–.10	.13
Threat of Physcial Abuse (CTS-TPA, .28, .67, 2.54)	.07	.13	–.03	.09	.02	.07
Adult Romantic Attachment (ECR)[a]						
Attachment Anxiety (ECR-ANX, 3.80, 1.09, –.14)	.21	.16	–.04	.17	–.13	.14
Attachment Avoidance (ECR-AVO, 2.55, .96, .47)	.19	.23	.10	.28	–.07	.23
Global Self-Esteem (GSE; 5.71, .83, –.81)	–.02	.09	–.04	.08	.04	.05
Social Desirability Responding (SDR; 5.89, 2.90, .47)	–.04†	.02	–.02	.03	.00	.02

NOTE: The level-2 coefficients, $\gamma_{anxiety1}$, $\gamma_{avoidance1}$, and $\gamma_{Anxiety \times Avoidance1}$, indicate the predicted increase (or decrease) in the level-1 coefficient, $b_{anxietyj}$, $b_{avoidancej}$, and $b_{Anxiety \times Avoidancej}$, respectively, for one raw unit increase in the level-2 variable. Separate hierarchical linear modeling (HLM) analyses were performed for each level-2 variable. The level-2 intercepts, $\gamma_{anxiety0}$, $\gamma_{avoidance0}$, and $\gamma_{Anxiety \times Avoidance0}$, which represent the average effect of anxiety, avoidance, and Anxiety × Avoidance interaction, respectively, on preference for potential dating partners were the same in all analyses ($\gamma_{anxiety0} = -.14$, $p < .05$, $\gamma_{avoidance0} = -.29$, $p < .001$, and $\gamma_{Anxiety \times Avoidance0} = .16$, $p < .01$). All variables were grand-mean centered. Coefficients represent the extent to which men's characteristics (in left column) predict the relationship (level-1 slopes) between attachment style of potential female dating partner (i.e., view of self, view of other, and the interaction term) and men's preference. ECR = Experiences in Close Relationships. $df = 91$.

a. Because the avoidance and anxiety scales of the ECR were entered in simultaneously, the *df* for analyses involving attachment are 90.

†$p < .10$. ***$p < .001$.

TABLE 7: Type of Female Dating Partner Most Preferred as a Function of Men's Self-Reports of Inflicting Psychological Abuse (Study 2)

	Attachment of Female Dating Partner Most Preferred					
	High Anxiety/ High Avoidance (Fearful)	*High Anxiety/ Low Avoidance (Preoccupied)*	*Low Anxiety/ High Avoidance (Dismissing)*	*Low Anxiety/ Low Avoidance (Secure)*	*High Anxiety*	*Low Anxiety*
Infliction of Psychological Abuse (IPA)						
Above the median ($n = 46$)	13 (28.3%)	15 (32.6%)	4 (8.7%)	14 (30.4%)	28 (60.9%)	18 (39.1%)
Below the median ($n = 47$)	5 (10.6%)	8 (17.0%)	11 (23.4%)	23 (48.9%)	13 (27.7%)	34 (72.3%)
Total ($N = 93$)	18 (19.4%)	23 (24.7%)	15 (16.1%)	37 (39.8%)	41 (44.1%)	52 (55.9%)

NOTE: Cells show the number of men who preferred each type of dating partner. Percentage within each level of infliction of abuse is reported in parentheses. The high anxiety column is the sum of the fearful and preoccupied columns. The low anxiety column is the sum of the dismissing and secure columns.

Social desirability responding. The next analyses examined the extent to which the relation between IPA and preferences for anxiously attached dating partners could be due to social desirability responding. SDR was negatively correlated with the IPA index ($r = -.44$, $p < .001$) and negatively related (although not statistically significant at $p < .05$) to preferences for anxiously attached dating partners ($\gamma_{anxiety1} = -.04$), $t(91) = 1.90$, $p < .10$. When individual differences in SDR were statistically controlled by entering IPA and SDR simultaneously as level-2 predictors in the HLM analyses, IPA continued to predict preferences for anxiously attached female dating partners ($\gamma_{anxiety1} = .54$), $t(90) = 2.61$, $p < .01$.

Global self-esteem and adult romantic attachment. Neither GSE nor the anxiety and avoidance scales of the ECR (assessed by entering the anxiety and avoidance dimensions simultaneously as level-2 predictors) were related to preferences for dating partners high in attachment anxiety (see Table 6).

Discussion

Study 2 showed that men who reported more instances of inflicting psychological abuse in their most recent romantic relationship were more likely to prefer descriptions of women characterized by high attachment anxiety. For example, men who reported the highest frequencies of inflicting psychological abuse were twice as likely to prefer a female dating partner high in anxiety than men who reported the fewest instances of inflicting psychological abuse (see Table 7). Thus, as elaborated in the General Discussion section, attachment anxiety in potential female dating partners may be viewed as a feature of the situation, or psychological ingredient, that differentially affected men's partner preferences.

The relation between men's past experiences of inflicting psychological abuse and preferences for female dating partners characterized by high anxiety remained statistically significant even when the effect of social desirability

responding was statistically controlled, indicating that the results could not be entirely explained by a general tendency to respond in a socially desirable manner.

The results of the present study are critical for understanding the past finding (O'Hearn & Davis, 1997), which was replicated in Study 1, that women high in attachment anxiety reported significantly more instances of psychological abuse than did women low in attachment anxiety. Although this might lead one to expect that women with high attachment anxiety prefer potentially abusive dating partners, Study 1 did not find support for this association. The results of Study 2, however, suggest that the attachment characteristics of women may be a psychological ingredient of the situation that is particularly salient and preferred by abusive men.

GENERAL DISCUSSION

To requote NiCarthy (1986), "If you've frequently become involved with abusive men, it's either because . . . something about them attracts you, or something about you attracts them." Although the existing literature on psychologically abusive relationships as well as assortative mating and partner preference hints at the possibility that some people may recreate negative relationship experiences through the dating partners they select, to date, no study has directly examined this hypothesis. The present research tested, and found support for, this widely held and influential assumption. Study 1 found that women who reported more instances of psychological victimization preferred dating partners that were judged by an independent sample of women as potentially abusive and who also possessed personality characteristics associated with an abusive personality (e.g., possessive, impulsive, jealous, and aggressive). Study 2 found that men who reported more instances of inflicting psychological abuse showed a stronger preference for female dating partners that were high in attachment anxiety.

By finding support for the hypothesized relation between past experiences of psychological abuse and preferences for dating partners, these findings simultaneously point to mechanisms that may be involved in promoting reoccurrence of psychologically abusive relationship dynamics for a given person over time. The partners selected, both by women and men, may be contributing to consistency in relationship experiences. Thus, the present findings may have implications for effective interventions.

Furthermore, the present research bridges the existing literature on psychologically abusive relationships with theory and methodology from social and personality psychology. Specifically, it links the study of psychological abuse to a theory of individual differences and personality (e.g., Mischel & Shoda, 1995). The present findings suggest that characteristics of potential dating partners are psychological ingredients that affect partner preference and may have high functional significance for some people. For example, aggressiveness and jealousy in potential male dating partners is a salient psychological ingredient for women who have experienced psychological abuse in the past, and an anxious attachment style in potential female dating partners is a salient psychological ingredient influencing the partner preference of men who have been abusive in the past.

In addition to identifying features of situations that have high functional significance for a given person, the results show how a person's partner preference varies as a function of a common set of psychological ingredients present in the situation. To further illustrate this approach, partner preference for different types of potential dating partners was plotted separately for women who scored above and below the median on the PMI (see Figure 1, top panel). As shown, women's partner preference varied as a function of the "psychological ingredients" present in the situation (see Figure 1, top panel). Specifically, the if . . . then . . . "behavioral signature" (Shoda, Mischel, & Wright, 1994) for women who had experienced higher instances of psychological abuse differed meaningfully from the if . . . then . . . signature for women who had not.[6] Similarly, in Study 2, the "behavioral signature" for the two groups of men differed meaningfully, consistent with the feature-by-feature HLM analyses (see Figure 1, bottom panel). Given the assumption that if . . . then . . . signatures reflect differences in cognitive-affective processing dynamics (e.g., Mischel & Shoda, 1995), the current findings suggest meaningful individual differences in individuals' cognitive-affective network as a function of their past relationship experiences.

The results of the present research highlight the idea that abusive dating relationships may form for various reasons. Some women may become involved with an abusive dating partner because, perhaps unwittingly, they prefer dating partners who possess abusive personality characteristics (Study 1). Alternatively, abusive men may be drawn to women with certain characteristics, such as an anxious attachment (Study 2). Of course, regardless of whether a person prefers, or is preferred by, a particular type of partner, the one who is perpetrating the abuse is ultimately accountable for his or her behaviors.

The present research also raises several questions that may benefit from future investigation. The degree to which the present findings generalize to more extreme instances of psychological abuse or whether they extend to physically abusive relationship dynamics is unknown. In a similar vein, the generalizability of the present findings to women-to-men, as well as same sex, abusive relationship dynamics requires further

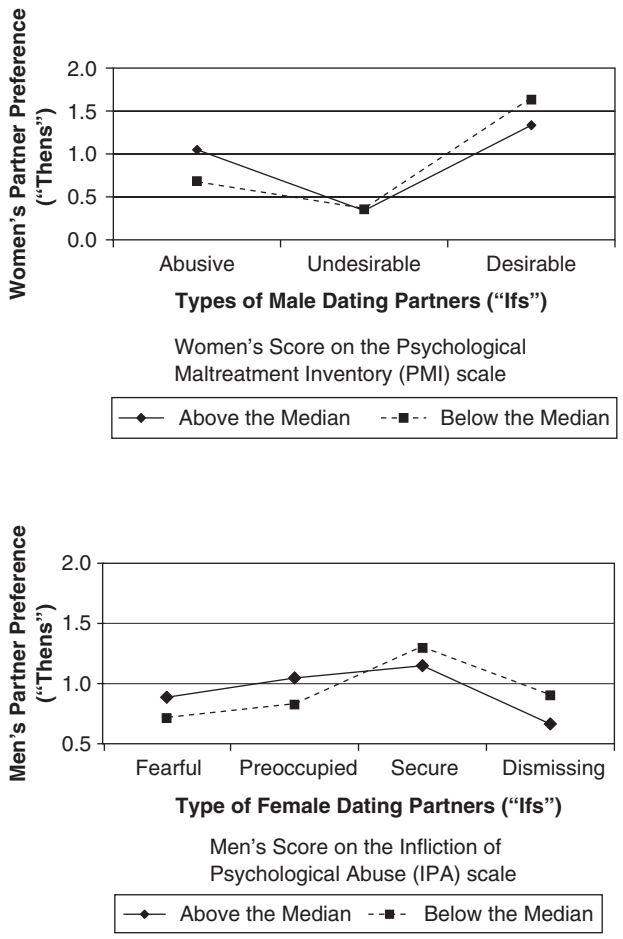

Figure 1 Results conceptualized as if . . . then . . . (situation . . . behavior. . .) profiles.

NOTE: As shown in the top panel, the characteristics of the potential dating partners (i.e., desirability and potential for abusiveness) are the "psychological ingredients" of the situation and partner preference ("thens") varied systematically as a function of the dating partner's characteristics ("ifs"). Women who had been the victim of psychological abuse (i.e., scoring above the median on the PMI) showed if . . . then . . . (situation . . . behavior . . .) profiles that were distinct from the profiles that characterized women who had experienced less abuse (i.e., scoring below the median on the PMI). As shown in the lower panel, the characteristics of the female potential dating partners (e.g., attachment style) are the psychological ingredients of the situation and partner preference ("thens") varied systematically as a function of the dating partner's characteristics ("ifs"). Men who had been the perpetrator of psychological abuse (i.e., scoring above the median on the IPA) showed if . . . then . . . (situation . . . behavior . . .) profiles that were distinct from the profiles that characterized men who had not (i.e., scoring below the median on the IPA).

investigation. In addition, a commonly held belief is that abusive men also can be charming and charismatic, and it may be fruitful to examine the effect of such characteristics, which were not examined in the present studies, on women's preferences. Finally, although the present studies focused on individual differences, to understand the formation of psychologically abusive relationships one also needs to consider the dyadic, social, and cultural context in which an individual lives (Zayas et al., 2002).

NOTES

1. The term "predict" is used because psychological victimization was used to predict women's slopes in the hierarchical linear modeling (HLM) analyses. Slopes, in turn, represented the relation between male partner's potential for abusiveness and women's preferences. Predict, however, does not imply a causal relationship, similar to height predicting weight and vice versa.

2. A full description of the development and validation of the personal ads used as stimuli in Study 1 and 2 is available on request.

3. Due to the design of the Internet Dating Service (IDS) procedure, all participants (in Studies 1 and 2) obtained the same average preference score (centered M preference = .94, SD = 0). Because the average preference for all participants was 0 after centering, the intercept, b_{0j}, which reflects each participant's average preference score for the 16 dating partners, was not included in the level-1 model. To confirm this assumption, HLM analyses were repeated with the intercept included in the level-1 model. As expected, the estimate for b_{0j} was 0 and the level-2 coefficient estimates and standard errors were similar to those reported in the text and tables.

4. For each level-2 variable, separate HLM analyses were performed and $\gamma_{abusiveness0}$ and $\gamma_{desirability0}$ were estimated in all models. The HLM analyses produced identical coefficient estimates but the SE of the coefficients varied minimally for each model as a result of differences in the level-2 variables. Because the results were highly similar, the SE for the model in which the Psychological Maltreatment Inventory (PMI) Index was the level-2 predictor are reported in the text and tables.

5. Results of HLM analyses using the weighted average of the short and full versions of the Infliction of Psychological Abuse (IPA) Index were highly similar to those reported here using only the full version. Specifically, the IPA index significantly ($p < .05$) predicted preferences for female dating partners.

6. Although Figure 1 shows that women above the median on PMI had a stronger preference for undesirable dating partners, this likely reflects the fact that the data in Figure 1 represents dichotomized PMI (into high vs. low), dichotomized partner characteristics (into abusive, undesirable, and desirable), and did not statistically control for the effect of partner abusiveness. As reported in Table 3, the HLM analyses, which represent ad characteristics and women's characteristics as continuous variables, did not show a significant relationship between PMI and preference for undesirable dating partners. Moreover, zero-order correlations between mean preference for the four desirable ads (i.e., the degree to which the desirable ads were selected across the four rounds of selection) and the undichotomized PMI variable was virtually zero ($r = -.01$, ns).

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