

# Adult Attachment and Patterns of Extradyadic Involvement

ELIZABETH S. ALLEN†  
DONALD H. BAUCOM†

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*Relationships between patterns of extradyadic involvement (EDI) and adult attachment were examined separately with undergraduates and community adults reporting prior EDI. Those with fearful or preoccupied styles reported more intimacy motivations for EDI, and undergraduates with these styles also reported more self-esteem motivations. Conversely, those with a dismissive style reported more autonomy motivations for EDI. Those with a fearful attachment style reported ambivalence about intimacy in the EDI. Fearful and preoccupied undergraduates and community males reported a more obsessive extradyadic relationship. However, dismissive individuals did not report more casual EDI. Gender effects also emerged, with females reporting more intimacy motivations than males, and undergraduate males reporting more casual EDI than undergraduate females. In the undergraduate sample, dismissive males had the most extradyadic partners over the prior 2 years relative to all other groups, and preoccupied females reported more partners than secure females. Clinical implications of these findings are discussed.*

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**E**xtradyadic involvement (EDI) outside a marital or primary dating relationship, such as intercourse with a person other than the spouse or primary dating partner, often precipitates relationship distress and dissolution (Betzig, 1989; Gordon & Baucom, 1999; Whisman, Dixon, & Johnson, 1997). Despite generally held standards for monogamy and the frequently negative consequences of EDI, Wiederman (1997) found that up to 34% of men and 19% of women in older cohorts reported at least one lifetime incident of extramarital sex. Among undergraduates, Wiederman and Hurd (1999) found that 49% of men and 31% of women reported engaging in extradyadic intercourse while in a serious dating relationship. Researchers who have assessed

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†Department of Psychology, University of North Carolina—Chapel Hill.

Elizabeth S. Allen is now at the Department of Psychology, University of Denver.

Correspondence concerning this article should be addressed to Elizabeth S. Allen, Department of Psychology, University of Denver, 2155 South Race Street, Denver, CO 80208. E-mail: ballen@nova.psy.du.edu

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a broader continuum of extradyadic behaviors (e.g., sexual behaviors other than intercourse) find even higher rates of EDI (Glass & Wright, 1985; Wiederman & Hurd).

Most literature on EDI has evaluated the relationship between predictor variables and the likelihood of a history of sexual intercourse outside a primary relationship. In addition, some literature has compiled lengthy and diverse lists of reported motivations for EDI (Atwood & Seifer, 1997; Glass & Wright, 1992; Greene, Lee, & Lustig, 1974), and other authors have noted wide variation in types of EDI, ranging from casual sexual involvement to serious love affairs (e.g., Glass & Wright, 1985). Taking the variability in motivations for and types of EDI into account, several clinical authors have posited intimacy regulating functions of EDI; that is, in some cases, EDI may be a way to meet autonomy needs, whereas in other cases, EDI may be a way to meet intimacy needs (Brown, 1991; Moultrup, 1990; Scarf, 1987). Specifically, evidence that EDI may meet autonomy needs is based on clinical reports from involved persons that their EDI was a way to obtain private space or assert a sense of freedom or independence from the constraints of a primary relationship (Brown; Elbaum, 1981; Pittman, 1989; Welter-Enderlin, 1993); further, autonomy can be maintained in the extradyadic relationship by having clear boundaries with the extradyadic partner, or by having a brief, casual involvement (Scarf). Conversely, other individuals reported that their EDI was characterized by intimacy motivations, such as needs for emotional closeness (Glass & Wright, 1985). Self-esteem boosting justifications are also prevalent and are highly related to emotional intimacy justifications (Glass & Wright, 1992). Consistent with intimacy needs, some individuals describe close emotional involvement with the extradyadic partner. In both autonomy and intimacy motivations for EDI, individuals often frame this as a response to the marital system. That is, intimacy needs are frequently depicted as compensatory for emotional neglect within the primary relationship (Elbaum; Scarf), and autonomy needs are frequently tied to experiencing primary relationships as overly constraining (Pittman).

Despite numerous clinical observations, there has been little empirical research investigating different motivations for EDI and types of EDI. That is, what predicts who uses EDI to meet autonomy needs and who uses EDI to meet intimacy needs? Heretofore, these differences have been primarily associated with gender. For example, Glass and Wright (1992) concluded that women's EDI more often involves relational needs (e.g., emotional intimacy) and close extradyadic relationships, whereas men's EDI is associated more with individualistic needs (e.g., desire for novelty) and less emotionally involved extradyadic relationships. In addition to gender, adult attachment theory is one framework for understanding autonomy and intimacy motivations for EDI and different types of extradyadic relationships.

Originally explored in the context of infant-caretaker relationships (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969, 1973, 1980), attachment theory has been profitably extended to adult romantic relationships in both dating and marital samples (e.g., Feeney, 2002; Hazan & Shaver, 1987; Simpson & Rholes, 1998). Insecurity in one's attachment to adult romantic partners can be conceptualized along two dimensions: anxiety about abandonment and avoidance of closeness (Brennan, Clark, & Shaver, 1998). Anxiety reflects worry about abandonment, desires for extreme closeness, and a reliance on others to maintain a sense of self-worth, whereas avoidance generally reflects discomfort with closeness and interdependency. Thus, anxiety can be considered indicative of concerns regarding sufficient intimacy, whereas avoidance is a sign of concerns regarding sufficient autonomy in relationships. Many

researchers and clinical authors agree that “individuals have needs for both belonging and autonomy, and the challenge of balancing these two needs is the basic challenge in intimate relationships” (Carlson & Sperry, 1999, p. xx). Attachment theory can be used to understand how different individuals have problems with this balance. As clinical authors have noted, some individuals may deal with this challenge by engaging in EDI, and the current paper seeks to understand this phenomenon through the lens of attachment theory.

Hypotheses regarding the relationship between attachment and EDI are further informed by understanding specific attachment styles. That is, the dimensions of anxiety and avoidance can be combined to form four attachment styles: secure, preoccupied, dismissing, and fearful (Bartholomew, 1990; Bartholomew & Horowitz, 1991; Brennan et al., 1998). Those classified as secure have low levels of both anxiety and avoidance; thus, these individuals are comfortable being close to their romantic partners and do not feel excessive worry about abandonment. The remaining three styles are collectively considered “insecure.” Preoccupied individuals have high levels of anxiety and low levels of avoidance. These individuals want to be close with their partners, yet worry a great deal about their relationships and their partner’s feelings for them. Dismissing individuals are high on avoidance and low on anxiety, preferring not to get close to their partners and not particularly worried about the strength and stability of their relationships. Fearful individuals have high levels of both anxiety and avoidance. They worry about their relationships and avoid opening up to their partners, theoretically to protect against rejection.

### **ATTACHMENT AND THE FREQUENCY OF EDI**

The only way that attachment theory has been applied to EDI is to examine the likelihood of EDI. Attachment, and several constructs related to attachment, has been a useful predictor of engaging in EDI. Anxious women in particular may be more likely to engage in EDI and report more extradyadic partners (Bogaert & Sadava, 2002; Gangestad & Thornhill, 1997; Stephan & Bachman, 1999), which has generally been interpreted as consistent with the high need for intimate contact with others and strong sexual attraction seen in anxious individuals (Hazan & Shaver, 1987). In contrast, using a construct similar to attachment, Stephan and Bachman found that avoidant men in particular were more likely to report destructive relationship behaviors, which included EDI. Interestingly, Gangestad and Thornhill found that avoidant attachment was actually negatively related to the number of extradyadic partners for females. Without examining this separately for males and females, Hazan, Zeifman, and Middleton (1994) found that avoidant individuals (relative to secure individuals) reported more engagement in what was conceptualized as sexual behavior reflecting low intimacy, including one-night stands and EDI. Dismissive persons in particular report high levels of promiscuity (Brennan et al., 1998). For avoidant or dismissive individuals, EDI may be a way to get “physically close to partners without incurring the psychological vulnerability of prolonged intimacy and dependency” (Brennan & Shaver, 1995, p. 268). Altogether, these prior findings suggest that avoidant men (perhaps particularly the dismissive style) and anxious women may report the highest rates of EDI, but a clear explanation of why there may be gender differences in the expression of attachment-related dynamics as they relate to EDI is lacking. Importantly, the underlying assumptions of why persons of various styles

might engage in EDI (e.g., obtaining intimacy, maintaining autonomy) have not been assessed empirically.

### **ATTACHMENT AND MOTIVATIONS FOR EDI**

Persons endorsing attachment anxiety or the preoccupied style more often report intense and obsessive romantic experiences, but with lower relationship adjustment relative to secure individuals (Collins & Read, 1990; Feeney & Noller, 1990; Hazan & Shaver, 1987; Simpson, 1990). Moreover, attachment anxiety is theoretically related to a negative model of self (with greater reliance on the approval of others), and persons with an anxious or preoccupied style do manifest lower self-esteem or self-confidence relative to secure individuals (Bartholomew & Horowitz, 1991; Collins & Read). Based on these prior findings, styles higher in anxiety (fearful and preoccupied) are hypothesized to endorse greater intimacy and self-esteem motivations for EDI. Given prior findings with the preoccupied style and the fact that the preoccupied style is low in avoidance, we may see that the preoccupied style is particularly strong in these motivations relative to other styles.

In contrast to the intense orientation to romantic relationships characterizing those high in anxiety, higher levels of avoidance or the avoidant styles relate to lower commitment to primary relationships, an avoidance of deep involvement with others, a willingness to engage in sex without emotional investment, and an emphasis on the fun or sexual aspects of relationships rather than emotional intimacy (Brennan & Shaver, 1995; Feeney, 1990; Feeney & Noller, 1991; Feeney, Noller, & Patty, 1993; Levy & Davis, 1988). Thus, styles higher in avoidance (fearful and dismissive) are hypothesized to endorse greater autonomy reasons for EDI; specifically, reasons for the EDI focused on a need for greater independence and freedom. We may see this relationship emerge as particularly strong for the dismissive style, given that they are also low in anxiety.

### **ATTACHMENT AND THE TYPE OF EXTRADYADIC RELATIONSHIP**

Consistent with the autonomy and intimacy motivations posited above, it may be that the anxious styles have more emotionally close and intense extradyadic relationships, whereas the avoidant styles may have more casual extradyadic relationships. However, the relationship between attachment and type of EDI may be more complex. Kirkpatrick and Shaver (1990), in their investigations of attachment and religion, noted a "compensation hypothesis" in which insecure individuals find a secure relationship with God (e.g., a person who feels that others are rejecting may see God as loving, available, and accepting). This is in contrast to a mental model hypothesis in which persons bring their basic style of attachment with others into their relationship with God (e.g., a person who reports anxiety in relationships with others also worries about the availability and responsiveness of God). In the case of EDI, it is important to test whether individuals also extend their mental models of adult attachment into the extradyadic relationship (essentially suggesting that extradyadic relationships are simply one more romantic relationship), or if individuals use extradyadic relationships as a compensatory relationship for feelings of insecurity in their primary relationships (suggesting that there is something unique about the

extradyadic relationship). For example, several clinical authors have noted that the particular nature of an extradyadic relationship—with frequent limitations on time spent together, a sense of a shared future, or interdependency—can permit individuals who often have difficulty allowing themselves to become close and open with their primary partner to feel more free and open in doing so with their extradyadic partner (Brown, 1991; Scarf, 1987). The compensation-versus-mental-models hypothesis does not address variations in the attachment style of the extradyadic partner; rather, it is focused on the variability of the type of extradyadic relationship as a function of one's own attachment style.

Given these competing hypotheses, we assessed various types of extradyadic relationships. From a mental models perspective, we may find that secure individuals report a comfortably close and loving extradyadic relationship; preoccupied individuals may report an obsessive extradyadic relationship; fearful individuals may report ambivalence regarding intimacy with the extradyadic partner; and dismissive individuals may report a casual extradyadic relationship. Conversely, from a compensation perspective, we may find that insecure individuals report a comfortably close and loving extradyadic relationship, or that avoidant (fearful and dismissive) individuals report that they are able to be more close and open with the extradyadic partner because of the boundaries that often exist around the extradyadic relationship, such as limited contact or no expectations of permanence.

Thus, it is hypothesized that attachment theory will be a meaningful way to understand motivations for and types of EDI, and will continue to predict rates of EDI. This study will examine underlying assumptions about *why* there is variability in rates of EDI for various attachment styles, will help address the dearth of literature explaining variability in motivations for and types of EDI, and will provide information regarding the issue of whether extradyadic relationships have a compensation function for relationship insecurity. Because gender has typically been used to explain differences in motivations for and types of EDI (Glass & Wright, 1992), gender is included in all analyses as an independent variable and as part of an interaction term with attachment. Specific hypotheses are briefly summarized below.

1. *Frequency of EDI.* The number of extradyadic partners will be used as the index of frequency. We hypothesize a replication of prior findings in which avoidant men (perhaps particularly the dismissive style) and anxious women report the highest rates of EDI.
2. *Motivations for EDI.* Individuals with anxious attachment (fearful and preoccupied) will endorse greater intimacy motivations for EDI. Individuals with avoidant attachment (fearful and dismissive) will endorse greater autonomy reasons for EDI. Women will be higher on intimacy motivations, whereas men will be higher on autonomy motivations.
3. *Types of EDI.* If the type of extradyadic relationship corresponds to the individual's reported attachment style, this will be taken as evidence for the mental models hypothesis. In contrast, if insecure individuals report a comfortably close and loving extradyadic relationship, or if avoidant individuals report being more open with the extradyadic partner because of limitations on the extradyadic relationship, this will be taken as evidence for the compensation hypothesis. Women may report closer extradyadic relationships, whereas men may report more casual extradyadic relationships.

Hypotheses were tested separately in two samples, an undergraduate sample and a sample of currently or previously married community adults. These hypotheses were tested separately because there were some differences in the measurement of salient constructs (see below) in the two samples. It is also important to acknowledge that the nature of EDI may differ in the two samples. For example, given the flux inherent in dating relationships, it may be much more developmentally normative for undergraduates to engage in EDI as a way to continue ongoing exploration of alternatives or to transition relationships. However, hypotheses were the same for the two samples because of the robustness of attachment findings across both dating and marital samples. Thus, the focus of this article is not on a comparison between groups (e.g., based on developmental differences); rather, the two groups are included in order to test for replication of findings across disparate samples as a way to increase confidence in the results.

## METHOD

### Undergraduate Participants

A total of 504 undergraduates at a large southeastern university participated in exchange for introductory psychology course credit. All participants were required to have been involved in a primary dating relationship of at least 1 month in duration within the last 2 years. Of this overall sample, 345 (69%) reported some degree of EDI (defined as romantic or sexual behavior with someone other than the primary partner while in a primary relationship) within the last 2 years. The behaviors encompassed in this definition of EDI were quite broad, ranging from falling in love to sexual intercourse. A 69% rate of EDI is consistent with prevalence rates for an undergraduate population found in other research that also included a broad range of extradyadic activity (Wiederman & Hurd, 1999). These 345 individuals who reported EDI in the prior 2 years included 204 females and 141 males. Ages in this sample ranged from 17 to 23 ( $M = 19$ ), with 81% being White, 13% African American, 3% Asian American, 1% Hispanic, 1% Native American, and 1% other.

### Community Participants

One thousand questionnaire packets were distributed to adult volunteers from the community who reported a current or previous marriage. Packets were distributed to approximately 527 males and 473 females, of whom approximately 824 were White and 176 were non-White (primarily African American). A total of 251 packets were returned. This is considered a good response rate given that participants were not compensated for their time, were recruited in public areas, and were asked to answer a lengthy questionnaire involving highly personal questions. Of this sample, 132 were female, 118 were male, and 1 individual did not specify a gender. Most (86%) of the participants were White, with 11% African American, 1% Asian American, 1% Hispanic, and 1% other. The sample was well educated; 77% reported a bachelor's degree or higher. Participants ranged in age from 21 to 84 ( $M = 39.95$ ,  $SD = 9.57$ ). Because recruitment was based on a marital history and not explicitly on whether the individual had a history of EDI, only a subset of these participants reported EDI during a marriage or engagement. Of the overall sample who returned the questionnaires, 115 respondents (46%) reported at least one EDI. These rates should not be considered a

valid estimate of the prevalence rates for EDI in the general population because of selection biases (e.g., persons who had engaged in EDI may have been more interested in and motivated to complete the questionnaire). The 115 individuals who reported EDI included 52 females and 63 males. Ages in this sample ranged from 24 to 74 ( $M = 42.49$ ,  $SD = 8.60$ ). Most (85%) of the sample was White, with 13% African American, 1% Asian American, and 1% other. Seventy two percent reported a bachelor's degree or higher level of education. Two males did not complete the primary attachment measure; thus, 113 is the total sample size used in the analyses for the community population with EDI.

### **Procedure: Undergraduate Sample**

Participants were invited to join a study labeled "Experiences in Relationships." All participants completed the entire battery of questionnaires. Persons who reported at least one EDI in the past 2 years were asked to answer questions based on the most recent EDI. Participants who did not report a history of EDI within the last 2 years were asked to complete the questionnaires based on a hypothetical involvement. Although the prediction of the number of extradyadic partners is based on the entire undergraduate sample, the results for motivations for and types of EDI are based on the sample of individuals who reported actual—not hypothetical—EDI in the past 2 years. After completion of the questionnaires, all participants were debriefed with a written explanation of the basic research questions, the development of the materials, and the research procedure; verbal explanations and elaborations were provided to interested participants.

### **Procedure: Community Sample**

Packets were distributed in three sites in a mid-sized southeastern city: the airport, a shopping area, and a downtown pedestrian area. Packets were not individually identified, were enclosed in a business reply envelope addressed to the primary investigator, and included the set of questionnaires and an informed consent form for the participant to keep. Using this procedure, participants retained anonymity. Adults who were alone or in same-sex groups were approached with the standard prompt, "Excuse me, I'm handing out surveys on experiences in marriage. Are you married or have you been married?" Individuals who responded affirmatively were then asked whether they were interested in participating in the study. If an individual expressed interest, the investigator explained that it was about a highly personal experience that he or she may have had in marriage, and that he or she should feel free to discard the survey if it was considered too personal. All questions were answered openly (excluding any information about hypotheses of the study), and individuals were frequently given more information about the topic of the study, affiliation of the investigator, and protections of anonymity. Volunteers then took the packets to complete and mail back at their convenience. In the questionnaire packet, respondents were asked if they had ever experienced a sexual or romantic relationship with another person while married or engaged. As in the undergraduate sample, respondents who reported at least one EDI were asked to answer questions based on the most recent EDI. Participants who had not engaged in EDI could simply stop at that point in the questionnaire. Although the prediction of the number of extradyadic partners is based on the entire community sample, the results for motivations for and

types of EDI are based on the sample of individuals who reported EDI during a marriage or engagement.

## Measures

*Extradyadic Experiences Questionnaire (EEQ)*. The EEQ was developed for the current investigation to assess patterns of EDI. The EEQ consists of several general questions about experiences of EDI, followed by 22 scales assessing various aspects of the most recent EDI. A pilot version of the EEQ consisting of 249 items across the 22 scales was tested in the undergraduate sample using several steps. The final version of the EEQ consisted of 93 items across the 22 scales (three to six items per scale), which demonstrated good reliability. All results are based on the revised final version of the EEQ. Scales covered a wide range of aspects of the extradyadic relationship, including patterns of onset, reactions to the EDI, attitudes toward the EDI, characterization of the primary relationship prior to the EDI, motivations for the EDI, and characterization of the extradyadic relationship. Most of these scales will not be described in depth here because of their irrelevance to the core hypotheses and space limitations. Scales that will be discussed in this article are autonomy and intimacy motivations for the EDI, and characterizations of the extradyadic relationship. These scales are described below. Sample items and internal reliabilities for these scales are presented in Table 1.

Three scales assessed autonomy and intimacy motivations for the EDI: *autonomy* (wanting freedom and space), *intimacy* (wanting to feel cared about), and *self-esteem* (wanting an increase in self-esteem, thought to be part of intimacy motivations).

Five scales assessed the type of relationship that the participant had with the extradyadic partner: *casual* (a fun, “no strings attached” relationship without emotional investment), *close* (a comfortably loving, close, and open relationship), *obsessive* (a needy, obsessive relationship with high desires for attention and reassurance), *ambivalent* (a desire for closeness accompanied by fears of rejection if close and open), and *contained* (a comfort with closeness because the relationship was impermanent or otherwise limited).

Within various classes of scales (e.g., motivations for EDI), items were interwoven in their order of presentation. Questions consisted of declarative statements with response options on a 7-point Likert scale, usually from *not at all true* to *very true*. Scale scores are the average of all items on the scale.

*Experiences in Close Relationships Inventory (ECRI; Brennan et al., 1998)*. The ECRI is a self-report attachment measure containing two 18-item scales assessing anxiety about abandonment and avoidance in adult romantic relationships. In the undergraduate sample, participants were asked to report on their general romantic attachment style. In contrast, in the community sample, participants were asked to report on their attachment to their spouse *prior* to the onset of the EDI. Although there is evidence for some stability of attachment, attachment can vary from relationship to relationship. The undergraduate participants were considered more likely to have a range of recent dating relationships, and an aggregate assessment of attachment across these relationships was thought to be most appropriate. Conversely, for the community sample, it was considered more appropriate to focus the attachment assessment on the relationship context for the most recent EDI (i.e., the marital

TABLE 1  
Sample EEQ Items and Reliabilities

Scale	Sample Items	$\alpha$	
		Undergraduate	Community
Autonomy	I wanted a little freedom.	.91	.85
Intimacy	I wanted some space from my primary partner.	.90	.81
	I was lonely and I needed to feel cared about.		
Self-esteem	I was feeling neglected in my primary relationship.	.88	.87
	The fact that the other person wanted me gave me a much-needed boost of self-esteem.		
Casual	My contact with the other person helped me feel like a desirable person.	.83	.81
	I would primarily describe our sexual involvement as fun rather than emotionally intimate.		
Close	I wanted a "no strings attached" relationship with the other person.	.91	.92
	I loved the other person.		
Obsessive	I felt emotionally connected to the other person.	.85	.83
	I was obsessed with the other person.		
Ambivalent	I felt very needy in the relationship with the other person.	.88	.89
	I wanted closeness in the relationship with the other person, but was worried that he or she would reject me once he or she knew the real me.		
Contained	I worried that if I really opened up to the other person, he or she wouldn't like me anymore.	.75	.79
	It was easier opening up to the other person <i>because</i> I knew that the relationship was not permanent.		
	It was easier to be emotionally intimate <i>because</i> I didn't see the other person too often.		

*Note.* Autonomy, intimacy, and self-esteem all asked in terms of how much the respondent thought it was a *reason* that he or she became involved with the other person; response choices ranged from *not at all a reason* to *very much a reason*. Casual, close, obsessive, ambivalent, and contained all asked in terms of how true the respondent thought the statement was about his or her involvement with the other person; response choices ranged from *not at all true* to *very true*. In the community sample, "primary partner" was rewritten as "spouse/fiancé(e)".

relationship prior to engaging in the most recent experience of EDI) to capture the most salient adult romantic attachment context for that particular incident of extradyadic behavior. Therefore, attachment in the community sample may be considered more contextually based, rather than the more dispositional approach taken in the undergraduate sample.

In the original investigation of the ECRI, Brennan et al. (1998) found excellent internal consistency for both scales ( $\alpha = .94$  for avoidance and  $\alpha = .91$  for anxiety). In the current samples with EDI, alphas for anxiety and avoidance ranged from .91 to .93. In the undergraduate sample, anxiety and avoidance were negatively related to one another ( $r = -.18, p = .001$ ); these dimensions were uncorrelated in the community sample. Whereas in the undergraduate sample males and females did not differ on their levels of anxiety or avoidance, females in the community sample reported significantly higher levels of anxiety,  $F(1, 111) = 4.82, p < .05$ . Following Brennan et al.'s (1998) recommended procedures, participants were placed into the four attachment categories—secure, fearful, preoccupied, and dismissive—based upon their scores on the two scales of anxiety and avoidance. In the undergraduate sample reporting EDI, 26% were categorized as secure, 21% as fearful, 36% as preoccupied, and 17% as dismissive. These proportions are similar to those found by Brennan et al. (1998) in undergraduate populations. In the community sample reporting EDI, 37% were categorized as secure, 18% as fearful, 19% as preoccupied, and 26% as dismissive. In both samples, logistic regressions indicated that attachment classifications did not vary by gender ( $p > .05$ ).

*The Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991)—community sample only.* In addition to obtaining the more contextual assessment of attachment in the community sample with the ECRI as noted above, it was also considered important to assess general patterns of adult attachment across romantic relationships for the community sample because this was a more appropriate index of attachment for predicting the frequency of EDI across the marital career. The RQ was used for this assessment. Community participants were asked to indicate which of four brief descriptions corresponding with the four attachment styles best described their general romantic relationship style. The RQ has demonstrated validity with regard to predicted personality variables, interpersonal problems, and sexual behavior (Bartholomew & Horowitz; Brennan et al., 1998; Brennan & Shaver, 1998). Moreover, ratings of RQ styles relate as hypothesized to the underlying dimensions of avoidance and anxiety (Brennan et al., 1998). In the community sample, 192 individuals provided an endorsement of one of the four styles: 52% endorsed secure, 6% fearful, 12% preoccupied, and 30% dismissive. Thus, the RQ did not distribute individuals as evenly across attachment styles compared with the ECRI, as found in prior research (Brennan et al., 1998), and very few individuals endorsed the fearful style. Logistic regressions indicated that attachment classification did not vary by gender ( $p > .05$ ).

*Impression Management Scale of the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1984)—undergraduate sample only.* Because of the sensitive nature of reporting EDI, a measure of social desirability was included in the undergraduate sample as a covariate to control for effects such as protectiveness of the self-image. Although inclusion of this would have been ideal in the community sample as well, such a measure was not used in this sample to keep the respondent burden as light as

possible; moreover, with the voluntary and anonymous nature of participation, it was believed that social desirability factors might not be as salient in the community sample. In the undergraduate sample, the impression management scale, which assesses a deliberately distorted positive presentation of self, was used. This scale contains 20 items that ask participants to endorse each item on a scale from 1 (*not true*) to 7 (*very true*). Example items on the impression management scale include “When I hear people talking privately, I avoid listening,” and “I never take things that don’t belong to me.” Paulhus (1991) reported that this scale has adequate internal consistency (alphas ranging from .75 to .86 in various studies). In the undergraduate sample reporting EDI, alpha equaled .77. Women earned significantly higher means on this scale,  $F(1, 337) = 20.58, p < .001$ , but there was not a significant effect for attachment,  $F(3, 337) = 2.22, p > .05$ .

## RESULTS

Two-way analyses of covariance (ANCOVAs) were used in the undergraduate sample, and two-way analyses of variance (ANOVAs) were used in the community sample to examine the relationship of gender, attachment style, and their interaction with patterns of extradyadic involvement. Pairwise comparisons were examined when a main effect for attachment style emerged in the overall model, and protected *t* tests were used to probe significant gender by attachment interactions. Social desirability, the covariate, was included in all analyses in the undergraduate sample—even though it did not correlate with all dependent variables—to retain a uniform analysis strategy and because the sample size permitted a loss of degree of freedom. Power was adequate in most analyses, although lessened in the community sample because of lower overall sample size. It was particularly low in the analyses using the RQ because the sample size for some groups (e.g., fearful) was quite small.

### Rates of EDI

The most basic hypothesis regarding the relationship between attachment style and extradyadic involvement was that males with an avoidant style (particularly the dismissive style) and women with an anxious style would report the highest rates of EDI. Total number of extradyadic partners within the last two 2 years was used as the index of frequency for the undergraduate sample, and total number of extradyadic partners while married or engaged was used as the index of frequency for the community sample. Because this dependent variable is so highly skewed,<sup>1</sup> with a few individuals in both samples reporting a high number of extradyadic partners, reports of 10 or more extradyadic partners were all recoded as 10 extradyadic partners to constrain the range. Table 2 presents means for each attachment style separately for males and females. In the undergraduate sample, the ECRI was used, and in the community sample, the RQ was used because these were the indexes of attachment that were phrased to capture general attachment across romantic relationships for the two samples. An index of general attachment across romantic relationships is most

<sup>1</sup> Because of the skew of this variable, inverse transformations were also performed (Tabachnick & Fidell, 2001) and analyses were conducted with the transformed variable. Findings were the same, so the results are presented in an untransformed format for clarity.

TABLE 2  
Mean Number of Extradysadic Partners

	Undergraduate Sample			Community Sample		
	Females (n = 297)	Males (n = 201)	Total	Females (n = 97)	Males (n = 95)	Total
Secure (n = 138)	1.31 (.22)	1.75 (.27)	1.53 (.17)	.65 (.30)	1.67 (.31)	1.16 (.21)
Fearful (n = 98)	1.66 (.27)	1.81 (.30)	1.73 (.20)	.83 (.87)	.83 (.87)	.83 (.62)
Preoccupied (n = 173)	1.91 (.20)	1.28 (.24)	1.60 (.16)	1.00 (.71)	1.80 (.55)	1.40 (.45)
Dismissive (n = 89)	1.48 (.27)	3.22 (.34)	2.35 (.22)	.90 (.38)	3.12 (.42)	2.01 (.28)
Total	1.59 (.12)	2.02 (.15)		.85 (.31)	1.85 (.29)	
Gender (df = 1, 489)	F = 5.00*			F = 5.75*		
Attach (df = 3, 489)	F = 3.44*			F = 2.25†		
Gender X Attach (df = 3, 489)	F = 6.75***			F = 1.48		

Note. Outliers (more than 10 partners) have been constrained. Numbers are estimated marginal means, and scores in parentheses are standard errors. In the undergraduate sample, attachment styles are based on the ECRI, and social desirability is included as a covariate. In the community sample, attachment styles are based on the RQ. Because of missing data, total N in the undergraduate sample is slightly reduced.

†p < .10. \*p < .05 (two-tailed). \*\*p < .01 (two-tailed). \*\*\*p < .001 (two-tailed).

appropriate for the broad outcome of total number of extradyadic partners. In the undergraduate sample, gender, attachment style, and their interaction all demonstrated significant effects. Males reported more partners than females, and pairwise comparisons indicated that the dismissive style reported significantly more extradyadic partners than all of the other styles. The significant interaction prompted an examination of the means for each attachment style separately for men and women. A protected  $t$  test was run comparing the group with the highest number of extradyadic partners (dismissive males) with the group with the next highest number of extradyadic partners (preoccupied females). This comparison was significant ( $p < .001$ ) and indicates that dismissive males had more extradyadic partners in the past 2 years relative to all other groups. Within females, preoccupied females had significantly more extradyadic partners in the prior 2 years relative to secure females ( $p < .05$ ).

In the community sample reporting EDI, main effects in the ANOVA were found only for gender, with males reporting significantly more partners than women. There was a trend for attachment; pairwise comparisons indicated that dismissive individuals reported more extradyadic partners relative to secure individuals ( $p < .05$ ). (A significant finding of a difference between dismissive and secure was facilitated by the greater number of persons in the secure category, which enhanced the power of that particular comparison.) Because the interaction was not significant (likely due to low power), protected  $t$  tests were not conducted. However, an informal visual examination of means again suggests that dismissive males reported the highest number of extradyadic partners. It is also interesting to note that, of the 7 community individuals who reported 10 or more extradyadic partners, 5 were dismissive males.

### Motivations for EDI

In the remaining analyses, categorical attachment based on the ECRI was used for both samples. This was an index of general romantic attachment in the undergraduate sample, and an index of marital attachment prior to engaging in the most recent EDI in the community sample. Results for the undergraduate sample are presented in Table 3, and results from the community sample are reported in Table 4.

In both the undergraduate and community samples, dismissive individuals were significantly more likely than the others to indicate that the reason for their EDI was wanting space and freedom from the primary relationship (*autonomy*). In both the undergraduate and community samples, gender and attachment effects emerged on the subscale tapping need for *intimacy* as a reason for the EDI. Women were significantly more likely than men to indicate that a feeling of neglect or rejection in the primary relationship and a desire for closeness were reasons for the EDI. In addition, pairwise comparisons indicated that the preoccupied and the fearful styles were significantly more likely than the secure and the dismissive styles to endorse a need for intimacy as causal for their EDI.

On the need for increased self-esteem subscale, a significant main effect for attachment style was found for the undergraduate sample only. In this sample, fearful and preoccupied styles endorsed significantly higher levels of self-esteem-boosting reasons as compared with the secure or dismissive styles. A significant interaction effect for attachment and gender also was found. Protected  $t$  tests revealed that, of the undergraduate females, preoccupied women were most likely to endorse self-esteem-boosting reasons, significantly more than secure or dismissive females ( $p < .001$ ).

TABLE 3  
ANCOVA of Gender and Categorical ECRI Attachment Styles on EEQ Subscale Scores—Undergraduate Sample

	Attachment Style Categories						F			
	Gender	Female n = 204	Male n = 141	Secure n = 88	Fearful n = 72	Preoccupied n = 125		Dismissive n = 60	Gender (df = 1, 336)	Attachment (df = 3, 336)
Autonomy		3.30 (.13)	3.28 (.16)	3.11 <sub>a</sub> (.19)	3.09 <sub>a</sub> (.21)	2.94 <sub>a</sub> (.17)	4.01 <sub>b</sub> (.24)	.01	4.97**	.69
Intimacy		3.04 (.12)	2.61 (.14)	2.58 <sub>a</sub> (.18)	3.30 <sub>b</sub> (.19)	3.13 <sub>b</sub> (.15)	2.29 <sub>a</sub> (.21)	5.19*	5.93***	1.54
Self-esteem		3.77 (.13)	3.43 (.15)	3.25 <sub>a</sub> (.18)	3.99 <sub>b</sub> (.20)	4.02 <sub>b</sub> (.16)	3.14 <sub>a</sub> (.22)	3.15	6.20***	3.20*
Casual		3.71 (.12)	4.15 (.14)	4.20 (.18)	3.64 (.19)	3.89 (.15)	3.98 (.21)	5.66*	1.59	.75
Close		4.03 (.13)	3.84 (.15)	3.81 (.19)	4.14 (.20)	4.05 (.16)	3.73 (.23)	.93	.89	1.28
Obsessive		2.29 (.09)	2.13 (.11)	1.79 <sub>a</sub> (.13)	2.55 <sub>b</sub> (.14)	2.78 <sub>b</sub> (.11)	1.71 <sub>a</sub> (.16)	1.33	16.76***	.27
Ambivalent		2.14 (.09)	2.06 (.10)	1.66 <sub>a</sub> (.13)	2.47 <sub>b</sub> (.14)	2.28 <sub>b,c</sub> (.11)	1.98 <sub>a,c</sub> (.15)	.39	7.66***	.50
Contained		3.10 (.10)	3.36 (.11)	3.16 (.14)	3.42 (.15)	3.09 (.12)	3.24 (.17)	2.92	1.04	.56

Note. Numbers in the first six columns are estimated marginal means, with standard errors in parentheses. For ECRI attachment styles, means within each row whose subscripts differ are different at  $p < .05$  (only reported if overall  $F$  significant). Covariate is social desirability. \* $p < .05$  (two-tailed). \*\* $p \leq .01$  (two-tailed). \*\*\* $p \leq .001$  (two-tailed).

TABLE 4  
ANOVA of Gender and Categorical ECRI Attachment Styles on EEQ Subscale Scores—Community Sample

	ECRI-Based Attachment Style Categories						F		
	Female n = 52	Male n = 61	Secure n = 42	Fearful n = 20	Preoccupied n = 22	Dismissive n = 29		Gender (df = 1, 105)	Attach (df = 3, 105)
Autonomy	3.16 (.21)	2.83 (.21)	2.81 <sub>a</sub> (.24)	2.89 <sub>a</sub> (.34)	2.38 <sub>a</sub> (.34)	3.89 <sub>b</sub> (.27)	1.15	4.85**	1.68
Intimacy	4.04 (.19)	3.47 (.19)	2.76 <sub>a</sub> (.22)	4.62 <sub>b</sub> (.30)	4.60 <sub>b</sub> (.30)	3.05 <sub>a</sub> (.25)	4.50*	13.98***	1.71
Self-esteem	4.79 (.29)	4.26 (.28)	4.10 (.33)	5.12 (.45)	4.74 (.45)	4.15 (.37)	1.70	1.46	.51
Casual	3.47 (.23)	3.92 (.23)	3.92 (.26)	3.80 (.37)	3.67 (.37)	3.40 (.30)	1.86	.57	1.65
Close	4.45 (.28)	4.30 (.28)	4.34 (.32)	4.26 (.45)	4.22 (.45)	4.69 (.37)	.15	.31	1.22
Obsessive	2.17 (.17)	2.34 (.17)	2.01 (.19)	2.33 (.27)	2.54 (.27)	2.13 (.22)	.47	.94	3.42*
Ambivalent	1.97 (.19)	2.36 (.19)	1.72 <sub>a</sub> (.21)	2.78 <sub>b</sub> (.30)	2.25 <sub>a,b</sub> (.30)	1.91 <sub>a</sub> (.24)	2.14	3.08*	1.20
Contained	3.23 (.21)	2.89 (.21)	3.13 (.24)	3.49 (.34)	2.79 (.34)	2.82 (.27)	1.27	1.04	.08

Note. Numbers in the first six columns are estimated marginal means, with standard errors in parentheses. For ECRI attachment styles, means within each row whose subscripts differ are different at  $p < .05$ .

\* $p < .05$  (two-tailed). \*\* $p \leq .01$  (two-tailed). \*\*\* $p \leq .001$  (two-tailed).

Fearful undergraduate females also scored higher than dismissive undergraduate females ( $p < .01$ ). Of the undergraduate males, fearful males earned the highest score on this variable, significantly more than secure males ( $p < .05$ ). Although a main effect for attachment was not found in the community sample for this variable, it should be noted that the ECRI dimension of attachment anxiety, as characterizes the fearful and preoccupied styles, was significantly correlated with self-esteem-boosting reasons ( $r = .36, p < .001$ ). The ECRI dimension of avoidance was unrelated to self-esteem motivations ( $r = .07, p = .50$ ) in the community sample.

### Type of Extradynamic Relationship

There was a significant effect for attachment on the scale assessing an obsessive extradynamic relationship (*obsessive*) in the undergraduate sample. In the undergraduate sample, both the fearful and preoccupied styles were significantly more likely than the secure or dismissive styles to endorse this obsessive and needy type of extradynamic relationship. In the community sample, there was a significant gender by attachment interaction effect. Protected  $t$  tests indicated that, among males, fearful and preoccupied males both earned significantly higher scores on this variable as compared with secure males ( $p < .05$ ). The female attachment styles did not score significantly different from each other on the level of desire for intense closeness with the extradynamic partner. Thus, only community males replicate the undergraduate finding of fearful and preoccupied individuals earning higher scores on this variable relative to secure individuals.

In both samples, a significant main effect was found for attachment on the degree of ambivalence regarding intimacy in the extradynamic relationship (*ambivalent*), indicating that the fearful style was most likely to endorse this type of extradynamic relationship, significantly more so than the secure or the dismissive styles. In the undergraduate sample, the preoccupied style also scored relatively high on this type of relationship, significantly more so than the secure style.

In both samples, there were no significant effects of gender, attachment, or their interaction on the comfortably close extradynamic relationship scale (*close*). Similarly, no significant effects for gender, attachment, or their interaction emerged for comfort with closeness in the extradynamic relationship because of some containment or limitations on the relationship (*contained*). In the undergraduate sample, males were significantly more likely to report a casual, emotionally distant extradynamic relationship (*casual*); however, this was not replicated in the community sample. There were no significant effects for attachment, or the interaction of attachment and gender, on the casual extradynamic relationship scale in either sample.

## DISCUSSION

Overall, results from both the undergraduate and community samples replicated well and support the hypothesis that attachment style is related to intimacy-regulating functions of EDI. When evaluating motivations for EDI, dismissive individuals from both samples were more likely to report that a reason for their involvement was to obtain space and freedom relative to all other groups. Conversely, preoccupied and fearful individuals in both samples were more likely than other groups to report that their EDI was motivated by a sense of neglect from the primary partner, loneliness, and a desire to feel cared about. It is interesting to note that the fearful style,

characterized by high levels of both anxiety and avoidance, generally endorsed more intimacy motivations than autonomy motivations, indicating that in the case of EDI, the anxiety dimension may be the more salient in motivating this type of behavior.

In prior research, self-esteem motivations have been viewed as a part of emotional intimacy motivations (Glass & Wright, 1992). In the current study, there is evidence that attachment anxiety, as manifested by the anxious styles in the undergraduate sample and the anxiety dimension in the community sample, is related to reporting that a motivation for the EDI was to experience increases in self-esteem and sense of desirability.

In the undergraduate sample, findings regarding the number of extradyadic partners largely mirrored prior findings. In this sample, preoccupied females reported more extradyadic partners in the prior 2 years relative to secure females. Higher rates of EDI for preoccupied undergraduate females is likely consistent with both prior findings regarding gender-based motivations for EDI (i.e., greater intimacy motivations for females) and the high need for intimacy seen in anxious individuals. In addition, dismissive undergraduate males reported the highest number of extradyadic partners in the prior 2 years relative to any other group, while in the community sample, there was a trend for the dismissive style to report more extramarital partners relative to secure individuals, and males reported significantly more extramarital partners than females. For dismissive males, it may be that engaging in repeated EDI is a way to assert a personal sense of freedom and independence, which fits with both gender-based motivations (i.e., "individualistic" motivations for males) and the autonomy motivations of the dismissive style. Repeated EDI suggests that these individuals may, in general, be less tolerant of restraints on sexual behavior with others outside a primary relationship. Although EDI, when it occurs, appears to function in a similar manner for both dismissive males and females (i.e., to exercise autonomy), dismissive males may be the most likely to use EDI to meet these needs. Thus, attachment may interact with stereotypical gender differences in sexual behavior. Males reported higher numbers of extradyadic partners in both samples, and research typically finds that males are more likely to engage in EDI (e.g., Atkins, Baucom, & Jacobson, 2001). Suggested reasons for such gender differences include societal messages that EDI is more acceptable for males (Lusterman, 1997; Vaughn, 1998) and evolutionary pressures for men to have multiple sexual partners (e.g., Wright, 1994). The current results suggest that this may not be a general propensity for all males, but for dismissive males in particular. Dismissive females may generally choose to assert interpersonal independence in other ways than extradyadic sexual behavior, which also fits gender stereotypes of sexual behavior.

In addition to testing the relationship between attachment and motivations for EDI, another major question of this article is the extent to which individuals extend their mental models of relationships into the extradyadic relationship, versus using the extradyadic relationship to compensate for insecure attachment in primary relationships. The current results suggest that anxiety dynamics generally follow a mental models pattern. Fearful individuals in both samples were more likely than secure individuals to endorse ambivalence regarding intimacy with the extradyadic partner (as were preoccupied undergraduates). In general, fearful individuals typically reported wanting intimacy but avoiding it, and fearful individuals in this study similarly reported wanting intimacy and openness with the extradyadic partner but felt concerned that they would be rejected if they did become intimate.

Also consistent with the notion that anxiety dynamics follow a mental models path in EDI, fearful and preoccupied undergraduates and community males were more likely to report an obsessive and needy extradyadic relationship, thus extending their anxiety into the extradyadic relationship. It is unclear why anxious community males—and not anxious community females—would be more likely to be obsessed with and crave high levels of closeness with the extramarital partner. In the community sample, attachment was targeted on the marital relationship prior to engaging in the EDI. It may be that women who were feeling anxious about their marriage were able to use the extradyadic relationship as compensatory. That is, their anxiety may be more statelike as opposed to traitlike, with feelings of distress focused on and isolated to their husbands at that time, and they use the extradyadic partner to gain a sense of closeness lacking in their marriage. In contrast, attachment anxiety was less common for community males (community females were significantly higher on feeling anxiety in the marriage prior to the EDI than males), and it may be that when males are experiencing anxiety in their marriage, it is more reflective of anxious traits, which they extend into the extradyadic relationship.

In contrast to the general finding that those styles characterized by high anxiety extended their anxious presentation into the extradyadic relationship (the mental models hypothesis), those who were categorized as dismissive did not report a more casual extradyadic involvement, nor were they particularly low on the scale assessing a close, loving extradyadic involvement. This is contrary to previous findings about the relatively low relationship investment and focus on fun in relationships of the avoidant style in general (Feeney & Noller, 1990, 1991), and findings regarding the low affection reported by the dismissive style in particular (Brennan et al., 1998). Thus, there may be something unique about an extradyadic relationship that helps to address avoidant dynamics manifest in primary relationships; that is, avoidance dynamics may follow a compensation pattern in EDI. One idea raised in the clinical literature is that the frequent limitations or boundaries around extradyadic relationships may soothe concerns about getting “too close” to a partner (e.g., Scarf, 1987). In fact, these same structural parameters (i.e., limits on time spent with an extradyadic partner) may aggravate anxiety dynamics, as supported by the extension of anxiety into the extradyadic relationship seen in the current study. One scale, the *contained* scale, attempted to capture the relationship between limits on the extradyadic relationship and increased comfort with closeness. However, there were no differences among attachment groups on this scale, suggesting that dismissive individuals were not more likely to report that they were comfortable being open and intimate with the extradyadic partner because of limitations on the relationship, such as limited time together or no expectation of permanence. It may be that these factors actually do facilitate closeness for the dismissive style, but that avoidant/dismissive individuals are not consciously aware of this and thus do not endorse these items. Alternatively, it may be that there are some structural features of an extradyadic relationship that address avoidance issues that were not assessed on this scale; for example, the contrast of the novel extradyadic partner with a devalued primary partner may facilitate more intense emotional involvement for the dismissive style than they usually express in a primary relationship. In the community sample in particular, with attachment focused on the marriage prior to the EDI, dismissive attachment may reflect increased disengagement with the marital partner that facilitates increased intimacy with the extradyadic partner.

Some gender differences also emerged that were consistent with earlier suppositions about differences between male and female EDI (Glass & Wright, 1992). As noted earlier, males reported more extradyadic partners than females in both samples; moreover, women reported more intimacy motivations for the EDI in both samples, and undergraduate males described their extradyadic relationship as more casual. Attachment does appear to add information above and beyond gender effects, as evidenced by main effects of attachment and the interaction effects of gender and attachment. Notably, no gender effects were found for autonomy motivations, indicating that males were no more likely to endorse these motivations than females, which is contrary to some inferences in the clinical literature.

This current study has important clinical implications for therapists working with individuals or couples struggling with the aftermath of EDI because it provides increased psychological insight into why people engage in EDI. This is not just a question of academic interest; persons affected by this issue typically have a great need to understand the reasons for a particular instance of EDI. A recent evaluation of an intervention for infidelity (Gordon, Baucom, & Snyder, 2004) demonstrated that helping couples and individuals develop a comprehensive narrative about the many reasons for a particular instance of EDI can be central to individual and relationship healing. When a primary partner first learns of an EDI, he or she typically makes extreme interpretations about the event, his or her partner, and himself or herself. For example, a spouse may label his or her partner an “uncaring and selfish liar,” an extreme depiction that leaves little room for healing or resolution. The results of the current study might help couples and therapists develop alternative narratives—to include difficulties balancing autonomy and relatedness in primary relationships (here operationalized as attachment dynamics)—as a potential basis for EDI. Further, attachment theory is theoretically grounded in a developmental context, and several studies have found that self-reported adult attachment style is meaningfully related to retrospective reports of relationships and events within one’s family of origin (Brennan & Shaver, 1998; Brennan, Shaver, & Tobey, 1991; Feeney & Noller, 1990; Hazan & Shaver, 1987; Levy, Blatt, & Shaver, 1998; Rothbard & Shaver, 1994). Therefore, insight into the attachment dynamics of an individual who has engaged in EDI may also provide the clinician with leads to investigate salient distal variables such as boundaries, loss, neglect, and affect regulation and expression in the family of origin. Again, Gordon et al. (2004) reported that exploring such distal variables is helpful in developing an understanding of the event that facilitates insight and recovery. Once a richer level of narrative is developed regarding the EDI, risk factors for EDI become more apparent, and interventions can be developed to help the individual or couple move beyond the event—and, if they wish, decrease the likelihood of future EDI. Even if the couple does not wish to reconcile, this style of balanced understanding is helpful for each individual to move on from the event (Gordon et al.). Interventions such as Emotionally Focused Couple Therapy (EFT; Johnson & Greenberg, 1995) are focused on dealing with attachment issues, and thus establish several guidelines for specific relevant interventions if the couple wishes to address these issues in their relationship.

There are several limitations of the current study, including the lack of a random sample of participants and reliance on self report. Although the two samples differed in some ways, both samples were well educated and primarily White, and in the community sample, selection factors were likely particularly strong. Thus, there are

significant limitations on the generalizability of these results. Future research with more diverse and representative samples is needed to establish the robustness and reliability of the findings across groups. Moreover, although the premise of the study is that attachment style influences patterns of the EDI, data from both the undergraduate and the community sample were collected at one point in time. Attachment has been shown to be moderately stable, but retrospective accounts of attachment and relationship variables are frequently inaccurate and strongly influenced by intervening events (e.g., Kirkpatrick & Hazan, 1994). One variable that may have been particularly influenced by the retrospective method was asking the community sample to recall their attachment to the spouse prior to the EDI. This method of asking participants to recall relationship variables retrospectively is in some ways an improvement on the common strategy in the EDI literature of assessing the current state of the primary relationship and using this data as “predictors” of prior EDI; nevertheless, it is clear that longitudinal investigations to explore the current questions are needed to rule out alternative explanations for the findings.

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