This dissertation titled

Leaving an Abusive Dating Relationship:

An Analysis of the Investment Model and Theory of Planned Behavior

by

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has been approved for

the Department of Psychology

and the College of Arts and Sciences by

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Christine A. Gidycz
Professor of Psychology

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Benjamin M. Ogles
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Abstract

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Leaving an Abusive Dating Relationship: An Analysis of the Investment Model and Theory of Planned Behavior

Director of Dissertation: Christine A. Gidycz

The purpose of the current study was to build on the existing literature in order to better understand women’s leaving processes in physically, sexually, and/or psychologically abusive dating relationships. Three models – investment model, theory of planned behavior, and an integrated model that combined elements of the former two theories – were tested. The sample included 282 college women currently in abusive dating relationships who completed surveys for course credit. Results demonstrated alarming rates of dating violence and that most women had little or no intentions of leaving their abusive partners. Results also showed that the investment model, theory of planned behavior model, and an integrated model all fit the data with modifications. However, the theory of planned behavior model was the best fit to the data, compared to the investment and integrated models. Implications for future research, theory, and intervention are discussed.

Approved: ___________________________________________________________

Christine A. Gidycz

Professor of Psychology
This project is dedicated to memory of Tina Croucher and to her parents – Jim and Elsa Croucher – whose dedication and commitment to ending dating and domestic violence has inspired many, including myself. Their work and accomplishments serve as a reminder that together we can end violence against women.
Acknowledgements

Firstly, I would like to acknowledge my mentor, Dr. Christine Gidycz. Her exceptional guidance and mentorship over the past five years have been pivotal in shaping both my professional and personal identities as a feminist researcher, clinician, advocate, teacher, and human being. I am forever grateful to Dr. Gidycz. I would also like to thank the members of my dissertation committee – Dr. Bruce Carlson, Dr. Julie Suhr, Dr. Frank Bellezza, and Dr. Nicole Reynolds – for their mentorship over the past five years in multiple domains of professional realms. Finally, I would like to thank my family, friends, and partner for their unconditional love and support.
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Chapter 1: Introduction

Dating violence is an endemic problem in our society, such that the majority of women will experience some type of abuse by a dating partner in their lifetime (Edwards, Desai, Gidycz, & VanWynsberge, 2009). In addition to documenting the deleterious consequences of dating violence on individuals and society (Arias & Corso, 2005; Lewis & Fremouw, 2001), research demonstrates that 31% to 85% of abusive relationships continue for some time following the initial incident of abuse (Edwards, Gidycz, & Murphy, 2011; Edwards, Murphy, Gidycz, 2008; Edwards, Kearns, Gidycz, & Calhoun, in press; Johnson & Sigler, 1996; Katz, Kuffel, & Brown, 2006; Sappington, Pharr, Tunstall, & Rickert, 1997). Accordingly, researchers have attempted to understand the factors that contribute to women’s stay/leave decisions in abusive relationships. Over the past few decades our understanding of women’s stay/leave decisions has undoubtedly increased. However, there are limitations to the existing body of empirical research, such that most research 1) is not inclusive in considering multiple forms of abuse; 2) has utilized samples of battered women in shelters, which limits the generalizability of findings to other samples, such as non-treatment seeking adolescents and college students; and 3) lacks clear theoretical underpinnings, despite numerous theories that have been delineated in the literature. The current study is innovative in that it will define abuse inclusively, sample non-treatment seeking women in dating relationships, and utilize social-psychological theoretical underpinnings.

Whereas much of the existing research to date has been atheoretical, several theories have been delineated to explain the leaving process in abusive relationships. The
majority of these theories are violence-specific theories (e.g., learned helplessness, traumatic bonding) that focus on abused women’s deficits in self-perception, judgment, and rationality. Violence-specific theories have been criticized for victim blaming, and there is little research evidence to support these theories’ abilities to predict women’s leaving intentions and behaviors (see Rhatigan, Street, & Axsom, 2006 for a review). More recently, general-theories, namely the investment model and the theory of planned behavior, from the social psychological literature have been adapted to the stay/leave decision literature.

The seminal variable of the investment model is commitment level, which is defined as “the degree to which the individual intends to maintain a relationship, feels psychologically attached to it, and sustains a long-term orientation toward it” (Rusbult & Martz, 1995, p. 559). This commitment variable is a function of the individual’s investment in the relationship, satisfaction with the relationship, and quality of available alternatives to the relationship. Investment refers to “the number and magnitude of resources that are tied to a relationship” (Rusbult & Martz, 1995, p. 560). Some investments are direct (e.g., time in the relationship, self-disclosure, emotional energy), whereas other investments are indirect (e.g., children, mutual friends, shared possessions). Satisfaction refers to “the degree to which the individual favorably evaluates the relationship” (Rusbult & Martz, 1995, p. 559). Quality of alternatives refers to “the attractiveness and availability of alternatives to the relationship—for example, a specific alternative relationship or the option of noninvolvement” (Rusbult & Martz, 1995, p. 560). The investment model has been examined extensively within the
relationship literature. Overall, studies with both community (e.g., Rhatigan & Axsom, 2006; Rusbult & Martz, 1995) and college women (e.g., Edwards et al., 2011; Katz et al., 2006; Truman-Schram, Cann, Calhoun, & Vanwallendael, 2000) demonstrate strong support for the investment model in understanding abused women’s leaving intentions and behaviors.

The theory of planned behavior asserts that an individual’s intention to use a behavior (e.g., leave an abusive relationship) is the best predictor of the individual actually performing the particular behavior. The intention to engage in the specified behavior is a function of the individual’s attitude toward the behavior, the subjective norm towards the behavior, and the individual’s perceived control over the behavior. More specifically, attitudes refer to “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991, p. 188). Subjective norms are operationalized as “perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991, p. 188). Perceived behavioral control, which distinguishes the theory of planned behavior from the theory of reasoned action, is “the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles” (Ajzen, 1991, p. 188). Whereas attitudes and subjective norms are believed to directly affect behavioral intentions only, perceived behavioral control is believed to directly affect both behavioral intentions and the actual behavior (Ajzen, 1991). Only one published study (Byrne & Arias, 2004) has tested the theory of planned behavior to assess abused women’s stay/leave intentions. Although this was a cross-sectional study with battered women,
overall support was found for the model in understanding leaving intentions. Research is sorely needed to test the appropriateness of the theory of planned behavior to explain college women’s leaving intentions and behaviors in abusive dating relationships.

Given the research support for both the investment model and the theory of planned behavior, there have been suggestions for integrating these theories to maximize explanatory and predictive power (e.g., Choice & Lamke, 1997; Strube, 1988). However, little research has followed these recommendations. In an effort to address this gap in the literature, Choice and Lamke (1997) combined several overlapping models – including the investment model and theory of planned behavior – into a single framework. These researchers (i.e., Choice & Lamke, 1999) later tested this theory’s ability to explain abused daters’ (men and women) stay/leave intentions. Results suggested that quality of alternatives, relationship satisfaction, relationship investments, and subjective norms accounted for 87% of the variance in participants’ leaving intentions. Personal (e.g., self-efficacy) and structural (e.g., money) resources were unrelated to participants’ leaving intentions. More recently, Edwards, Murphy, et al. (2008) utilized a prospective design where college women completed surveys at the beginning and end of a 10-week academic quarter. Variables from several theoretical models (including investment model and theory of planned behavior) were assessed. Results suggested that higher levels of relationship satisfaction and commitment, as well as the severity of the partner abuse, all uniquely predicted college women’s Time 1 leaving intentions. Longitudinal regression analyses suggested that Time 1 leaving intentions and decreased relationship investment predicted women’s leaving behaviors over the follow-up period. Although not all aspects
of the theory of planned behavior were assessed, this study provides evidence for the utility of integrative social-psychological models and underscores the need for future, integrative research.

The specific aims of the current study were to 1) assess the fit of the investment model (Figure 1) to the data; 2) assess the fit of the theory of planned behavior (Figure 2) to the data; and 3) assess the fit of an integrated model (Figure 3) to the data and; and 4) determine which of the three models is the best model to explain college women’s leaving intentions in abusive relationships. Since some research suggests that the occurrence of physical, sexual, and psychological abuse are significantly related (Edwards, Murphy, et al., 2008), it was planned a priori to test each of the models with abuse as a latent variable (Figures 4 – 6). With regard to the integrated model, since relationship commitment, investment, satisfaction, and quality of alternatives can be conceptualized as attitudes (Rusbult, 1980; Rusbult, 1983; Rusbult & Martz, 1995), paths were initially directed from each of these investment model variables to attitudes towards leaving one’s partner, a theory of planned behavior variable. This was further justified by the theory of planned behavior conceptualizing attitudes as the extent to which a person has a positive or negative evaluations or appraisals of a specific behavior (Ajzen, 1991). Accordingly, relationship commitment, investment, satisfaction, and quality of alternatives can be considered positive and/or negative evaluations and appraisals of leaving intentions. Not only does adding the investment model variables assist in understanding factors that shape women’s attitudes towards leaving their partners, but it will add an additional path into leaving intentions, thus potentially increasing our
understanding of women’s leaving intentions. Whereas it was expected that all three models will be a good fit to the data, it is hypothesized that an integrated model will be the best fit to the data.
Figure 1. Investment model (hypothesized). Error variances for endogenous variables set to one.
Figure 2. Theory of planned behavior (hypothesized). Error variances for endogenous variables set to one.
Figure 3. Integrated model (hypothesized). Error variances for endogenous variables set to one.
Figure 4. Investment model (with latent variable) (hypothesized). Error variances for endogenous variables set to one.
Figure 5. Theory of planned behavior (with latent variable) (hypothesized). Error variances for endogenous variables set to one.
Figure 6. Integrated model (with latent variable) (hypothesized). Error variances for endogenous variables set to one.
Chapter 2: Method

Participants

Based on previous research regarding college women’s stay/leave decisions in abusive dating relationship (Edwards et al., 2011; Katz et al., 2006), literature on structural equation modeling (Jackson, 2001; Stevens, 1996), and the results of an a priori root-mean-square error of approximation-based power analysis (MacCallum, Browne, & Sugawara, 1996), at least 200 women in abusive relationships were needed for the path analyses. A total of 676 women completed the surveys. Twenty-six women were excluded from the analyses because of incomplete data, and an additional eleven who reported that they were currently in relationships with women were excluded. Of the 639 remaining participants, only women who reported that they were currently in an abusive relationship (N = 282) were included in the analyses.

Similar to the demographic characteristics of the University, participants were largely young (mean age = 18.67; sd = .95, range = 18=22) and Caucasian (87%). Approximately 30% reported that their combined annual family incomes were less than $50,000, 42% reported their annual family income to be between $50,000 and $100,000, and 28% reported their annual family income to be over $100,000. Participants reported that on average their current relationships were 18.48 months in length (sd = 15.36; range = <1 month – 72 months). Further, 8% of participants classified their current relationships as “friends with benefits”, 22% as “casual dating relationship”, 65% as “serious dating relationship”, 3% as “engaged”, and 2% as “other”.
Procedure

Participants were recruited from the Research Participant Pool in the department of psychology at a medium-size Midwestern University. Inclusion criteria required that participants are female, above the age of 18, and currently in a dating relationship. Based on previous research (e.g., Katz et al., 2006), there was no time requirement for relationship length to participate in the study. Also consistent with previous research (Carlson, 1987; Edwards et al., 2011; Jerstad, 2005; Sugerman & Hoteling, 1991), in the solicitation message, dating relationships were defined as “any type of dating relationship, ranging from casual and non-committed relationship to very serious relationships.” In order to avoid selection bias, the description of the study provided to potential participants referred to the study as an examination of dating relationships; there was no mention of relationship abuse. The study took place in the psychology department in a large-group testing environment. Surveys were administered by a female graduate student or an advanced female undergraduate research assistant. At the beginning of the study session, participants received informed consent (Appendix A) and were encouraged to ask questions about the study procedures. Following the completion of the surveys, which took approximately 45 minutes, participants were compensated with course credit and provided debriefing and referral information (Appendix B).

Measures

Demographics. A demographics questionnaire (DQ; Appendix C) assessed basic participant characteristics, such as age, racial identification, and socioeconomic status. The DQ also included questions to gain more detailed information about the length of
participants’ current dating relationships and how they classified their current relationships.

**Partner Abuse.** The Conflict Tactics Scale- Revised (CTS2; Appendix D; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) is the most widely used measure of intimate partner abuse. It was used in the current study to assess participants’ experiences of Psychological Abuse (e.g., “Called me fat or ugly”), Physical Abuse (e.g., “My partner slapped me”), and Sexual Abuse (e.g., “My partner used threats to make me have sex with him”) perpetrated by participants’ current partners. Response options for each item are on a 6-point scale and range from “Never” to “More than 20 times”. The CTS2 has demonstrated good psychometric properties (Straus et al., 1996). Within the three subscales of abuse (i.e. Sexual, Physical, & Psychological), Straus et al. (1996) classified some types of abuse as severe and other types as moderate. Similar to previous research (e.g., Testa, VanZile-Tamsen, & Livingston, 2005), psychological aggression was defined only by the severe items on the CTS2 since the majority of women report experiencing at least one incident of moderate forms of psychological aggression on the CTS2 in their current or most recent dating relationship (Edwards et al., 2009; Edwards et al., 2011; White & Koss, 1991). Further justification for this decision came from Edwards et al.’s (2009) suggestion that many of the verbalization items on the CTS2 could be construed as arguing rather than aggression. Given that the CTS2 does not include items to assess harassment, the Harassment subscale (e.g., “My partner harassed me over the telephone”) from the Composite Abuse Scale (CAS; Appendix C-2; Hegarty, Bush, & Sheehan, 1999) was used to create a more inclusive definition of psychological
abuse. The scale anchors of the CAS were modified in order to be congruent with the scale anchors of the CTS2. The CAS has good psychometric properties (Hegarty et al., 1999; Hegarty, 2005). The items on the Harassment subscale of the CAS were summed with the items on the Psychological abuse subscale of the CTS2.

Consistent with previous research (e.g., Campbell, Rose, Kub, & Nedd, 1998), a participant was considered to be in an abusive relationship if she reported at least two experiences of moderate abuse or at least one experience of severe abuse on the Physical Abuse subscale (as measured by the CTS2), Sexual Abuse subscale (as measured by the CTS2), or Psychological Abuse subscales (as measured by the CTS2 and CAS). Subscale values reflect the number of times a participant has experienced that particular type of abuse by her current partner. In the path analyses, the three abuse variables were each continuous variables, as recommended by Straus and colleagues (1996). As previously discussed, it was planned a priori to analyze the models with abuse as a latent variable. The internal consistencies (Cronbach’s alpha) for each of the three subscales were: Physical Abuse (.70), Sexual Abuse (.53), and Psychological Abuse (.42)

**Investment Model Variables.** The Investment Model Scale (IMS; Appendix E; Rusbult, Martz, & Agnew, 1998) was used to assess investment model variables. Specifically, Satisfaction (e.g., “My relationship is close to ideal”), Quality of Alternatives (e.g., “My needs for intimacy could be fulfilled in alternative relationships”), Investment (e.g., “My partner and I share many memories”), and Commitment (e.g., I want our relationship to last for a very long time”) were be assessed using the IMS. Response options range from “Do not agree at all” (0) to “Agree completely” (8). Rusbult
et al. (1998) reported that the IMS has good psychometric properties. Higher scores on each of the subscales reflect higher levels of that particular variable. The internal consistencies (Cronbach’s alpha) for each of the four subscales were good: Satisfaction (.96), Quality of Alternatives (.84), Investment (.85), and Commitment (.94).

**Theory of Planned Behavior Variables.** The Theory of Planned Behavior Questionnaire (TPBQ; Appendix F) was constructed for the current study based on Ajzen and Fishbein’s (1980) and Ajzen’s (1991; 2006) guidelines and items adapted from Byrne and Arias (2004) study assessing battered women’s leaving intentions. The four subscales, and consistent with the components of the theory of planned behavior, were Leaving Intentions, Attitudes, Subjective Norms, and Behavioral Control. All items were on a 7-point scale. Leaving Intentions were measured by three items that assessed women’s intentions to leave their partner; response options ranged from “Extremely unlikely” to “Extremely likely”. Eleven items assessed participants Attitudes towards leaving their partners. Response options for Attitudes items were bipolar adjectives, such as “Extremely harmful” to “Extremely beneficial”. Four questions assessed Subjective Norms (e.g., “Most people who are important to me think that [I should/should not] leave my current partner”). The Behavioral Control subscale included eight items to assess capability (e.g., “For me to leave my partner would be…” ranging from “Impossible” to “Possible”) and controllability (e.g., “How much control do you believe that you have over leaving your partner?” ranging from “Complete control” to “No control”). Positive and negative endpoints were counterbalanced to offset potential response sets. Items were reverse coded so that higher scores on the Leaving Intentions subscale reflected greater
intentions to leave one’s current partner; higher scores on the Attitudes subscale reflected more positive attitudes towards leaving one’s partner; higher scores on the Subjective Norms subscale reflected greater perceived social pressure to leave one’s partner; and higher scores on the Behavioral Control subscale reflected perceived ease of leaving one’s partner.

Given that the TPBQ was constructed for the current study, a confirmatory factor analysis (CFA) using Amos (Arbuckle, 1999) was conducted (Figure 7) to verify the four-factor model. The CFA for the factor weights and latent variable covariances showed marginal support for the fit of the model to the data $[X^2(293, N = 282) = 1069.293, p < .001; CFI = 0.885; TLI = 0.873; RMSEA = 0.097]$. Modification indices provided by the program AMOS suggested correlating some of the error terms. Given that this is highly controversial (Tabachnick & Fidell, 2007), an alternative approach was taken, and items with error variances that correlated with many other error variances were deleted and the model was re-estimated (Bellezza, personal communication, April 15, 2010). None of these attempts improved the fit of the model to the data over the original model. Thus, the original model was retained given that it was a very close to an acceptable fit and all factor loadings were above .50, which is considered very good (Comrey & Lee, 1992). Additional support for the factors is provided by the internal consistencies (Cronbach’s alpha), which were good for each of the subscales: Leaving Intentions (.96), Attitudes (.97), Subjective Norms (.91), and Behavioral Control (.81).
Figure 7. Confirmatory factor analysis. $X^2(293, N = 282) = 1069.293, p < .001$;
CFI = 0.885; TLI = 0.873; RMSEA = 0.097
Chapter 3: Results

Data Preparation

Data were hand-entered into Statistical Package for the Social Sciences (SPSS, 2008), and diagnostic examination of the data was conducted to check for normality, linearity, outliers, homogeneity of variance, and multicollinearity. No serious violations of the assumptions were detected, especially in light of the large sample size (Tabachnick & Fidell, 2001). Of note, given that some of the variables were non-normally distributed, all of the models were tested separately with original, non-transformed and transformed variables; the results were the same. Thus, the models using the original, non-transformed variables are presented herein.

Descriptive Statistics

Current partner abuse was reported by 41.7% \((n = 282)\) of the entire sample. Of the 282 abused women, 54.3% \((n = 153)\) reported psychological abuse \((\text{range} = 0-62; \text{mean} = 3.85; \text{sd} = 8.19)\), 37.6% \((n = 106)\) reported physical abuse \((\text{range} = 0-77; \text{mean} = 2.08; \text{sd} = 7.28)\), and 75.2% \((n = 212)\) reported sexual abuse \((\text{range} = 0-65; \text{mean} = 7.17; \text{sd} = 11.84)\). Additional descriptive statistics for variables of interest are displayed in Table 1.

Correlation Matrix

A correlation matrix was computed to determine the bivariate relationships among all variables of interest (see Table 2 for these results).
### Table 1

**Descriptive Statistics (N = 282)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Actual Range</th>
<th>Possible Range</th>
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<tr>
<td>Leaving Intentions (TPBQ)</td>
<td>7.45</td>
<td>5.62</td>
<td>3 – 21</td>
<td>3 – 21</td>
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<tr>
<td>Attitudes (TPBQ)</td>
<td>31.94</td>
<td>15.35</td>
<td>11 – 77</td>
<td>11 – 77</td>
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<tr>
<td>Subjective Norms (TPBQ)</td>
<td>12.23</td>
<td>7.68</td>
<td>4 – 28</td>
<td>4 – 28</td>
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<td>Behavioral Control (TPBQ)</td>
<td>33.82</td>
<td>9.06</td>
<td>8 – 56</td>
<td>8 – 56</td>
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<td>Satisfaction (IMS)</td>
<td>28.07</td>
<td>10.54</td>
<td>0 – 40</td>
<td>0 – 40</td>
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<tr>
<td>Quality of Alternatives (IMS)</td>
<td>20.65</td>
<td>9.59</td>
<td>0 – 40</td>
<td>0 – 40</td>
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<tr>
<td>Investment (IMS)</td>
<td>24.89</td>
<td>9.50</td>
<td>0 – 40</td>
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<td>Commitment (IMS)</td>
<td>40.09</td>
<td>15.45</td>
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<td>Sexual Abuse (CTS2)</td>
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<td>11.84</td>
<td>0 – 65</td>
<td>0 – 200</td>
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<tr>
<td>Psychological Abuse (CTS2 &amp; CAS)</td>
<td>3.85</td>
<td>8.19</td>
<td>0 – 62</td>
<td>0 – 200</td>
</tr>
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</table>

Note: TPBQ = Theory of Planned Behavior Questionnaire; IMS = Investment Model Scale; CTS2 = Conflict Tactics Scale Revised; CAS = Composite Abuse Scale
Table 2

*Correlation Matrix*

<table>
<thead>
<tr>
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<td>.67**</td>
<td>.28**</td>
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<td>-.54**</td>
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<td>.72**</td>
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<td>-.09</td>
<td>-.19**</td>
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<td>6. Quality of Alternatives</td>
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<td>-.56**</td>
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<td>8. Commitment</td>
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<td>-.07</td>
<td>-.11*</td>
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Note: **p<.01, *p<.05
Path Analyses

Analytic Overview. A series of path analyses using AMOS 7.0 (Arbuckle, 1999) were conducted in order to test the hypothesized models. The goodness-of-fit chi-square statistic was used to test each of hypothesized models, and a non-significant chi-square statistic is desirable because it indicates that there is not a significant difference between the model and the data. However, with large samples, trivial differences between sample covariance matrixes and estimated population covariance matrices often result in a significant chi square (Tabachnick & Fidell, 2007). Therefore, statisticians (e.g., Bellezza, personal communication, March 13, 2008; Loehlin, 1998; Tabachnick & Fidell, 2007) recommended the use of additional goodness of fit indices, such as the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error Approximation (RMSEA). For the CFI and TLI, values close to .95 and higher are evidence of an appropriate fit; for the RMSEA, values close to .06 and lower are evidence of an appropriate fit (Hu & Bentler, 1996; Loehlin, 2004). Based on recommendations in the literature (MacCallum et al., 1996), confidence intervals (CIs) for RMSEA were used to obtain information about the precision of the RMSEA estimate. In a well-fitting model, the lower 90% confidence limit includes or is close to 0, while the upper limit is less than or close to .05 (MacCallum et al., 1996). Whereas the CFI, TLI, RMSEA, and RMSEA CIs were used to assess the fit of the individual models, the Akaike information criterion (AIC; Akaike, 1974) was used to determine which of the three models (i.e., investment model, theory of planned behavior, or an integrated model) best fit the data. The AIC, a degree of parsimony fit index, is used to compare models
that are not nested (Tabachnick & Fidell, 2007). The model with the lowest AIC value is considered the best fitting model. For models that did not initially fit the data, modification indices were examined for suggestions on refining the models. Only modifications that were theoretically justifiable were considered. Additionally, nonsignificant paths were deleted from the models (Garrison, 2009).

**Investment Model.** For the hypothesized investment model (Figure 1), initial results revealed unacceptable goodness-of-fit indices, \(X^2(12, N = 282) = 162.238, p < .001; \text{CFI} = 0.830; \text{TLI} = 0.603; \text{RMSEA} = 0.211; \text{RMSEA CI} = 0.183 – 0.241, \text{AIC} = 210.238.\) Modification indices provided by the program AMOS were examined and the model was revised to include additional paths from satisfaction to investment, satisfaction to quality of alternatives, quality of alternatives to investment, satisfaction to leaving intentions, and physical abuse to leaving intentions. Non-significant paths were deleted from the model. However, two paths that were marginally significant were retained since they improved the fit of the model to the data. As demonstrated by the goodness-of-fit indices, the revised model (Figure 8) was a good fit to the data, \(X^2(7, N = 282) = 9.310, p = .231; \text{CFI} = 0.997; \text{TLI} = 0.992; \text{RMSEA} = 0.034; \text{RMSEA CI} = 0.000 – 0.086, \text{AIC} = 51.310.\) The final model accounted for 5.4% of the variance in satisfaction, 22.3% of the variance in investment, 14.6% of the variance in quality of alternatives, 71.8% of the variance in commitment, and 68.6% of the variance in leaving intentions.
Figure 8. Investment model (revised). All paths shown are significant at $p < .05$ or lower except the path between psychological abuse and satisfaction and the path between physical abuse and quality of alternatives (both paths are marginally significant at $p < .10$). Error variances for endogenous variables were set to one.
**Theory of Planned Behavior.** For the hypothesized theory of planned behavior (Figure 2), initial results revealed unacceptable goodness-of-fit indices, $X^2(6, N = 282) = 245.299$, $p < .001$; $CFI = 0.648$; $TLI = 0.234$; $RMSEA = 0.377$; $RMSEA CI = 0.337 – 0.418$, $AIC = 289.299$. Modification indices provided by the program AMOS were examined and the model was revised to include additional paths from attitudes to behavioral control, subjective norms to attitudes, and sexual abuse to leaving intentions. Non-significant paths were deleted from the model. As demonstrated by the goodness-of-fit indices, the revised model (Figure 9) was a good fit to the data, $X^2(11, N = 282) = 9.028$, $p = .619$; $CFI = 1.000$; $TLI = 1.006$; $RMSEA = 0.000$; $RMSEA CI = 0.000 – 0.053$, $AIC = 43.028$. The final model accounted for 4.8% of the variance in subjective norms, 53.0% of the variance in attitudes, 23.6% of the variance in behavioral control, and 67.1% of the variance in leaving intentions.
Figure 9. Theory of planned behavior (revised). All paths shown are significant at $p < .05$ or lower. Error variances for endogenous variables were set to one.
**Integrated Model.** For the hypothesized integrated model (Figure 3), initial results revealed unacceptable goodness-of-fit indices, $X^2(23, N = 282) = 454.119, p < .001; \text{CFI} = 0.738; \text{TLI} = 0.373; \text{RMSEA} = 0.258; \text{RMSEA CI} = 0.238 – 0.279, \text{AIC} = 540.119$. Modification indices provided by the program AMOS were examined and the model was revised to include additional paths from satisfaction to investment, satisfaction to quality of alternatives, investment to quality of alternatives, satisfaction to subjective norms, attitudes to behavioral control, investment to behavioral control, satisfaction to leaving intentions, and sexual abuse to leaving intentions. Non-significant paths were deleted from the model. As demonstrated by the goodness-of-fit indices, the revised model (Figure 10) was a good fit to the data, $X^2(30, N = 282) = 39.122, p = .123; \text{CFI} = 0.994; \text{TLI} = 0.990; \text{RMSEA} = 0.030; \text{RMSEA CI} = 0.000 – 0.059, \text{AIC} = 111.122$. The final model accounted for 4.4% of the variance in satisfaction, 18.1% of the variance is investment, 20.5% of the variance in quality of alternatives, 74.4% of the variance in attitudes, 58.6% of the variance in subjective norms, 72.1% of the variance in commitment, 29.2% of the variance in behavioral control, and 73.1% of the variance in leaving intentions.
Figure 10. Integrated model (revised). All paths shown are significant at $p < .05$ or lower. Error variances for endogenous variables were set to one.
Latent Variable Models. For the hypothesized latent variable models (Figures 4 – 6), initial results revealed unacceptable goodness-of-fit indices: investment model \[X^2(18, N = 282) = 145.324, p < .001; \text{CFI} = 0.853; \text{TLI} = 0.771; \text{RMSEA} = 0.159; \text{RMSEA CI} = 0.133 – 0.183, \text{AIC} = 181.324\]; theory of planned behavior \[X^2(12, N = 282) = 108.505, p < .001; \text{CFI} = 0.852; \text{TLI} = 0.741; \text{RMSEA} = 0.169; \text{RMSEA CI} = 0.0141 – 0.199, \text{AIC} = 140.505\]; integrated model \[X^2(36, N = 282) = 272.50, p < .001; \text{CFI} = 0.855; \text{TLI} = 0.778; \text{RMSEA} = 0.153; \text{RMSEA CI} = 0.136 – 0.170, \text{AIC} = 332.536\]. Given that the reason for these analyses was the expected significant relationships among all of the different types of abuse, which the bivariate analyses did not support, further exploration of these models was discontinued after assessing the initial fit.

Summary of Path Analytic Results. The investment model (Figure 8), theory of planned behavior (Figure 9), and integrated model (Figure 10) were all good fits to the data after adjusting each of the models based on the modification indices, which were consistent with theory and previous research. The effect size (i.e., squared multiple correlation) of leaving intentions was the greatest in the integrated model \(R^2 = .73\), compared to .67 and .69 in the theory of planned behavior and investment models, respectively). However, based on the AIC values, the theory of planned behavior best fit the data (AIC = 43.03), compared to the investment model (AIC = 51.31) and integrated model (AIC = 111.122).
Chapter 4: Discussion

The purpose of the current study was to assess the factors related to leaving intentions for women in abusive relationships. In an effort to meet this goal, the researcher tested the fits of the investment model, theory of planned behavior, and an integrated model, with the ultimate goal of determining which model best fit the data. Consistent with previous research (e.g., Edwards et al., 2011; Katz et al., 2006), an alarmingly high percentage (42%) of women in dating relationships reported the presence of partner abuse, even using a somewhat conservative definition (i.e., at least two moderate abusive experiences or one severe experience to be considered an abusive relationship). These data also showed that many women had very little intentions of leaving their partners, consistent with previous cross-sectional and longitudinal research that demonstrates the stability of many abusive relationships (Edwards et al., 2011; Edwards, Crawford, et al., in press; Katz et al., 2006; Truman-Schram et al., 2000). Most importantly, the current study found several well-fitting models that shed important light on women’s leaving intentions in abusive relationships. Of important note, none of the hypothesized models fit the data without modifications. This is likely due to the fact that many of the endogenous variables in the various models were related to one another. Given that in structural equation modeling endogenous variables cannot be correlated, causal arrows were drawn between many of the endogenous variables, based on the modification indices. It is critical to underscore, however, that given the cross-sectional design of the study, the directions of these relationships are unclear. Rather than the relationships being strictly unidirectional, it is possible that there are bi-directional
relationships among these variables (i.e., from the investment model, satisfaction, investment, and quality of alternatives; from the theory of planned behavior, attitudes, subjective norms, and behavioral control) (Givertz & Segrin, 2005; Rhatigan, Moore, & Stuart, 2005). Given that the theory of planned behavior was the best fitting model and this was the first study to test this theory in a sample of abused college women, the discussion will focus largely on the theory of planned behavior and less on the investment model, which has been previously studied in samples of abused college women (Edwards et al., 2011; Katz et al., 2006; Truman-Schram et al., 2000).

The theory of planned behavior was the best fit to the data, compared to the investment and integrated models. In the theory of planned behavior model, more positive attitudes towards leaving one’s partner (i.e., attitudes) and greater perceived social pressure to leave one’s partner (i.e., subjective norms) were significantly and positively related to intentions to leave one’s current partner (i.e., leaving intentions). Although perceived ease of leaving one’s partner (i.e., behavioral control) was positively related to leaving intentions at the bivariate level, in the presence of attitudes and subjective norms, behavioral control did not emerge as a significant correlate of leaving intentions in the theory of planned behavior path analyses. These findings differ from the Byrne and Arias’ (2004) study with help-seeking battered women in which attitudes and behavioral control were related to leaving intentions, but subjective norms were not. With regard to the behavioral control finding, it is likely that college women have more personal and structural resources to leave an abusive relationship than battered women seeking help from community agencies. With regard to the differing subjective norm
finding, Byrne and Arias (2004) speculated that subjective norms were unrelated to leaving intentions in their sample because many women did not disclose the abuse to other individuals. However, research with college women suggests that approximately 75% of abused women disclose dating violence in their current relationships, most commonly to their same-age peers (Edwards, Dardis, & Gidycz, in press). Additionally, given that most college women live in close proximity to other individuals in on-campus dormitories or off-campus housing (National Multi Housing Council, 2009), isolation from others is not likely as salient of a factor for college women as it may be for non-college age populations.

The frequencies of different forms of current partner abuse were also related to various components of the theory of planned behavior. Specifically, increases in sexual abuse were positively and significantly related to leaving intentions, and increases in physical abuse were positively and significantly related to more positive attitudes towards leaving one’s partner and greater perceived social pressure to leave one’s partner. However, increases in sexual and psychological abuse were negatively and significantly related to perceived ease of leaving one’s partner. These findings suggest that the more frequently an individual is abused, the more likely other individuals are to encourage the woman to leave her partner. Conversely, the inverse association between abuse and behavioral control could be due to women who are in highly abusive relationships being fearful to leave their abusive partners and feeling little efficacy in their ability to leave, which is consistent with previous theory and research (Edwards et al., 2011; Edwards, Kearns, et al., in press; Rhatigan et al., 2006; Walker, 1979).
While not quite as good of a fit to the data as the theory of planned behavior model, the investment model was an acceptable fit to the data. Both commitment and satisfaction demonstrated direct associations with leaving intentions. This is consistent with previous prospective and longitudinal research (e.g., Edwards et al., 2011) where both commitment and satisfaction, as measured at the first survey session, were significant predictors of women’s decisions to terminate their relationships over the 10-week follow-up period, as measured at the second survey session. Furthermore, consistent with proposed theory and previous research, relationship satisfaction, relationship commitment, and poorer quality of alternatives were significantly associated with relationship commitment. The associations between abuse and investment model variables in the current study are also analogous to those found in previous research (Edwards et al., 2011; Hagan & Axsom, 2006; Hagan & Street, 2005). Specifically, as abuse frequency increased, quality of alternatives increased and relationship satisfaction decreased. On the contrary, as abuse frequency increased, relationship investment also typically increased. Hagan and Street (2006) suggested that the more abuse women are exposed to the more energy and effort they put forth to resolve the conflict, thus leading to increases in perceived investment.

Although the abuse variables differed somewhat between the theory of planned behavior model and the investment model, in both models many of the abuse variables demonstrated relatively small (albeit significant) relationships with other model variables. Results from the Edwards et al. (under review) study underscored women’s lack of acknowledgment, minimization, and normalization of the abuse in their current
relationships, which could result in the small relationships observed in the current study among abuse variables and models' variables. It is also perplexing that sexual abuse was only related to two model variables (i.e., leaving intentions and behavioral control) at the bivariate level, unlike physical abuse and psychological abuse which were related to most all investment model and theory of planned behavior model variables at the bivariate level. Furthermore, despite occurring at a higher frequency in the sample than physical and psychological abuse, sexual abuse was eliminated from the investment model during the modification process, which is consistent with model results from the Edwards et al. (2011) study. Conversely, sexual abuse was related to leaving intentions in the theory of planned behavior, whereas physical abuse was related to leaving intentions in the investment model. It is likely that these findings emerged as a result of the relationships that the abuse variables had with the other model variables (i.e., subjective norms and attitudes in the theory of planned behavior model and commitment in the investment model) that predicted leaving intentions, especially since all forms of abuse were related to leaving intentions at the bivariate level. Some of the perplexing findings regarding the abuse variables may be related to the unique characteristics of the sample (e.g., all were in abusive relationships rather than including both abused and nonabused women) as well as some research suggesting that it may not be the frequency of the abuse that matters as much as the severity and/or the meaning that women ascribe to the abuse (Katz et al., 2006; Rhatigan et al., 2006). Clearly, more research is needed to confirm and better understand the present study's findings related to the abuse variables.
Contrary to the hypothesis that the integrated models would be the best fit to the data, this model actually was the poorest fit to the data. Whereas it was hypothesized that the investment model could be linked to the theory of planned behavior via attitudes, results suggested that many other aspects of the theories were related as demonstrated by the numerous modifications indices suggested by the program Amos. In fact, the integrated models only fit after generous use of the modification indices, which greatly complicates the interpretability of this model. Additionally, the variance accounted for in leaving intentions was only marginally higher in the integrated model than either the theory of planned behavior or investment model alone, which brings into question the suggestion (e.g., Choice & Lamke, 1997; Strube, 1988) that integrating these theories could maximize explanatory and predictive power. Although some previous research (Choice & Lamke, 1997; Edwards, Murphy, et al., 2008) has found promising results for integrating the theory of planned behavior and the investment model, the current study was the first study to include all facets of both theories using structural equation modeling. It is possible that some of the variables from the investment model and theory of planned behavior are part of similar types of underlying, latent constructs. For example, the bivariate correlation between the investment model’s commitment and the theory of planned behavior’s leaving intentions was high \( (r = -0.79) \), which suggests that these two variables are likely tapping into the same construct. Additionally, a high correlation \( (r = -0.70) \) was found between the investment model’s satisfaction and the theory of planned behavior’s subjective norms. It is possible that these two variables are tapping into a global satisfaction variable, which is comprised of both self and others’
satisfaction with one’s relationship. Amalgamating similar variables from these two theories as composite, observed variables or latent variables might improve the fit of an integrated model to the data.

Although the current study contributes to our understanding of the factors that are related to women leaving intentions in abusive relationships, several limitations should be noted. First, the sample was homogenous, which limits the generalizability of these results to diverse (e.g., racial minorities, same-sex couples) college students. Additionally, the cross-sectional design of the current study is a limitation, such that the directions of the relationships are unknown. Similarly, intentions were measured, rather than actual leaving behaviors. However, intention is the best proximal measure of behavior when longitudinal data collection is not possible (Francis et al., 2004). Multiple meta-analyses show that product moment correlations between intention and actual behavior range from .45 to .62 (for a review, see Sutton, 1998). Further, Edwards, Murphy, et al. (2008) found that intentions to leave a sexually abusive partner, as measured at the first survey session, was the strongest predictor of actually leaving an abusive partner over a 10-week follow-up period, as measured at the second survey session. Nevertheless, future research could benefit greatly from employing longitudinal, prospective designs. This type of research would allow for a better understanding of the temporal sequencing of the variables assessed and a better understanding of their predictive relationships (i.e., direction of paths). It is important to note, however, that research demonstrates that many women leave and return to their abusive partners multiple times and that women often under estimate their personal risk for returning to
their abusive partner (Edwards, Murphy, et al., 2008; Martin et al., 2000). Thus, research that includes multiple points of data collection is sorely needed. An additional limitation of the current study is that the questionnaire used to measure theory of planned behavior variables was created for the purposes of the current study. Suggestions from Ajzen (Ajzen, 1991; 1996) and previous research (Byrne & Arias, 2004) were used to develop the questionnaire, and initial psychometric analyses are promising. However, there is a need for future research to assess the psychometric properties of this measure, especially with regard to validity information and test-retest reliability.

An additional limitation of the current study is the lack of consensus in the literature on the best practices for defining and measure intimate partner abuse. Although most researchers agree that intimate partner violence includes physical, sexual, psychological/verbal, and stalking violence (Center for Disease Control and Prevention, 2008), what constitutes each of these different types of abuse categories is much less agreed upon (Saltzman, 2004). This is especially the case for psychological abuse, which is due to the fact that psychological abuse has only recently been included in studies that have assessed physical and sexual intimate partner violence (Follingstead, 2007). Additionally, most of the measures of intimate partner violence have been developed with married, co-habiting populations in mind. Although some of the measures, including the CTS2 (Straus et al., 1996) used in the current study, have been used extensively with college students, there is still some question as to the sensitivity of this measure to capture abuse specific to adolescents and college students in dating relationships. Furthermore, the internal consistencies in this study were less than ideal for both the
sexual abuse and psychological abuse subscales, which is likely, in part, due to the facts that 1) women in the current study all reported at least some form of current partner abuse and 2) the psychological abuse subscale was a composite of items from two measures. Of important note, Koss et al. (2007) suggested that measures of internal consistency are not appropriate for victimization measures because internal consistencies imply that all experiences are interrelated, suggesting that a common characteristic exists that causes women to be abused or assaulted in multiple ways. Taken together, there is a grave need for consensus among researchers on the best practices for defining and measure intimate partner abuse (see Cook, Gidycz, Koss, & Murphy, 2011) as well as research that focuses on developing new measures that capture dating violence in adolescent and college-age populations.

Additionally, more research is needed to assess the factors that shape investment model and theory of planned behavior variables. Results from this study showed that women in abusive relationships, on average, had high levels of relationship satisfaction and commitment, and low levels of favorable attitudes towards leaving their partners and perceived social pressure to leave their partners, all of which were directly related to leaving intentions in the path analyses. Why is it that women are satisfied with and committed to their abusive relationships? Only one published study (i.e., Edwards et al., 2011) has attempted to answer this question, and results suggested that a history of childhood abuse, psychological distress, avoidance coping, and self-esteem shaped women’s perceptions of investment model variables. No published study has assessed the factors that shape abused women’s perceptions of theory of planned behavior variables.
However, the researcher is currently collecting qualitative data on this topic that will hopefully shed light on the factors that shape attitudes towards leaving one’s partner (e.g., advantages and disadvantages of leaving), subjective norms towards leaving one’s partner (e.g., approving and disapproving individuals of leaving), and behavioral control over leaving one’s partner (circumstances that enable leaving or make leaving difficult). More research is also needed to assess the role of abuse severity and frequency in shaping women’s perceptions of investment model and theory of planned behavior variables, especially in light of the fact that abuse accounted for only a small amount of variance in the endogenous variables in the path analyses. Taken together there is a need for more research on the factors that shape investment model and theory of planned behavior variables, including abuse variables.

The current study provides information that may be useful in tailoring interventions to college-age women in abusive dating relationships, as well as their peers. In general, these data underscore the importance of assessing and incorporating into treatment plans attitudinal, relational, and social variables. For example, given that attitudes towards leaving one’s partner was the strongest correlate of intentions to leave one’s partner, it may be important for therapist to explore with clients the factors that shape their attitudes towards leaving or not leaving their abusive partners. Additionally, given that greater perceived social pressure to leave one’s partner was positively associated with intentions to leave one’s partner, it is likely important to educate others – especially other college students since they are the most likely source of their friends’ disclosures (Edwards, Dardis et al., in press) – on how to respond to the disclosure of
partner abuse. In fact, many prevention programs (e.g., Black & Wiesz, 2008; Foshee et al., 1998; Gidycz & Orchowski, 2009) are beginning to address how adolescents and young adults can help their friends who are in abusive dating relationships. Additionally, due to the continued support for the investment model, it could be effective for therapists to process with their clients the factors that shape their perceptions of investment model variables. Given that previous research suggests that a history of childhood abuse, psychological distress, self-esteem, and avoidance coping shape abused college women’s perceptions of investment model variables (Edwards et al., 2011), these are likely important factors to address in interventions. Although there is no published research to date that assesses the factors that shape perceptions of theory of planned behavior variables among abused college women, the researcher is currently collecting qualitative data on this topic, which might be useful in translating research findings into clinical intervention.

In conclusion, the current study sheds important light on the factors — namely those from the investment model and theory of planned behavior — that affect women’s leaving intentions in abusive relationships. Perpetrators are responsible for all acts of intimate partner violence, and it is critical that researchers focus on the development of primary prevention efforts. However, until intimate partner violence is eradicated from society, it is important to understand how to best assist women in abusive relationships, which includes an understanding of their decision making process regarding remaining in or terminating their relationships. Although the role of therapists in encouraging their clients to terminate an abusive relationship is a controversial topic (see Edwards, Merrill,
Desai, & MacNamara, 2008 for a discussion), therapists want to empower their clients and provide them with possible alternatives to their abusive relationships. Research such as the current study is useful to clinicians in understanding the variables that affect this complex decision making process.
References


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National Multi Housing Council (2009). Special student housing report: Has the recession had an impact? Available at http://www.nmhc.org/Content/ServeContent.cfm?ContentItemID=5402


Appendix A: Consent Form

Ohio University Consent Form

Title of Research: An Examination of Women’s Dating Relationships
Researchers: Katie Edwards, M.S.
Faculty Supervisor: Christine Gidyez, Ph.D.

You are being asked to participate in research. For you to be able to decide whether you want to participate in this project, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This process is known as informed consent. This form describes the purpose, procedures, possible benefits, and risks. It also explains how your personal information will be used and protected. Once you have read this form and your questions about the study are answered, you will be asked to sign it. This will allow your participation in this study. You should receive a copy of this document to take with you.

Explanation of Study
The purpose of this study is to explore dating relationships, including relationships where upsetting experiences may have occurred. Therefore, to participate in this study you must be in a dating relationship. By dating relationship, we mean any type of dating relationship, ranging from casual and non-committed relationships to very serious relationships. If you are not currently in a dating relationship, please notify the researcher now. If you are in a relationship and you choose to participate, you will be asked to fill out several questionnaires. Following completion of the questionnaires, you will be debriefed. If you have any questions or concerns, the experimenter will be there to assist you. Your participation for this session should take approximately one hour. Some women may be invited back to attend a 4-month follow-up session, which is completely voluntary.

Risks and Discomforts
During this study, you will be asked for personal and sexual information. Please consider your comfort level with these types of questions before agreeing to participate in the study. This study involves no physical risks for participants. However, some individuals might experience emotional discomfort. Participation is voluntary, and you may stop responding and withdraw from the study at any point without penalty.

Benefits
Your participation will provide you the opportunity to learn, first-hand, the process of data collection for a psychological research. The data from this study could also be helpful to psychologists in providing help to women with upsetting relationship experiences.

Confidentiality and Records
Your identity will be protected. All of your data will be kept confidential. Confidentiality will be protected by assigning each participant a number to which all data are referred. Only the investigators will have access to the information linking names and participant numbers and this list will be destroyed within one year. This master list will contain the names of individuals who complete the future participation form. Information gathered in this study will be used by investigators for research purposes only and no names will be
attached to any subsequent presentation or publication. Additionally, in presentations or publications, your written responses to questions might be used in the form of quotations, but no identifying information will be included.

Some of the surveys will contain questions regarding self-injurious behaviors. If you endorse thoughts about harming yourself, a researcher will contact you to ensure your safety and provide referral information (also available on the Debriefing Form). However, a researcher will be unable to contact you if your name and personal contact information are not provided on the Future Participation Form.

Additionally, while every effort will be made to keep your study-related information confidential, there may be circumstances where this information must be shared with:

* Federal agencies, for example the Office of Human Research Protections, whose responsibility is to protect human subjects in research;
* Representatives of Ohio University (OU), including the Institutional Review Board, a committee that oversees the research at OU.

**Compensation**

You will receive one credit for today's session. If you complete the future Participation Form, you may be asked to take place in one additional follow-up session in four months, during which you would fill out additional questionnaires. If you choose to participate in the follow-up session, which will take place in approximately four months, you will receive monetary compensation.

**Contact Information**

If you have any questions regarding this study, please contact
Katie Edwards, M.S. 056 Porter Hall (593-1088)
Christine A. Gidycz, Ph.D. 231 Porter Hall (593-1092)

If you have any questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

By signing below, you are agreeing that:
- you have read this consent form (or it has been read to you) and have been given the opportunity to ask questions
- known risks to you have been explained to your satisfaction.
- you understand Ohio University has no policy or plan to pay for any injuries you might receive as a result of participating in this research protocol
- you are 18 years of age or older
- your participation in this research is given voluntarily
- you may change your mind and stop participation at any time without penalty or loss of any benefits to which you may otherwise be entitled.
Appendix B: Debriefing Form

Debriefing Form

Thank you for your participation in this research project. This study was designed to examine the relationship between relationship experiences and responses to dating situations. To accomplish this goal, you were asked questions about personal life events, including psychological, physical, and sexual experiences.

The information provided by these questionnaires will help psychology researchers and clinicians learn more about college women’s experiences of upsetting dating experiences. In doing so, psychologists will be better able to use such questionnaires to research important social issues. The results of such studies will provide more detailed information to aid in the development of future prevention and intervention programming for women with upsetting relationship experiences.

As a reminder, all of your questionnaire responses will remain strictly confidential. If you have any further questions regarding the nature of this study, or would like to request details of the results, please feel free to contact one of the following:

Katie Edwards, M.S. 056 Porter Hall (593-1088)
ke265405@ohio.edu

Christine A. Gidycz, Ph.D. 231 Porter Hall (593-1092)
gidyycz@ohio.edu

In addition, if you are concerned about the study materials used or questions asked and wish to speak to a professional, or if you would like more information or reading material on this topic, please contact one of the following resources:

Ohio University Counseling and Psychological Services: 593-1616
Ohio University Psychology and Social Work Clinic 593-0902
My Sister’s Place Battered Women’s Shelter 593-3402
Sexual Assault Survivor Advocacy Program 589-5562
OU Counselor-in-Residence 593-0769
Appendix C: Demographics Questionnaire (DQ)

DQ

DIRECTIONS: Please write-in your answer or choose the best response for each question. Do not skip any items and answer all items honestly.

1. What is your age? (write-in)________________________

2. What is the name of your first pet? (write-in)__________________________

3. What is your current year in college?
   A. First
   B. Second
   C. Third
   D. Fourth
   E. Fifth or above
   F. Graduate student
   G. Other __________

4. What is your race/ethnicity?
   A. Caucasian, Non-Hispanic
   B. African American
   C. Latino or Hispanic
   D. Asian or Pacific Islander
   E. American Indian or Alaska Native
   F. Two or more races
   G. Other

5. What is your religion?
   A. Catholic (Christian)
   B. Protestant (Christian)
   C. Jewish
   D. Muslim
   E. Nondenominational
   F. Other
   G. None
6. Approximately what is your parents’ yearly income?
   A. Unemployed or disabled
   B. $10,000 – $20,000
   C. $21,000 - $30,000
   D. $31,000 - $40,000
   E. $41,000 - $50,000
   F. $51,000 - $75,000
   G. $76,000 - $100,000
   H. $100,000 - $150,000
   I. $151,000 or more

7. Which one best describes your relationship/sexual orientation?
   1. exclusively heterosexual experiences
   2. mostly heterosexual experiences
   3. more heterosexual than homosexual experiences
   4. equal heterosexual and bisexual experiences
   5. more homosexual than heterosexual experiences
   6. mostly homosexual experiences
   7. exclusively homosexual experiences

8. How old were you when you first began going on dates? (write-in)

9. Approximately how many dating relationships have you had? (write-in)

10. Approximately how many consensual sexual partners have you had (including oral, anal, and vaginal intercourse)? (write-in)

11. Are you currently involved in more than one dating relationship?
    A. No
    B. Yes [If you are involved in more than one dating relationship, answer the following questions with regard to the relationship that is the most significant]

12. How long have you been with your current partner? (write-in) ____years ____months

13. How would you classify your relationship with your current partner?
    A. Friends with benefits
    B. Casual dating relationship
    C. Serious dating relationship
    D. Engaged
    E. Married
    F. Other (write-in) ______________________
14. Do you currently live with your partner?
   A. Yes
   B. No

15. Have you had consensual sex (vaginal, oral, or anal) with your current partner?
   A. Yes
   B. No

16. What is the sex of your current partner?
   A. Male
   B. Female
Appendix D: Conflict Tactics Scale (CTS-V)

CTS-V

**DIRECTIONS:** No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have spat or fights because they are in a bad mood, are tired, or for some other reason. Couples also have many different ways of trying to settle their differences. This is a list of things that might happen when you have differences.

Circle how many times your CURRENT PARTNER has done these things to you. If you are involved in more than one dating relationship, answer the questions with regard to the relationship that is the most significant. **Please do not skip any items and answer all items honestly.**

<table>
<thead>
<tr>
<th>0 = Never</th>
<th>1 = Once</th>
<th>2 = Twice</th>
<th>3 = 3 – 5 times</th>
<th>4 = 6 – 10 times</th>
<th>5 = 11 – 20 times</th>
<th>6 = More than 20 times</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My partner showed care for me even though we disagreed.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>2. My partner explained his side of a disagreement to me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>3. My partner insulted or swore at me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>4. My partner threw something at me that could hurt.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
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<tr>
<td>5. My partner twisted my arm or hair.</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<td>5</td>
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<tr>
<td>6. I had a sprain, bruise, or small cut because of a fight with my partner.</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<tr>
<td>7. My partner showed respect for my feelings about an issue.</td>
<td>0</td>
<td>1</td>
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</table>
8. My partner made me have sex without a condom. | 0 1 2 3 4 5 6
9. My partner pushed or shoved me. | 0 1 2 3 4 5 6
10. My partner used force (like hitting, holding down, or using a weapon) to make me have oral or anal sex. | 0 1 2 3 4 5 6
11. My partner used a knife or gun on me. | 0 1 2 3 4 5 6
12. I passed out from being hit on the head by my partner in a fight. | 0 1 2 3 4 5 6
13. My partner called me fat or ugly. | 0 1 2 3 4 5 6
14. My partner punched or hit me with something that could hurt. | 0 1 2 3 4 5 6
15. My partner destroyed something belonging to me. | 0 1 2 3 4 5 6
16. I went to a doctor because of a fight with my partner. | 0 1 2 3 4 5 6
17. My partner choked me. | 0 1 2 3 4 5 6
18. My partner shouted or yelled at me. | 0 1 2 3 4 5 6
19. My partner slammed me against a wall. | 0 1 2 3 4 5 6
20. My partner was sure we could work out a problem. | 0 1 2 3 4 5 6
21. I needed to see a doctor because of a fight with my partner, but I didn’t. | 0 1 2 3 4 5 6
22. My partner beat me up. | 0 1 2 3 4 5 6
23. My partner grabbed me. | 0 1 2 3 4 5 6
24. My partner used force (like hitting, holding down, or using a weapon) to make me have sex. | 0 1 2 3 4 5 6
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<td>25. My partner stomped out of the room or house or yard during a disagreement.</td>
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<td>26. My partner insisted on sex when I did not want to (but did not use force).</td>
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<td>27. My partner slapped me.</td>
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<td>28. I had a broken bone because of a fight with my partner.</td>
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<td>29. My partner used threats to make me have oral or anal sex.</td>
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<td>30. My partner suggested a compromise to a disagreement.</td>
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<td>31. My partner burned or scalded me on purpose.</td>
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<tr>
<td>32. My partner insisted on oral or anal sex (but did not use physical force).</td>
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<td>33. My partner accused me of being a lousy lover.</td>
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<td>34. My partner did something to spite me.</td>
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<td>35. My partner threatened to hit or throw something at me.</td>
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<td>36. I felt physical pain that still hurt the next day because of a fight with my partner.</td>
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<td>37. My partner kicked me.</td>
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<td>38. My partner used threats to make me have sex.</td>
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<td>39. My partner agreed to try a solution to a disagreement I suggested.</td>
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<td>40. My partner had sex (vaginal, oral, or anal) with me while I was asleep or passed out from alcohol or drugs.</td>
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<td>41. My partner told me that I wasn’t good enough.</td>
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<tr>
<td>42. My partner followed me.</td>
<td>0</td>
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<td>5</td>
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<tr>
<td>43. My partner tried to turn my family, friends, or children against me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<tr>
<td>44. My partner told me I was ugly.</td>
<td>0</td>
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<td>45. My partner tried to keep me from seeing or talking to my family.</td>
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<td>46. My partner hung around outside my house when he was not supposed to be there.</td>
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<td>47. My partner blamed me for the aggressive behavior.</td>
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<tr>
<td>48. My partner harassed me over the telephone.</td>
<td>0</td>
<td>1</td>
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<td>5</td>
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<tr>
<td>49. My partner harassed me at work.</td>
<td>0</td>
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<td>4</td>
<td>5</td>
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<tr>
<td>50. My partner became upset if dinner/housework wasn’t done when he thought it should be.</td>
<td>0</td>
<td>1</td>
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<td>3</td>
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<td>5</td>
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<tr>
<td>51. My partner told me I was crazy.</td>
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<td>3</td>
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<td>5</td>
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<tr>
<td>52. My partner told me that no one else would want me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<tr>
<td>53. My partner did not let me socialize with my female friends.</td>
<td>0</td>
<td>1</td>
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<td>4</td>
<td>5</td>
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<tr>
<td>54. My partner tried to convince my friends, family, or children that I was crazy.</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
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<tr>
<td>55. My partner told me I was stupid.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>56. My partner did not let me socialize with my male friends.</td>
<td>0</td>
<td>1</td>
<td>2</td>
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Appendix E: Investment Model Scale (IMS)

IMS

DIRECTIONS: Answer the following questions with regards to your CURRENT partner. If you are involved in more than one dating relationship, answer the questions with regard to the relationship that is the most significant. Circle the number that best describes how you feel using the scales provided. Please do not skip any items and answer all items honestly.

1) Please indicate the degree to which you agree with each of the following statements regarding your current relationship (circle an answer for each item).

   a) My partner fulfills my needs for intimacy (sharing personal thoughts, secrets, etc.)
      Don't Agree Agree Agree Agree
      At All Slightly Moderately Completely

   b) My partner fulfills my needs for companionship (doing things together, enjoying each other’s company, etc.)
      Don't Agree Agree Agree Agree
      At All Slightly Moderately Completely

   c) My partner fulfills my sexual needs (holding hands, kissing, etc.)
      Don’t Agree Agree Agree Agree
      At All Slightly Moderately Completely

   d) My partner fulfills my needs for security (feeling trusting, comfortable in a stable relationship, etc.)
      Don’t Agree Agree Agree Agree
      At All Slightly Moderately Completely

   e) My partner fulfills my needs for emotional involvement (feeling emotionally attached, feeling good when another feels good, etc.)
      Don’t Agree Agree Agree Agree
      At All Slightly Moderately Completely

2) I feel satisfied with our relationship. (please circle a number)

   0 1 2 3 4 5 6 7 8
   Do Not Agree Agree Agree
   At All Somewhat Completely
3)  My relationship is much better than others' relationships.

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<th>0</th>
<th>1</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
<tr>
<td>Do Not Agree At All</td>
<td>Agree Somewhat</td>
<td>Agree Completely</td>
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4)  My relationship is close to ideal.

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<tr>
<td>Do Not Agree At All</td>
<td>Agree Somewhat</td>
<td>Agree Completely</td>
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5)  Our relationship makes me very happy.

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<tr>
<td>Do Not Agree At All</td>
<td>Agree Somewhat</td>
<td>Agree Completely</td>
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6)  Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc.

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<th>6</th>
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<tbody>
<tr>
<td>Do Not Agree At All</td>
<td>Agree Somewhat</td>
<td>Agree Completely</td>
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</table>

7)  Please indicate the degree to which you agree with each statement regarding the fulfillment of each need in alternative relationships (e.g., by another dating partner, friends, family).

a)  My needs for intimacy (sharing personal thoughts, secrets, etc.) could be fulfilled in alternative relationships

| Don't Agree At All | Agree Slightly | Agree Moderately | Agree Completely |

b)  My needs for companionship (doing things together, enjoying each other's company, etc.) could be fulfilled in alternative relationships

| Don't Agree At All | Agree Slightly | Agree Moderately | Agree Completely |

c)  My sexual needs (holding hands, kissing, etc.) could be fulfilled in alternative relationships

| Don't Agree At All | Agree Slightly | Agree Moderately | Agree Completely |
d) My needs for security (feeling trusting, comfortable in a stable relationship, etc.) could be fulfilled in alternative relationships

Don't Agree At All | Agree Slightly | Agree Moderately | Agree Completely

e) My needs for emotional involvement (feeling emotionally attached, feeling good when another feels good, etc.) could be fulfilled in alternative relationships

Don't Agree At All | Agree Slightly | Agree Moderately | Agree Completely

8) The people other than my partner with whom I might become involved are very appealing. (please circle a number)

0 1 2 3 4 5 6 7 8
Do Not Agree | Agree Somewhat | Agree Completely

9) My alternatives to our relationship are close to ideal (dating another, spending time with friends or on my own, etc.).

10) If I weren't dating my partner, I would do fine – I would find another appealing person to date.

0 1 2 3 4 5 6 7 8
Do Not Agree | Agree Somewhat | Agree Completely

11) My alternatives are attractive to me (dating another, spending time with friends or on my own, etc.).

0 1 2 3 4 5 6 7 8
Do Not Agree | Agree Somewhat | Agree Completely

12) My needs for intimacy, companionship, etc. could easily be fulfilled in an alternative relationship.

0 1 2 3 4 5 6 7 8
Do Not Agree | Agree Somewhat | Agree Completely
13) Please indicate the degree to which you agree with each of the following statements regarding your current relationship (circle an answer for each item).

<table>
<thead>
<tr>
<th>a) I have invested a great deal of time in our relationship</th>
<th>Don't Agree At All</th>
<th>Agree Slightly</th>
<th>Agree Moderately</th>
<th>Agree Completely</th>
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</table>

<table>
<thead>
<tr>
<th>b) I have told my partner many private things about myself (I disclose secrets to him/her)</th>
<th>Don't Agree At All</th>
<th>Agree Slightly</th>
<th>Agree Moderately</th>
<th>Agree Completely</th>
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<tr>
<th>c) My partner and I have an intellectual life together that would be difficult to replace</th>
<th>Don't Agree At All</th>
<th>Agree Slightly</th>
<th>Agree Moderately</th>
<th>Agree Completely</th>
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<tr>
<th>d) My sense of personal identity (who I am) is linked to my partner and our relationship</th>
<th>Don't Agree At All</th>
<th>Agree Slightly</th>
<th>Agree Moderately</th>
<th>Agree Completely</th>
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<tr>
<th>e) My partner and I share many memories</th>
<th>Don't Agree At All</th>
<th>Agree Slightly</th>
<th>Agree Moderately</th>
<th>Agree Completely</th>
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14) I have put a great deal into our relationship that I would lose if the relationship were to end. (please circle a number)

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<th>7</th>
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<tbody>
<tr>
<td>Do Not Agree At All</td>
<td>Agree Somewhat</td>
<td>Agree Completely</td>
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15) Many aspects of my life have become linked to my partner (recreational activities, etc.), and I would lose all of this if we were to break up.

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<tbody>
<tr>
<td>Do Not Agree At All</td>
<td>Agree Somewhat</td>
<td>Agree Completely</td>
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16) I feel very involved in our relationship – like I have put a great deal into it.

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<tr>
<td>Do Not Agree At All</td>
<td>Agree Somewhat</td>
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17) My relationships with friends and family members would be complicated if my partner and I were to break up (e.g., partner is friends with people I care about).

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<tbody>
<tr>
<td>Do Not Agree</td>
<td>Agree</td>
<td>Agree</td>
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<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
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<tr>
<td>At All</td>
<td>Somewhat</td>
<td>Completely</td>
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18) Compared to other people I know, I have invested a great deal in my relationship with my partner.

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<td>Do Not Agree</td>
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</table>

19) I want our relationship to last for a very long time (please circle a number).

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20) I am committed to maintaining my relationship with my partner.

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21) I would not feel very upset if our relationship were to end in the near future.

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22) It is likely that I will date someone other than my partner within the next year.

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23) I feel very attached to our relationship—very strongly linked to my partner.

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24) I want our relationship to last forever.

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25) I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner for several years from now).

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</table>
Appendix F: Theory of Planned Behavior Questionnaire (TPBQ)

TPBQ

DIRECTIONS: Please answer these questions with regards to your CURRENT partner. If you are involved in more than one dating relationship, answer the questions with regard to the relationship that is the most significant. Circle the number that best describes how you feel using the scales provided. Please do not skip any items and answer all items honestly.

1. I intend to leave my partner.

1 2 3 4 5 6 7
Extremely Unlikely

2. I will try to leave my partner.

1 2 3 4 5 6 7
Extremely Unlikely

3. I plan to leave my partner.

1 2 3 4 5 6 7
Extremely Unlikely

4. Leaving my partner is...

1 2 3 4 5 6 7
Extremely Good

5. Leaving my partner is...

1 2 3 4 5 6 7
Extremely Harmful
6. Leaving my partner is…
1  2  3  4  5  6  7
Extremely Punishing

7. Leaving my partner is…
1  2  3  4  5  6  7
Extremely Pleasant

8. Leaving my partner is…
1  2  3  4  5  6  7
Extremely Worthless

9. Leaving my partner is…
1  2  3  4  5  6  7
Extremely Enjoyable

10. Leaving my partner is…
1  2  3  4  5  6  7
Extremely Healthy

11. Leaving my partner is…
1  2  3  4  5  6  7
Extremely Wonderful
12. Leaving my partner is...

1 2 3 4 5 6 7
Extremely Negative

13. Leaving my partner is...

1 2 3 4 5 6 7
Extremely Terrible

14. Leaving my partner is...

1 2 3 4 5 6 7
Extremely Right

15. Most people who are important to me think that ______ leave my partner

1 2 3 4 5 6 7
I Should

16. It is expected of me that I leave my partner.

1 2 3 4 5 6 7
Strongly Disagree

17. People who are important to me want me to leave my partner.

1 2 3 4 5 6 7
Strongly Disagree
18. I feel social pressure to leave my partner.

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<th>7</th>
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</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
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<td>Strongly Agree</td>
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</table>

19. Leaving my partner and ending the relationship is

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</thead>
<tbody>
<tr>
<td>Extremely Easy</td>
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<td></td>
<td></td>
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<td>Extremely Hard</td>
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</table>

20. If I tried to leave my partner and end the relationship, it is _______ that I would be successful

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<tbody>
<tr>
<td>Extremely Unlikely</td>
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<td>Extremely Likely</td>
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</table>

21. I have _______ over leaving my partner.

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<tbody>
<tr>
<td>No Control</td>
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<td>Complete Control</td>
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22. I am _______ that I would be able to leave my partner if I wanted to.

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</tr>
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<tbody>
<tr>
<td>Extremely Confident</td>
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<td>Extremely Unconfident</td>
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23. For me to leave my partner would be

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<tbody>
<tr>
<td>Completely Impossible</td>
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<td>Completely Possible</td>
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24. It is mostly up to me whether I leave my partner.

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<tbody>
<tr>
<td>Strongly Disagree</td>
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<td>Strongly Agree</td>
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</table>
25. If I wanted to, I could leave my partner.

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26. For me to leave my partner is _____.

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<tbody>
<tr>
<td>Extremely Easy</td>
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<td>Extremely Difficult</td>
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